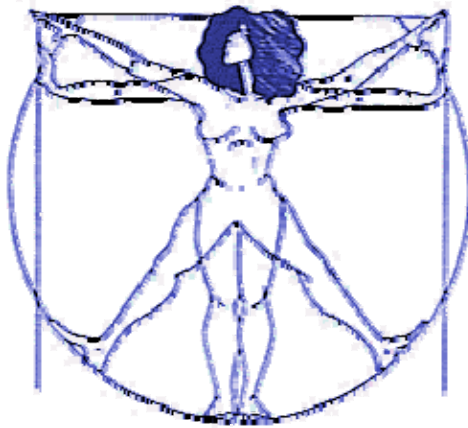


# BALANCE



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### 2002 Articles

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### **Linda Buch-Body Language-April 21, 2002**

*"I was told that after doing any training with weights, protein should be eaten within one hour. The reason is supposedly that if you don't eat protein within an hour, the body goes through some metabolic process which breaks down muscle, making the workout less effective. Is this true and, if so, what is the process?" Linda Martin, Denver*

### **MUSCLES NEED MORE THAN JUST PROTEIN**

In ancient times, the victor of a battle often "honored" his valorous (albeit vanquished) opponent by eating his heart to obtain some of the dead hero's spirit. In the minds of many athletes and exercisers, the erroneous "muscle=protein, therefore, to get lots of muscle, eat lots of protein" analogy seems to be the modern-day reconstruction of this ancient practice. Before getting into the nutritional imperatives, let's look at what goes on with muscle when it is exercised through weight training.

Muscle is composed of many fibers bundled together into groups. Each muscle group is comprised of numerous types of cells which do everything from regulating fuel, producing force, converting fat and carbohydrates into usable energy, to allowing contraction to occur, and repairing the muscle after a hard bout of work. Capillaries link the muscles to our cardiovascular systems, bringing in oxygen and other nutrients carried by the blood, and carrying out waste products created by muscle contraction. When someone engages in regular strength training exercise, the body learns to recruit more and more muscle fibers in order to help complete the task. Over time, strength is improved and, often, muscle size increases.

According to *Understanding Nutrition* (Whitney and Hamilton, West Publishing, 1987), metabolism is "the sum total of all the chemical reactions that go on in living cells." Metabolic activity, therefore, takes place all the time, head-to-toe, all day long. Muscle cells are unique in their ability to increase their metabolic rate when trained to do so through exercise but, I am sorry to say, a high protein diet does not guarantee increased muscularity. Larger muscles are a result of proper training along with some nicely inherited genetics, not diet.

While it is a fact that protein is necessary to build, maintain, and repair tissue, it only contributes part of the total energy (calories) needed to keep you going during and after exercise. Just as with all calories, the excess is usually stored as fat. Muscle cells need glycogen (a storage form of glucose) in order to function, recover, and continue functioning. Carbohydrates (the primary source of glycogen), along with fat, are actually the preferred foods for energy during exercise and for recovery afterwards. Daniel Kosich, Ph.D. (president of *EXERFIT* Lifestyle Consulting in Denver) reminds us that "Fat burns in the flame of carbohydrate," which means fat can only be utilized when glycogen stores are adequate. It is true that athletes do need more protein than non-athletes (about 0.7 to 0.9 g of protein per kg of body weight, according to Nancy

Clark, MS, RD). But athletes need more calories in general, in addition to increased protein.

I did find two very small studies that seem to indicate that protein absorption is improved when it is ingested right after exercise. Danish researcher, Brigitte Esmark (Sports Medicine Research Unit at Bispebjerg University Hospital), reported in the August 15, 2001 issue of *The Journal of Physiology*, "Consuming a high-protein supplement within minutes after strength training may help healthy older men [13 healthy men aged 70-80 were studied] ward off muscle loss that comes with age." Another study (1997) with six untrained men at the Department of Metabolism, Shriners Burn Unit, Galveston, TX (researchers Tipton, Klein, and Wolfe), yielded results that "imply that protein intake immediately after exercise may be more anabolic [growth promoting] than when ingested at some other time." More research should be done on a wider sample of humans (like maybe studying some *women*?) before conclusions can be properly drawn.

My suggestion is that after your workout, eat a small meal with a balanced mix of protein, complex carbohydrates, and fat. If you pushed yourself hard during your workout, you are going to crave a healthy meal anyhow. You just don't have to limit yourself to one food group.

## LINDA BUCH - BODY LANGUAGE - DECEMBER 15, 2002

### REDESIGNING STRENGTH TRAINING PROGRAM

*"I am a 52 year-old woman who really needs some advice on redesigning my weight resistance program. I began working out at the gym 10 months ago, and have lost 40 pounds through diet and exercise. The trainer at the gym got me started with some basic exercises, and I've added weight as well as additional exercises. But my routine has become too "routine" and I need some variety. I like machines rather than free weights, since they keep me from getting hurt. I cannot afford more sessions with a trainer. Do you have any recommendations that can help?" Janie V., Colorado*

"The joy of life is variety," (Samuel Johnson) so it is time to add a little salsa to what has become a bland workout. Even if you cannot afford additional sessions with a trainer, it is possible to stay with the same machines you currently enjoy and simultaneously infuse new life into your "routine" routine. Since most experts believe a program should be changed every four to six weeks, you are overdue for an overhaul.

**Tip #1: Stack exercises in the same muscle group.** "Stacking" involves performing two to three exercises, one right after another, without resting. For example, as soon as you finish your chest presses, go right to the pec dec and do a set of chest flies. By not resting between machines, your chest will have to work harder and recruit more muscle in the process. Rest after each stack is completed.

**Tip #2: Stack antagonistic muscle groups.** "Antagonistic" muscle groups are like opposite sides of a coin: chest/back, hamstrings/quadriceps, biceps/triceps. Observe your muscles while exercising. Notice when one group of muscles is shortening, the opposite group is lengthening. For example, during hamstring curls, when the hamstrings flex, the quadriceps stretch. The opposite occurs during leg extensions (i.e., when the quadriceps flex, the hamstrings stretch). Use the same method described above in Trick #1 and quickly move between the machines which work opposing muscle groups. Rest after each stack is completed.

**Tip #3: Change the number of sets.** Instead of going through your circuit by doing one set per machine, do two or even three sets. Prioritize the areas of your body which are most in need of extra attention and give those areas some additional sets.

**Tip #4: Pyramid training.** This is a great way to really blast your muscles in a short period of time. There are two types of pyramids: ascending and descending. For an ascending pyramid, set your weights at the heaviest setting at which you are comfortable and perform as many repetitions as you can. As soon as you get stuck, drop the weight a couple of plates and, again, do as many repetitions as possible. Keep doing this until you can barely lift the weight at all. A descending pyramid will be the

opposite. Set the weight light enough to perform 15 repetitions; increase the weight a plate or two and perform as many repetitions as possible. Repeat your efforts until you feel completely fatigued.

**Tip #5: Change your speed.** Most lifting is performed faster on the muscle shortening phase (called the concentric contraction) and a bit slower on the muscle lengthening phase (called the eccentric contraction). By using superslow resistance training, you can increase the intensity of your workouts. Reduce the weight you normally lift by about 20% and use ten seconds to flex the muscle and five seconds to return to the starting point. One set of ten repetitions in each muscle group will be all you can stand before you feel completely fatigued!

**Tip #6: Change everything, every workout.** Week one, lift lighter weights with more repetitions; week two, lift heavier weights with fewer repetitions; week three, lift heavy for your first workout of the week and lighter for the second one. Toss in some of the other suggestions mentioned in this article (stacking, pyramiding, superslow) and you will have a new workout each time you go to the gym.

As long as you maintain proper form, any of these suggestions will invigorate your next workout and bump you off your current plateau.

## LINDA BUCH - BODY LANGUAGE - DECEMBER 22, 2002

### UNDERSTANDING BASIL METABOLIC RATE CALCULATIONS

*"I am a family physician and ACE certified trainer. I read each of your columns. Many I give to patients. Help me understand the BMR [Basil Metabolic Rate] calculation from body composition measure. I know about the metabolic rate of fat and muscle. How should calculations be adjusted for muscle being about 50% (average according to various reputable sources) of lean body weight, the remainder being skin, bone, blood and organs?"* Earl J. Carstensen, MD, Aurora, Colorado

I know Dr. Carstensen already knows the answer to all of this, so I must acknowledge his diplomatic way of saying, "Hey, explain this better for everyone, Linda!" Fortunately for me, Dr. Carstensen sent me some of the excellent materials he uses with his patients, including a complete explanation of body composition. Since he is a physician and a fitness professional, his information was both illuminating and succinct.

Humans are composed of fat, water, and lean tissue (muscle, skin, bone, organs, and blood). *Fat* is located under the dermal layer of the skin, intramuscular, and around vital organs. It is important for protection of the organs, insulation, and energy, and, in fact, is essential for us to stay alive: women require 10-12% and men require 2-4%. *Lean tissue* is 50% muscle, 14% skin, 14% bone, 14% organs, and 8% blood. It is easy to see why so many factors come into play as we try to not only figure out personal metabolic rates, but also body composition.

The three most popular methods for figuring body composition (from cheapest to most expensive) are skinfold (using calipers), Bioimpedence Analysis (scales that electrically measure body fat), and the DEXA (Dual-Energy X-ray Absorptiometry), which is a type of X-ray most commonly used for bone scans. Body composition readings (percentage of body fat to lean mass) can vary depending on time of day, how hydrated you are, eating schedule, and so forth. It's a good idea, therefore, to pick one method and stick with it for at least a year, checking progress only about every eight-weeks.

Once you know your starting point you will be able to figure out how to safely change your body composition. *Remember, weight loss doesn't always mean fat loss.* The wisest course of action is to concentrate on reducing body fat percentage, rather than just "weight." Since muscle is more metabolically active than fat (muscle burns 35 to 50 calories per pound per day, while fat burns about three calories), it is important to keep and/or increase muscle at the expense of fat. Thus, at the beginning of an exercise and diet program, by knowing your weight and the accompanying percentage of which is body fat and muscle, you can come fairly close to figuring out your caloric needs. For example. If you are 150# and 30% body fat, you are carrying about 45# of fat and 105#

of lean tissue (of which about 52# is muscle). This means a daily caloric intake of about 2,000 calories just to stay status quo.

The safest way to reduce calories without compromising health is to reduce your daily intake by 20% (about 400 calories), increase your output by the same amount, or some combination of the two. This way valuable muscle can be spared at the expense of excess body fat.

*(I would like to thank Earl J. Carstensen, MD, of HEALTHY PRACTICES, Prof. LLC, for his kind assistance in writing this article. I would also like to thank my math teachers for not rolling over in their respective graves as I attempted any math whatsoever, thus preventing worldwide catastrophe from the seismic shifts in the earth's core that said "rolling" would have engendered.)*



## LINDA BUCH - BODY LANGUAGE - DECEMBER 29, 2002

*"I am a successful heart transplant (got a ladies heart, so now I change my mind all the time and sometimes even ask directions) and have extreme weakness and inability to build muscle. This is not caused by the anti-rejection drugs, according to my cardiologists. They are stumped. So, I am seeking some suggestions as to muscle disease, possibility rather rare, or other debilitating factors. There are quite a few transplant patients out here so maybe you could do a column?"*  
Joseph Morin, Colorado

### EXERCISE FOR HEART TRANSPLANT PATIENTS

It is hard to stay in such good spirits after an ordeal like yours so you just might be the King of Hearts, Joe! Exercise after a transplant is touchy business. It is necessary for health, but must be approached with extreme caution and the vigilant oversight of your physicians and physical therapists. Exercises that are recommended most frequently by all of the sources I checked out (Temple University, Cleveland Cardiac Clinic, University of Florida) came up with similar suggestions: walking, biking, swimming and dancing were high on the list for aerobic activity with light strength training (nothing over 20# unless cleared by your doctor) also strongly advised. Boxing with a heavy bag is also good for building muscle, bone density, and cardiovascular capacity. Start slowly with a competent instructor because boxing is more strenuous than it looks!

Your situation is critical because the viability of muscle directly affects the strength and density of bones. Since osteopenia (weakening of the bones) shows up in almost 100% of heart transplant patients, University of Florida researchers found weight lifting to be the best and simplest solution. "It's well-known that people who engage in weightlifting exercises have very thick, strong bones. We measured bone mineral density in heart transplant patients and began a program of weight lifting after surgery to see what effect, if any, exercising might have on strengthening bones," reports Randy Braith, an exercise physiologist with the University of Florida's Center for Exercise Science in the College of Health and Human Performance. They discovered that "transplant patients who began strength training two months after the transplant surgery were able to restore and maintain bone mineral density to the same level it was prior to the operation." Braith recommends resistance training for any postoperative rehabilitation program for heart transplant patients in addition to the commonly prescribed cardiovascular program.

A similar study by the Division of Cardiology at the Los Angeles School of Medicine also found that those patients who were involved in a six-month program of both muscle-strength and aerobic exercise (under the guidance of a physical therapist) had "significantly greater increases in peak oxygen consumption and a decrease in carbon dioxide production." It should be noted that the exercise program was started with the control group "as soon as feasibly possible after [the] heart transplant." (New England

Journal of Medicine, 340:272-7, 1999 Jan 28) Better oxygen consumption means better levels of energy and general health.

None of this will do you any good, however, if lifting is a struggle. Muscle weakness either originates in the nerves or in the muscle itself. Your doctors and physical therapists are the best professionals qualified to evaluate your muscles either through pushing and pulling resistance, functional moves (such as standing up from a chair), or other such tests. A second option is to have a muscle biopsy to check for a protein enzyme called creatine kinase. This enzyme is part of the phosphocreatine energy system which is important for muscle function. Use of the supplement, creatine phosphate, has often been successful in treating postoperative muscle atrophy caused by extended bed rest and, if your physician concurs, could help you overcome your current feelings of weakness.

I hope something this simple will do the trick for you, Joe! Your good humor will help you as well.

## LINDA BUCH - BODY LANGUAGE - DECEMBER 8, 2002

*"Could you please address weight-loss supplements like chromium and ephedra? My friend is taking ephedra and she says it speeds up her metabolism--and her heart. Are there any safe foods or supplements that increase metabolism?" Gabrielle Devenish, Superior, CO*

### BEWARE OF "WEIGHT-LOSS" SUPPLEMENTS

We have all seen the ads. Take this pill to lose weight. No dieting or exercise required. The company will tout the "guaranteed" efficacy of some potion (usually with an "X" or "metabo" somewhere in the name), said to have been widely used for centuries in China. All you need is a credit card and a large dose of desperation.

But first, what exactly is 'metabolism' and why does everyone want theirs boosted? Simply, metabolism is the rate your body burns energy (calories). Basal Metabolic Rate (BMR) is the term used to describe energy usage when at rest. Reputedly, a higher metabolism means a leaner body. Determining factors for your particular metabolic rate are weight (the heavier you are, the higher your BMR), your age (BMR is slower by 2% per decade after age 20, and is higher in children than in adults), your ratio of muscle to fat (people with more muscle tend to have a higher BMR), and whether or not you are restricting calories with a new diet (metabolic rates fall if you shed pounds through calorie restriction).

One of the herbs touted as a "fat-burning metabolism booster" is ephedra (from the herb, ma huang), which has been used medicinally for thousands of years to treat asthma, allergies, and sinus problems. Diet potion manufacturers like it because it stimulates the central nervous system, elevating the body's temperature, which slightly elevates the body's metabolic rate. According to a study published this year in the *International Journal of Obesity and Related Metabolic Disorders*, ephedra did aid in weight loss in overweight (but otherwise healthy) individuals *if* taken only as directed under Industry standards, and following all the warnings and precautions set by the Industry.

In October 2002, however, the Senate Government Affairs Subcommittee held a hearing in which evidence of serious problems with a popular diet supplement containing ephedra was discussed. According to committee chair, Senator Richard Durbin, there have been plenty of problems with the supplement including "three deaths, 20 heart attacks, 24 strokes, 40 seizures, 465 episodes of chest pain, and 966 reports of heart rhythm disturbances." It was also mentioned in the hearing that many of the complainants were "young people in good health and taking recommended doses of the product." The diet supplement industry argues that more people die of being overweight, which they say makes the risks with ephedra worth the gamble.

If you chose to ignore the red flags, it is generally recommended you use these products one month at a time, with breaks of a week or two before resuming, and never for longer than three months without a break. Herbs of this nature are medicine, after all, and are not intended for constant use. Remember: nothing exceeds like excess, and more is not necessarily better.

Another popular supplement for weight loss is chromium picolinate. Chromium helps insulin in the making of blood sugar. Picolinate acid is thought to help with chromium absorption. It would seem the combination of these two into a single pill would be helpful for both weight loss and to those with Type 2 diabetes, which often occurs in sedentary, overweight humans. Unfortunately, a laboratory study conducted at Dartmouth in 1996 found that chromium picolinate could harm chromosomes. Since cancer can get its start from damaged cells, the panacean claims of chromium picolinate are specious at best. To date, there are no studies to show that this product will aid weight loss or that it helps diabetics.

Considering the serious risks with both supplements, I believe you'd make a safer financial investment in healthier food and a good pair of walking shoes.

## Linda Buch-BODY LANGUAGE- February 10, 2002

### Body Image

*" Last February 2001, at 44 years and 5'5", I weighed 135#, which isn't fat but my body composition was getting fatter. I started lifting weights every other day and now lift three times a week. By May 2001, I was down to 122 # and I've gone from a size 8 to a 4. I am a runner but in the winter I am lucky to get in 2 runs a week. My question: When I look at myself naked I still see an inch or two of body fat all over. I increased my running in the summer to 4 times a week, I don't have a treadmill, and don't want to join a gym. I eat well but what do I need to do to get leaner? More weight training? Cut all the fat out of my diet? Betty H. Denver*

Your question has unfurled a couple of red flags on my fitness flagpole. The key to your inquiry is in your own words, "I still see...body fat all over." While it is not unusual to continue to see our old selves in the mirror in spite of becoming leaner and more fit, at some point it is important to step back from the mirror and reassess our goals and objectives. Exercise, when integrated properly into our lives, is a great tool for health and wellness. It should build self-esteem, not destroy it. When self-esteem suffers, exercise is no longer a tool--it is a weapon.

A quick calculation of your Body Mass Index\* comes out to slightly over 20. Normal range for women is 21-25. This calculation is a cursory measurement at best but seems to indicate that you are plenty lean already. The "fat" you see is possibly from unrealistic images that have burrowed into the brain via Hollywood and magazines. The "lollipop" look is rife among the female stars and, if we continue to juxtapose our bodies next to the Callista Courtney Laura Flynn's of the world, we can start to think we look like beached Beluga whales. Another great demoralizer is the bodybuilder magazine where the women all have shrink-wrapped looking muscularity. Neither of these portrayals of womanhood are particularly accurate!

As for severely restricting fat intake, this will impair your energy levels and lead to some serious nutritional deficiencies. Vitamin A, E, D, and K are all fat soluble and are vital to staying healthy. At least 30% (20% unsaturated) of your calories should come from fat. Fat will also keep you satisfied with your meals and prevent any binge eating that often comes from feeling deprived. I STRONGLY recommend that you consult with a Registered Dietitian, (not a "nutritionist"), particularly one who is involved with athletes and exercisers such as yourself. A Registered Dietitian can calculate your basal metabolic rate, more accurately determine your body mass ratio, design a healthy eating plan, and, refer you to other fitness and health professionals who can help guide you to a healthier track.

There is one gap in your general fitness program, however. Your wintertime cardiovascular program does need some attention. It is easy to forget that the heart is a

muscle and that it needs and loves a good workout just like your other muscles. There are some very compact and inexpensive methods to work in some cardiovascular exercise without plopping a treadmill in the basement. A Fitball® can be a very effective tool, not only for flexibility but also for a good aerobic workout. Another great piece of equipment is the mini-trampoline, sold at most sporting goods stores, which is both fun to use and safe for jogging. The cheapest method of all is the good old jump rope, which has been an effective cardiovascular device for decades. Since you are a runner, I am going to assume that you have some appropriate shoes with proper support so that the impact of jumping or bouncing will not cause injury.

As Sarah, the Duchess of York says, “It's a question of a fit mind, fit body. If you are able to start loving yourself and have a better sense of self-worth...well, free your mind, and your bottom will follow.”

- [\*-Divide your weight by 2.2=kilograms
- Divide your height in inches by 39.4 to get meters and multiply that number by itself (i.e. square it)
- Divide your weight in Kg by your height in meters (squared) to get your BMI]

## LINDA BUCH-BODY LANGUAGE-FEBRUARY 17, 2001

### Change Routine to Bring About More Change

*"I am a 48 year old woman who is about 40 #'s overweight. I joined a fitness program two months ago where we move from station-to-station alternating between resistance machines and aerobic stations. We spend 30 seconds at each station and go around twice. I have been working out 5-6 times a week for two months and, while I feel stronger, I have experienced no change in weight and have lost only about 1/4 inch from hips, waist, abdomen, and bust. My goals are to firm up, build some muscle and lose some fat. Should I be doing this program every day? Are there modifications I can make to maximize my efforts? Violet J., Denver*

You are to be commended, Violet, for making the decision to exercise regularly! Let's look at the positive changes you have made in two months. First of all, you have established a consistent, almost daily, routine for improving your health and wellness. According to the Centers for Disease Control and Prevention (CDC), American obesity in the adult population has reached 60%, and three out of four women do not participate in regular physical activity. Your current activity level puts you in the top 25 percentile of American adults! By becoming physically active, you are reducing your risks of heart disease, some cancers, Type 2 diabetes, osteoporosis, hypertension, and many other conditions related to inactivity and obesity.

The loss of even 1/4" in your hips, waist, abdomen, and bust--without the apparent drop in "weight" on the bathroom scale--can be discouraging on its face value. The truth, however, is that you have lost body fat while increasing muscle mass. Since you did not mention your percentage body fat (compared to your lean body mass) I recommend that you either have one of the fitness professionals at your gym calculate this for you with skinfold calipers, or, invest in one of the new bathroom scales that measure both weight and body fat. This will give you a much healthier perspective than just *weight*. It is important to remember that muscle is metabolically "hungrier" than fat. Muscle requires about 50 calories per pound per day while fat only requires THREE. More muscle = higher metabolism = less body fat.

What you are feeling with your current exercise routine is stuck. Our bodies respond positively to change but our brains prefer predictable efficiency. After about 6 weeks of doing the same routine over and over, your brain has figured out how to streamline your efforts and is humming happily along on a nice, flat plateau. It's time to pump up the volume!

Your heart has become more efficient with exercise and needs more of a challenge. There is currently some controversy surrounding the viability of "heart rate" as a good indicator of aerobic output. While I find nothing wrong with using a heart rate monitor to check the heart's output, a simple and inexpensive way to determine if you are working hard enough comes from fitness author Covert Bailey. In his book, Smart

Exercise (Houghton Mifflin, 1994), he suggests that you, “Find out how fast you can cover a mile comfortably, repeatedly and consistently.” In other words, find your “pace,” which will improve with consistent participation.

Now that you have experienced some success with circuit training, I recommend that you expand your horizons and try some new activities, such as a more strenuous aerobics class, a vigorous walk outside for 30 minutes, a more intense immersion into weight lifting, a class that uses Fitballs®, a dance class, and so forth. You can still participate in your current class but experiment with every third day instead of every day, putting different activities in between.

Whatever you decide, Violet, DON'T STOP. Even if you choose to just stay put and stick with your current routine for a while, you are still way ahead of the rest of the pack.



**Linda Buch-BODY LANGUAGE-February 3, 2002**

**Snowshoeing is Great Exercise and Lots of Fun!**

*"I have heard that snowshoeing is a great way to cross-train. What do you think? Lisa, Denver*

The sport of snowshoeing is growing by stomps and steps (let's face it-it's hard to 'leap and bound' in snowshoes!). According to American Sports Data, Inc., snowshoeing is up 18 percent over last year, putting the number of participants at over 2 million. The reasons for this are obvious to anyone who has lived in the Rocky Mountain area for any length of time: 1. It is inexpensive, 2. You can do this almost anywhere there is snow, 3. It is inexpensive, 4. The learning curve is more like a straight line, 5. It is inexpensive, 6. It is an excellent and simple way to exercise, and, 7. It is inexpensive. Families who quake at the price of lift tickets can instead have fun with the family outdoors without mortgaging the house. Anyone who wants to get, or stay, in shape during the winter months can do so by marching through the snow in the great outdoors as a break from indoor treadmills, stair-steppers, and spinning classes. Since snowshoeing involves the arms, legs, and cardiovascular system, this is a great sport for cross-training!

If you can walk, you can snowshoe. All you need for your feet is a pair of water resistant boots and you are set to go. Rental snowshoes are readily available at most ski and sport stores and fees are downright cheap. "Snowshoeing transforms your body into a calorie-burning machine," writes Suzanne Schlosberg, fitness author and contributing editor to *Health* magazine. "A brisk 20-minute per mile pace on packed snow burns about 510 calories per hour; that's close to what you'd use up jogging five miles an hour."

Ski poles are also recommended, not only for additional calorie-burning benefits, but also to help out on the hills. Dress in layers, with clothing designed to wick away moisture. Do not make the mistake of wearing cotton next to your skin and feet! There are some fabulous innovations in cold-weather exercise wear that are light, warm, comfortable, and that--more importantly--KEEP YOU DRY. You will work up a sweat out there. Frequent stops for snacks and water will allow you to cool down. If you are wearing cotton, it will hold the moisture next to your skin, making you feel cold and clammy. At best, you will feel chilled and clammy; at worst, you could develop hypothermia.

Colorado's parks and ski areas all have great trails and many offer guided tours. The Denver Post publishes a special section twice a year called *Ski and Snow* in November and January which is a great resource for finding areas to explore. Call your favorite area for up-to-date information on trails and guided tours.

The sport of snowshoeing sounds easy, but carefree it isn't. Keep in mind that you are heading out into the elements, so caution is always advised. Inexperienced snowshoers should do their first few treks with either guided tours or participate in well-organized activities, such as races and fund-raisers.

According to a California survey in 1999, snowshoeing has seen a 56% increase in the number of women trying the sport over 1998 (Carlos Alcala, *Sacramento Bee*, 2/6/01.) There are lots of women-only trips which can be found on the internet or you can call your favorite travel agent. These trips are popular because, unlike Alpine skiing, snowshoeing tends to promote a more convivial and social atmosphere among the participants. So, get your friends together and get out there. With snowshoeing, you can be intrepid, get in shape, and enjoy great camaraderie as well.

**LINDA BUCH-BODY LANGUAGE-JANUARY 6, 2002**  
**"BODY FAT RATIO MORE IMPORTANT THAN WEIGHT"**

*"I know that body fat percentage is more important than weight , but how do I find my percentage? L.C., Westminster*

"I need to lose some weight," is probably the most repeated sentence in America. But "weight" per se is only a small piece of the body puzzle. The bigger truth answers the question, "What percentage of your body is composed of fat?" The unfortunate reality for most of us is "too much."

Body fat is extremely necessary for our survival. It cushions our organs, insulates us from the elements, and is the richest source of energy in our body. It behooves us, therefore, to have body fat, we just don't need to be so possessive of it. According to the national Centers for Disease Control and Prevention, 60% of Americans are now considered obese. This population is, by the medical definition of "obese," at least 30 percent over ideal body weight. How much is *too* much and how do we find out how much we have?

The bathroom scale does not tell us everything we need to know about body composition. Take two people of identical height, sex, age, and weight. One will be in a pair of size 28 Levi's and the other will be in a size 36. The difference between the two is the ratio of body fat to lean mass. But does being thin automatically mean healthy? Not necessarily. Two individuals of the same height, sex and age, one weighing more than the other, but both wearing the same size 501's, probably means the heavier person has more muscle and less fat than the lighter person.

Obtaining your exact percentage of body fat is the tricky part. Let's face it, outside of autopsy, we are never going to get an EXACT percentage.

The easiest way to check body fat is via the "naked truth" test. Check yourself out critically in the mirror. If you can "pinch an inch" (or worse, "grab a slab") just below and to the immediate right of the navel , you are probably too fat.

Another method for calculating whether or not you are over fat is the Body Mass Index (BMI). This requires a bit of math (trust me-get a calculator!) but can be calculated as long as you know your weight and height. First, recalculate your body weight in kilograms (your weight in pounds **divided** [corrected from original error which said "X"] by 2.2). Next, convert your height in inches to meters and then square it (divide your height in inches by 39.4 to get meters, then take that number times itself). Divide your weight by your height (squared) to obtain your BMI. Federal guidelines now recommend a BMI below 25. For women, obesity begins at 27.5 and for man it begins at 28.5. This is not a "percentage body fat," per se but does give you a number (we Americans LOVE numbers) to see where you stand regarding personal corpulence.

The most popular body fat percentage calculator is the skinfold caliper method. This requires a skinfold measurement from at least three-to-seven areas of the body (at areas from the triceps, back, hip, front thigh, chest and abdominals) which are added together and checked on a chart delineated by sex and age. It is important not only to have this done by an experienced exercise professional, but also to have the same person check it again a few months into your exercise program in order to provide some semblance of measuring consistency. Keep in mind that the fat being measured is only that which is stored under the skin. Fat located around the organs and in the muscle will be missed. These measurements are useful because, over time with proper exercise and diet, you can see all of the numbers in the measured sites come down.

Another gadget on the market is the bioelectrical impedance scale which sends an imperceptible electrical current through the body to measure the amount of water therein. The scale calculates the body fat by reading where the water is NOT located (water is only located in fat-free tissue). Again, the accuracy is specious because so many factors can skew the readings, like levels of hydration or whether you weighed pre- or post- exercise. If you purchase one of these for your home, be sure to use it at the same time of the day on the same day of the week for better accuracy.

Underwater weighing has almost gone the way of rotary dial phones. In its place as the “gold standard” is the DEXA (Dual Energy Xray Absorptiometry) at the University of Colorado Health Sciences Center for Human Nutrition. This machine (a reading costs about \$250) was designed to read bone density but was found to do an amazing job of measuring body fat and lean mass as well. The computer also gives you a color picture of where you fat is located...which, unfortunately, many of us can already see by looking in the mirror.

## LINDA BUCH-BODY LANGUAGE-JANUARY 13, 2002

### Tissue Damage and Exercise

*"I had been exercising 3-4 days a week using 'The Firm' videos. When I increased my weights, I think I hurt my back but it went away after about 2 weeks. After a massage at work, my back started hurting again and, one month later, still hurts. I was told by a trainer friend that it was probably soft tissue damage and would take about 6 months to heal. I don't normally feel the pain unless I stick out my stomach and lift my butt. What is soft tissue damage? What should I do regarding exercise? Should I insist that my doctor send me to a specialist? Do I need physical therapy? Pilates? Yoga? How about Karen Voight's 'Pure and Simple' stretching tapes? Susie, Denver, CO*

As the bumper-sticker says, "Eat right, exercise, and die anyway." Seriously, anytime we exercise we can experience strains and pains previously unknown to us as we sat motionless in our recliners. The occasional twinge of pain and discomfort is still far less egregious than diseases that arise from relative immobility, like obesity, heart disease, stroke, diabetes, high blood pressure and the like. The "soft tissue" being referred to is the muscle, fascia, and other connective tissue located in and around the skeletal structure of the body; in your case, the lower back. Tissue damage does not often show up on x-rays so it can be difficult to diagnose. Any injury should be taken seriously, however, and dealt with immediately.

"Working through the pain" may be helpful advice if you are running from ravenous wolverines but should not be done otherwise. The best general advice anytime aches and pains occur post-exercise is RICE: Rest, Ice, Compression, Elevation. "Rest" in your case would be to shift from the higher-intensity workout you had been doing with weights to something like yoga, pilates, or tai-chi, all of which involve putting the body through its paces but without the addition of heavy, handheld weights. These disciplines also teach you how to keep your body in alignment. By "sticking out [your] stomach and lifting [your] butt" you are putting excessive strain, on the injured area- perhaps even keeping it from healing. While this may be a great imitation of Sarah Jessica Parker's "Carrie" or "Sex and the City" fame, over time this could cause damage to the disks in that part of your back. But, I digress....

"Ice" (either a professional cold-pack or crushed ice wrapped in a towel) should be applied to soft-tissue injuries for about 20 minutes, 3-4 times a day. This may or may not help you at this point since it has already been a while since your initial injury. However, it may make the area feel better and, assuming you have not fractured any bones, certainly will not cause any damage.

"Compression" of this area can be accomplished at the same time by wrapping the cold-pack (or ice-in-a-towel) around you with an elastic bandage. Do not keep yourself

wrapped in the bandage while sleeping for the night. This sort of long-term constriction could cause further damage.

“Elevation” of the afflicted area (getting the injured area higher than the heart) is done to allow gravity to drain fluid and prevent excessive fluid accumulation. For your back, lie on the floor with the ice under you and support your legs under the knees with a bolster or hassock to reduce the pressure on the lumbar area.

A visit with a physical therapist is always a good idea in order to check the diagnosis and to insure proper form for the stretches that will inevitably be part of your recovery. As for using tapes like Karen Voight’s “Pure and Simple,” any tapes that are recommended by respected professional fitness organizations (like the ACSM, ACE, NASM, AEA, AFAA, and so forth) would work just fine. The key is to find one that you will use. Also, don’t give up on massage. You may need a sports injury massage specialist to help you with your recovery. Find someone appropriate for you via the American Massage Therapy Association at: [www.amtamassage.org](http://www.amtamassage.org) or call: 888/843-2682.

## LINDA BUCH-BODY LANGUAGE-JANUARY 20, 2002

### Exercise and Rheumatoid Arthritis

*"I have rheumatoid arthritis and wonder what exercises would be good for stretching and getting my heart rate up without too much stress on my joints. I have one warm water therapy session a week that is good for range of motion but not heart rate. Other water aerobics are during the day when I am at work. Fortunately, I can walk and have been doing so but wonder about weight training and step aerobics, which I used to love. My weight has gone up since I had to quit going but have been feeling well enough to start again. What do you think? Mary Barnard, Lakewood*

Approximately 43 million Americans (approximately 2/3's of them women) suffer from one of the many forms of arthritis. The two most common forms are osteoarthritis, where the cartilage between bones at the joints wears down causing pain and inflammation; and, the more crippling and disfiguring rheumatoid arthritis, (which usually strikes between ages 20-50) an autoimmune disease where the person's immune system attacks the healthy tissue and damages the joints. Over two million Americans suffer from the latter. Physical activity is a necessity for arthritis sufferers because weight-gain and inactivity can exacerbate the disease. You are to be commended for persevering through what is undoubtedly some teeth-grittingly painful moments in your quest to stay fit.

The Centers for Disease Control and Prevention (CDC) has worked hard to dispel the myth that exercise--specifically strength training, aerobic conditioning, and stretching--is harmful. In fact, Stanford University's Terri Heinrich Rizzo, MAS, reports that "appropriate, regular, exercise not only increases flexibility, strength and the ability to do every day activities but also reduces pain, fatigue and depression." Exercise is supported by both the American College of Rheumatology and the Arthritis Foundation. The trick is to find activities that you can enjoy doing that will benefit your health and general wellness without causing chronic, painful flair-ups. In answer to your question, there is good news.

If you have been away from exercise for a while, start back by doing 5 minutes/3 times a day and work up to 30 minutes a day, several days a week. Most of the experts warn arthritis sufferers away from high impact activities such as step aerobics. The good news is that walking, bicycling, inline skating, and ESPECIALLY swimming, are excellent substitutes. Swimming allows for nonimpact, full range of motion exercise which is great for cardiovascular conditioning, enhancing muscle tone, and maintaining flexibility. Hopefully your work schedule will permit more swim time at some point because this is far and away your best option. The Colorado Easter Seal pool has morning and some evening water aerobic classes throughout the week as well as open swim times. Since this a therapeutic pool, with temperatures above 92 degrees, a doctor's consent is needed to gain entrance. Call 303/233-1666, ex. 248 for information.

There are many Rec. Centers with marvelous swimming facilities in the Denver Metro area. Most of the pool temperatures at Rec. Centers are in the 82 degree range, however, which may not be comfortable for you. It is a good idea to call and check to see at what temperature the specific facility *maintains* its pool.

Since you are able to walk for exercise, definitely keep at it! Another great exercise, if you are up for the challenge (and your doctor gives you the green light) is inline skating. If that seems a bit scary or risky, bicycling is another great option. Check out spinning classes at your local Rec. Center, Health Club, or YMCA.

Weight training can help to ease pain by balancing the strength of the muscles that surround the affected joints. It is always best to either keep the weights light or to use therapy bands. Start back to weight training with extreme caution so that an inflammation response isn't generated. Warming your joints with hydrocolator pads or taking a warm shower prior to lifting may be a sensible option.

I would also recommend calling the Arthritis Foundation (303/756-8622 or 800/475-6447 or [www.arthritis.org](http://www.arthritis.org)) to find exercise and stretching classes. Call for their free pamphlet, "Exercising Your Arthritis." Good luck and keep moving!

*Thanks go to the good people at the Rocky Mountain Arthritis Foundation for their assistance with this article.*



### **LINDA BUCH-BODY LANGUAGE-July 21, 2002**

*"My question is about Myotherapy by Bonnie Prudden. She has a book out and trains therapists, and I am going to one she has trained. I have experienced wonderful results but my insurance won't cover the costs like they do for a Physical Therapist. What do you know about this therapy? Marilyn, Denver, CO*

The very first exercise book I ever purchased was by the venerable and redoubtable Bonnie Prudden. She has been a relentless proponent for fitness and wellness since the 1950's. "Myotherapy®" was developed by Bonnie Prudden in 1976 as a way of relaxing muscles, alleviating pain, and improving circulation by applying pressure with fingers, knuckles and elbows to the "trigger points" in the muscles for four to 20 seconds. The patient usually feels excruciating pain followed by no pain in the previous area of complaint. A certified myotherapist then determines what exercises and stretches the patient needs to learn in order to reeducate the affected muscle to prevent the pain from returning.

Many people, including athletes like Mark McGuire, have gotten relief and satisfaction by working with therapists certified as a Bonnie Prudden Myotherapist. It is a shame that insurance companies won't cover drugless, non-invasive methods such as this! Bonnie Prudden's Myotherapy program is promoted as an affordable, cost-effective way to get relief from pain and to learn how to prevent a recurrence through muscle reeducation. Perhaps, since cost is an issue, some extra time with your myotherapist learning a variety of exercises and stretches would be beneficial so that you could go longer between sessions.

Other "hands-on" methods include "Reiki," an ancient Tibetan healing art involving the placement of hands on the body to promote calm and well-being. It is even being embraced by a number of medical doctors. "Reiki empowers people and helps them mobilize their own inner resources for healing," says former surgeon and Chief of Alternative Therapies at St. Elizabeth's Medical Center in Boston, Pamela Pettinati, M.D., for *HEALTH* magazine, April 1998. This method is even being requested for study by medical students at Brown and Tufts Universities. You can get more information locally from the Reiki USUI Center for Natural Healing, (303)782/9657.

Other massage techniques include, but are not limited to: Accupressure, Lomi-Lomi, Myofacial Release, Rolfing, Craniosacral, Shiatsu, Reflexology, and Swedish massage techniques. All have their good points, limitations, supporters and detractors. The best place to start when looking for a therapist, or to find a method that is best for you, is to call the National Certification Board for Therapeutic Massage and Body work (800-296/0664) for a list of certified therapists in your area. You could also check with the Massage Therapy Institute of Colorado (303-329/6345) or any one of the other fine schools listed in the Yellow Pages. Massages can be pricey (fees average about \$1.00 a minute) but the right technique can work wonders!

You did not mention what sort of exercise you enjoy or participate in so I am going to take the liberty of suggesting a few that are gentle on the joints yet “kick butt” for both your muscles and cardiovascular system.

Swimming laps is a great way to get a total body workout while at the same time gliding along without impacting your joints (assuming you don’t lose yourself in the moment and crash into the pool wall!). If the idea of swimming laps causes your brain to go numb, try Aquatic Fitness, which is like aerobics in the water. Most classes are conducted in the shallower parts of the pool, with the advanced classes in the deep end.

Bicycling is also a great “easy-on-the-joints” way to get fit. Walking is the most affordable and can be done almost everywhere. Regardless of which method you choose, I hope you find a way to enjoy life as pain-free as possible!

**LINDA BUCH-BODY LANGUAGE-JULY 28, 2002**  
**STAMINA IMPROVES AS CALORIES BURN**

*"I've been doing cardiovascular exercise for about 7 months now to lose weight. Over time, my stamina has increased and I am able to do the same exercises without much difficulty. Does this mean I am no longer burning the same amount of calories as I did at the beginning? Do I need to increase the duration or the difficulty of the workout to continue burning the same number of calories? Also, is breathing rate a good measurement for how many calories I am burning? Some days it seems like the same exercises are more difficult than other days, yet I wonder if this makes any difference in the number of calories burned or if I just have more energy on certain days."*  
Donnee Brito, Westminster

Time for a simple study on what puts the "fit" into *fitness*! When you first started to exercise, it was probably a real ordeal just to push yourself through 15 minutes. As you continued to put work demands on your body, amazing things started to happen: your heart muscle became stronger, larger, and thicker, and your body started to build more "roads," called capillaries, not only to the heart and lungs, but to all of your other muscles as well. In addition, your blood vessels became larger (dilated) in order to accommodate the demand you put on them, which enabled them to carry blood and oxygen more easily. This means the work load for your heart and lungs *decreased*, allowing you to go further and longer than when you first began.

As for breathing, your ability to exercise longer and stronger improved with training. Your newly formed and expanded capillaries carried oxygen around more efficiently enabling you to breathe a lot easier. As for how hard to push yourself, if you can barely say your name without gasping, you are probably pushing too hard; if you can recite the Gettysburg Address without taking a breath, it is time to push your efforts up a few notches.

Since the larger muscles of your arms and legs are probably involved in your exercise routine, some additional muscle was acquired which also demanded more oxygen-rich blood. More capillary "roads" were built which helped to bring the oxygen-rich blood to the new muscle. When this all came together (probably after about six to eight weeks of consistent exercise) you suddenly realized you didn't seem to be working as hard. Congratulations! You have experienced the "training response," a gift to you from Mother Nature for being a good exerciser. You can continue to become more fit by challenging yourself with different and/or more difficult workouts.

Because exercise stimulates the growth of muscle, you are actually using more calories, not fewer. Muscle is more metabolically active than fat. This is because muscle contains the oxidative enzymes and mitochondria (a sort of cellular furnace) that help to utilize fat as an energy source, reducing its current role as seat padding! Trained (exercised) muscle becomes larger which increases the available mitochondria and oxidative enzymes. As Covert Bailey says in his book, *Smart Exercise*, "[The muscles] become fat-

burning machines, and you become a better butter burner.” Be sure to add some strength training to your routine at some point to keep valuable muscle viable and strong.

Rather than worry about how many calories you are burning, focus on how much healthier you are becoming by being consistent. Exercise keeps you young, keeps you mobile, reduces body fat, strengthens the immune system, and lowers blood pressure. Realize the enjoyment of the task at hand as opposed to using your body as an abacus for calculating “spent” calories. When you are 70 to 90 years old, you will probably still be mobile and independent--walking, hiking and traveling to your well-exercised heart’s content--rather than the alternative.

As for low-energy days, we all have them. But, where an unfit person might succumb to a touch of “the vapors,” you are up and moving. Way to go!

## **Linda Buch-BODY LANGUAGE-June 23, 2002**

*"What are the best exercises to do to improve posture? I know my shoulders are a weak link and I know Pilates is very good for posture."*

Sue Malone, Castle Rock, CO

I get downright peevisish about posture. Sometimes it is tempting to cast all those worries about assault charges aside and just push/pull the people's slumping shoulders and hips back into proper alignment! So far, I have managed to restrain myself.

Good posture is POWERFUL. It expresses confidence, vitality, and youthfulness. Our bodies are naturally designed to enable us to move gracefully and efficiently, yet many of us fall into poor postural habits. Everyday tensions and stresses are often absorbed by our bodies and compounded over time. This has a domino effect, creating a structure whose integrity is sorely compromised--emphasis on "SORE!" Poor posture is manifested in many different ways. Mentally, poor posture can contribute to tension as well as the heightened physical stress. Physically, when your spine is compressed, the internal organs are squeezed as if they are in a vice, and lung capacity can decrease, causing your nerves and blood vessels to become constricted. This can increase the potential for chronic back pain, neck pain, and headaches.

Women's posture is often a legacy of how we carried ourselves as young girls and adolescents. Many young girls ruined their posture during their formative years thinking, among other notions, that slouching forward would make them seem submissive, shorter or less visible. Men often assumed the "bully posture" to look "cool." So, pay attention to that annoying little voice in your head (your mother!) telling you to "Stand up straight! Don't Slouch!"

Standing and sitting properly keep your muscles in balance, allowing your spinal column and all of the surrounding muscles to work in harmony, thus providing you with pain-free mobility. Poor posture indicators, according to physical therapist Deborah Ellison, are: "collapsed arches in your feet; an elevated hip or shoulder; one side of the body rotated forward or back; pelvis and hips tilted to the front, back or side; rounded back; drooping chest and shoulders; head jutting forward." These misalignments are often caused by muscle imbalances from poor sitting or standing habits, or from the body's own ability to work around muscle weaknesses due to an injury.

But hope for the posturally challenged abounds! Pilates is an often strenuous technique previously used by dancers to strengthen the muscles of the back, hips, and abdomen. The exercises performed in a Pilates class will bring all of these muscles around the spine into balance and alignment. "Pilates uses spring-based equipment in all conceivable planes of motion, involving precision, awareness, and the use of breath. It is

designed to “strengthen and lengthen muscles from the core out to the extremities, open up joints, and release tension,” says the brochure from the Phoenix Center for Health Excellence in Cherry Creek. Pilates *mat* classes are offered at many fitness facilities as well. These classes mimic the Pilates exercises but without the machine (called the “Reformer”) component.

In the Denver area, Yoga classes and facilities are as abundant as “Road Work Ahead” signs. If a Pilates studio is too difficult to locate (or pay for), Yoga is another great way to get in touch holistically with your body’s strengths and weaknesses.

Another way to retrain your muscles is through the Alexander Technique (1-800-473-0620) or the Feldenkrais Method (1-800-775-2118). The Alexander Technique works on straightening the spine; the Feldenkrais Method uses a movement system that changes how messages are transmitted from the muscles to the brain. Both disciplines strive to change bad habits and help the body achieve proper balance and alignment.

Regardless of the path you choose, it is worth the time and effort because dysfunctional muscle patterns can create major health problems if allowed to persist over a lifetime.

## Linda Buch-BODY LANGUAGE-June 30, 2002

*"After taking the heart recovery test I am wondering if a lower working heart rate skews the results? I can only get my heart rate to 136 beats per minute. So, with a one minute recovery of 120 beats, I have a 1.4 score. I am 43 and have been running for 19 years, currently running 16 to 20 miles per week at four miles per outing. Am I not working out hard enough? Any insights?"*  
"Rapid" Robert, Colorado

Way back in the last century, about 1997 or so, the standard formula for figuring out your maximum heart rate (the maximum number of beats per minute your heart should beat according to your age) was simply to take 220 (the presumed maximum number of beats the average person's heart can handle for one minute) minus your age. This formula was developed by William L. Haskell, MD, a professor at Stanford University and was only intended as a guide, not as a gold standard. It is thought that 30-40% of the population does not fit this formula at all. Research by Hirofumi Tanaka, Ph.D., University of Colorado, reveals that the traditional formula "underestimates maximal heart rate for older adults and overestimates it for younger adults" (*IDEA Personal Trainer, Nov.-Dec. 2001*). In spite of newer formulas being drafted by researchers, the majority of fitness agencies still use the original as their primary guide.

Why does this even matter, you ask? Because the heart is a muscle and it, like the other muscles in your body, needs to be exercised at 55-80% of your maximum in order to stay healthy and strong. One way to check your heart's fitness is to observe how quickly it recovers after huffing and puffing your way through an aerobic workout of at least 20 minutes or more (where you are breathing deeply yet still able to say "Mary Had a Little Lamb" without gasping for air). Most of the resources I use suggest stopping after the aerobic portion of your exercise session, immediately take your pulse, then rechecking your pulse again after one minute. Subtract the two numbers to see how quickly your beats per minute (BPM) drop toward your resting heart rate (to find this number, take your pulse first thing in the morning). The quicker it falls, the stronger and better trained the heart muscle.

According to the customary standards mentioned above, your maximum heart rate is approximately 177 BPM, give or take 10%. Using these numbers, you are working out at approximately 77% of your maximum, which sounds like a decent pace. This means you have either an exercise problem or a cardiac problem.

In a 1999 national radio interview, Dr. Michael Lauer, cardiologist at the Cleveland Clinic, Cleveland Ohio, reported "We found was that this change in heart rate during the first minute after exercise was an extremely powerful predictor of mortality, in fact it was the most powerful predictor of mortality." He continued to report, "We'd like to see is the heart rate fall by at least 20 beats per minute during that first minute after

exercise." (Reference: Cole et al. *Heart-rate recovery immediately after exercise as a predictor of mortality. New England Journal of Medicine* 1999; 341:1351-1357.)

Since I have no way of knowing how hard you are working out, what sort of terrain you are encountering, how long it takes you to run the four-mile average, what sort of genetics you have inherited, or what medications you may be on to prevent your heart rate from getting above 136 BPM, I strongly encourage you to contact a cardiologist and set up a complete battery of tests for your cardiovascular system. These tests should at least include a stress test on a treadmill, blood work, and a lung capacity test with a spirometer (a device which measures the lungs' capacity to hold air, ability to exchange oxygen and carbon dioxide, and so forth.)

Once this information is analyzed by your cardiologist, you will have a better understanding of your situation. I know you want to jog worry-free so don't procrastinate-call today!



**Linda Buch-Body Language-June 9, 2002**

**Figuring Fat Grams and Daily Calories**

*"How many fat grams per day are recommended and how do I determine how many calories per day to consume to lose weight? I'm 5'9" and wish to lose 50#. I try to get in 4-5 half-hour sessions on the cardio equipment per week and lift weights twice a week. Mary Billmaier, Adams County, CO*

On National Public Radio recently, I heard an interview with an immigrant from Bangladesh. When he was asked why he worked so hard to emigrate to America, he replied, "I wanted to live in a country where even the poor people are fat." Seems the whole world knows Americans do not suffer from too few fat grams. Interestingly, the more fat-gram conscious we have become, the fatter we have gotten. Thanks to some nefarious marketing, "fat-free" has somehow become an "all-you-can-eat-for-free" concept. If you are a label-reader, you will notice that the calories in the "fat-free" items are often greater than the calories in the regular items. Fat carries flavor. In order to make up for this, the sugar content often escalates, bumping the caloric content in the process.

Humans need *some* fat in their diets. Vitamins A,D,E, and K are all fat-soluble so without some fat in our food we would suffer nutritionally. But not all fats are created equally. Some are good, some are bad, and some are REALLY ugly. Everyone has heard the terms "saturated, polyunsaturated," and "monounsaturated." What makes each of these fats different from one another is how they look chemically. If you jump into the "Way-Back Machine" and peek into your high school chemistry class, you will recall that chemical compounds are composed of two or more elements. The key elements in fat are hydrogen and carbon. How they are bonded together is what makes them saturated or not. "Saturated" fats (from tropical oils and animal fat) have the maximum number of hydrogen atoms. This make this fat harder for the body to break down but really easy to store (like on the butt or on the arteries). "Polyunsaturated" fats (vegetables, some nuts, grains, and fish) and "monounsaturated" (olive oil, avocado, peanuts, cashews) fats lack some hydrogen atoms, which makes these fats easier for the body to break down and use for energy, vitamin transportation, and so forth.

The truly "nasty" fats, however, are the *trans fatty acids* which are artificially created in a lab by adding hydrogen to a perfectly good polyunsaturated fat in order to improve the shelf-life. This is know as "hydrogenation" and has been found to be even more harmful to cardiovascular health than saturated fat.

Studies published in the INTERNATIONAL JOURNAL on OBESITY (vol. 25, #1503, 2001) have shown that people who included unsaturated fats from olive, nut and canola oils (often called the "Mediterranean Diet") stuck to their reduced calorie diets better than those who drastically reduced their fat intake. Also, those who increased their

fruits and vegetables (8 to 10 servings per day) also had long term success. As for how many fat-grams you should eat in a day, you must first find out how many calories you need to stay right where you are weight-wise and, in the process, do the math to figure out what percentage of your calories need to come from fat (30% should come from fat, primarily from unsaturated sources). To do this you must calculate your Basal Metabolic Rate (BMR), which means you will have to figure out how much of you is fat and how much is lean mass (muscle and organ tissue).

To find your BMR, either make an appointment with a Registered Dietitian, make an appointment with a facility that has a body composition machine called a "Bod Pod," (1-800-4BODPOD to find local vendors) or pick up a scale by Tanita which both weighs you and reads your body fat. (Keep in mind that the "Bod Pod" will be far more accurate than an inexpensive scale.) Since lean mass burns about 35 calories per pound and fat burns only 3 calories per pound, whip out the calculator and figure your daily caloric needs in order to maintain your current weight. As long as you accept this number as a fairly rough estimate, and you keep up with your workouts, you should be on your way to both your weight-loss goals and a healthier diet.

## LINDA BUCH-BODY LANGUAGE-MARCH 17,2002

*"Someone at the gym told me I am wasting my time on the treadmill because I hold onto it while walking. I set the incline between 10 and 15 percent, and the speed between 3.5 mph and 4 mph. I go for 30 minutes. If I let go, I won't last 20 seconds."* Kelcie Wayne, Denver

A bazillion years ago, in the 1960's or '70's, researchers in the field of cardiac health noticed a phenomenon among symphony orchestra conductors Leonard Bernstein, Sarah Caldwell, and Seiji Ozawa. In spite of sometimes sporadic exercise regimens, their cardiovascular systems were in superb condition. Seems there are a lot of health benefits to those orchestra-conducting arm movements! The adding of arm equipment to treadmills and the popularity of power walking soon followed.

Obviously, the legs do most of the work on the treadmill, but getting the arms into the act can increase calories burned by as much as 25%. According to *Running Research News* (November 1991), "Each 1% increase in the elevation requires 4% more energy." At your current 10-15% elevation, you have already bumped your caloric output. However, I would like to suggest that change is both necessary and appropriate in order to stay mentally challenged and physically balanced. Some great ways to spice up your work out and increase the benefits of your exercise are mixing up the inclines and speeds. This will allow you to use your arms when walking on the treadmill which will help you tone your upper body.

According to *Walk Off Weight* newsletter (June 1997), using the arms correctly can boost your caloric burn by as much as 20%. The arms should be bent at a 90 degree angle and swing in an arc from your waist to the bottom of your chest. Keep your hands in a fist and make sure your shoulders are relaxed. Another benefit to knocking your incline down a bit is that it will allow you to experiment with light hand-weights (1#-2#). The occasional use of light hand weights (for experienced exercisers) can make a workout more interesting.

Allison Serrell, a fitness writer for *Health* magazine (May 1999) suggests using what are called "intervals." For example, warm up for five minutes at your usual pace. Speed up the treadmill by .3 mph each minute for 4 minutes. For the next five minutes, alternate between grades of 3% to 6% every other minute. Next, set the treadmill at 10-15% and climb for 4 minutes. Repeat the program and cool down. Try any number of variations on this routine. The change in grades and speed will allow you to get your arms moving and will involve more of your leg muscles in the process. By staying at the higher inclines all of the time, your upper leg muscles are getting most of the attention. By mixing things up, your workout will be more balanced. At some point, these improvements could make it possible for you to walk at the higher inclines without having to hold on.

Many people are getting back into fitness, often after a long lapse. Some find the treadmill convenient but a bit scary. Should someone new to exercise be intimidated into walking sans hands before they feel ready? No. With 61% of Americans now considered medically obese, and with only 14% of Americans engaging in the recommended minimum of 20 minutes of exercise per day, I believe the Denizens of Dogma should be encouraging rather than admonishing.

The boost in cardiac output between holding on to a railing or using the arms can be enough to push the heart rate too high for someone who is out of condition. Be sure to wear a heart rate monitor, or pay close attention to your Perceived Exertion (how you *feel*). After a week or two of consistent workouts, a beginner should experiment with different speeds and elevations.

**Linda Buch-Body Language-March 10, 2002**

### **Is Creatine safe for Young Adults?**

*" My son is a 21 year old college student. He is 5' 11" and weighs 155#. He is very active in sports and has lifted weights for 3 years under the guidance of a fitness trainer. He would like to add some bulk and has looked at supplements such as creatine. We have discouraged this, feeling that perhaps he could achieve this with diet or another approach. He and I are interested in your opinions and suggestions."* Brent Heaviland, Golden

*Citius! Altius! Fortius!* (Swifter! Higher! Stronger!) This is the Olympic motto, dating back to the Ancient Greeks. The search for ergogenic aids for this sort of athletic excellence has not changed much; in fact, even the Ancient Greeks experimented with herbal concoctions to try to get an edge over opponents. There are a lot of supplements on the market hyped largely with anecdotal evidence. Your son must be commended for wanting to know a few facts before diving headlong into the shark-feed frenzy that is often prevalent in some "whadoyabench" weight room cultures. Of all the supplements on the market, creatine monohydrate seems to be the one that actually works and, more importantly, works safely.

Creatine phosphate is a naturally occurring substance in the body. It is found in red meat and fish but is largely depleted from these foods when cooked. Creatine phosphate is essential for the production of ATP (adenosine triphosphate), the fuel every muscle needs in order to contract. When a muscle contracts, the ATP is "burned" and loses one of its phosphate molecules, becoming ADP (adenosine diphosphate). Creatine phosphate donates its phosphate molecule back to the ADP (diphosphate), turning it back into ATP (triphosphate) so that the muscle can continue to work. By loading the body with extra creatine, we are filling our potential stores right to the brim. This allows the muscles to work harder, longer, and recover faster--a real benefit to anyone who is trying to increase muscle size and power.

Creatine is widely used by athletes (it is not a banned substance) who are engaged in anaerobic activities involving strength or short bursts of speed. This supplement has not been found to be particularly useful for athletes in endurance events. Creatine supplementation, according to exercise physiology experts William J. Kramer, Ph.D., and Jeff Volek, MS, RD, of Ball State University in Muncie, IN, "significantly enhances the ability to maintain muscular force and power output during exhaustive bouts of cycling, running, repeated jumping, swimming, kayaking/rowing and weight lifting. Improvements in bench press strength and 40-yard dash times have been documented, as have significant increases in fat-free mass."

When "loaded" into the muscles, and maintained properly on a daily basis, the creatine stores tend to remain high for as long as a month, which means you can cycle on and off

safely and still hang on to the results of your hard work. Be careful of “if a little is good, more is better” type thinking, however. Creatine has a saturation point which means the body can only hold so much. Anything over this amount is excreted in the urine.

Creatine is still being studied for affects over the long term. Some reports of muscle cramping, diarrhea, and nausea have been reported but only in isolated cases. If you want to try this supplement, try to buy from a USA manufacturer who is registered with the FDA . This is a popular product. Beware of “bargains.”

While creatine appears to be safe for a number of populations (it has been used successfully with muscular dystrophy and ALS patients, among others) I feel that youths and teens should concentrate on developing good exercise and eating habits, eschewing ergogenic aids, until they have matured physically and mentally. The introduction of bodybuilding supplements at a young age ties self-esteem to artificially obtained physique, power and strength. I believe that it is healthier for youths and teens to “fill out” naturally first.

It sounds like your 21 year old son has spent enough time focusing on himself to develop the awareness and maturity necessary to make an appropriate decision relative to his goals, and, to choose wisely.

*(Additional resources for this article included U.S. Pharmacist, 8/01; and [www.webmd.com](http://www.webmd.com))*

## **Linda Buch-Body Language-May 12, 2002**

*"My husband and I are in our early 60's and have resumed exercising regularly. Since mid-January, we have been going to the gym 3 to 4 times a week, doing 20 minutes of aerobics, either upper or lower body machines for @ 20 minutes, and a series of core-strengthening exercises and stretches. When we are finished we feel exhilarated, but within an hour or so we are TIRED! How long does this continue?" Jackie Powell, Denver*

### **RESTORING ENERGY AFTER WORKOUT**

Fitness clubs are being inundated with members over age 50 and apparently the two of you are leading the charge! You both have organized a terrific, well-balanced fitness program for yourselves which will enhance your vitality for many years to come. Exercise is the best antidote for the loss of muscle and bone which often accompanies aging, especially among the sedentary. It also helps maintain flexibility, boosts immune response, improves heart and lung capacity, and reduces the risk for high blood pressure, type 2 diabetes, osteoporosis, and coronary heart disease. Regular exercise has also been found to help keep our mental faculties sharp and clear (which may or may not help you remember where you put the car keys)!

Like it or not, our bodies change as we age. Even the most elite athletes find they must take more time between exercise sessions in order to feel good and to avoid injury. A Danish study, published in 1990 by H. Klitgaard, Ph.D., found that muscle fibers—particularly the "fast twitch" fibers (the ones that can handle quick or explosive moves) become increasingly weaker and even wither away in older adults, particularly among those who do not exercise. Your strength training workouts will reverse this weakness and will restore a lot of muscle mass.

Fatigue at the beginning of a new program is normal, therefore, but should disappear within a couple of weeks. After all, your body has to adjust to your new output levels by expending a lot of energy to rebuild tissue and restore energy stores in the muscle and liver. Continuing exhaustion could mean that you are lifting too heavy or pushing yourselves too hard on the aerobic equipment. As we age, our bodies need more time to recover from the lifting, and from the huffing and puffing. It may be necessary to reduce the weight load, cutting back on the number of sets, and allowing more time between exercises for proper recovery.

Also, you did not mention any sort of "warm-up" prior to starting your exercises, such as light warm-up moves using resistance bands and/or Swiss balls. One of the fitness professionals at your facility can show you some good moves to get your muscles warmed up and your body ready for exercise. Doing some light recovery stretches in between your lifting sets may also help.

The last aspect for your consideration is nutrition. Nutritional needs don't really change that much as we age *for those who exercise*. It had been previously assumed that caloric intake had to decrease to allow for slower metabolisms. However, recent studies have shown that active seniors can and should keep their caloric intake at the levels recommended for men and women aged 25-50. In order to maintain and restore adequate glycogen stores (the body's preferred food), be sure your calories are at least 60% complex carbohydrates (fruits, vegetables, grains, beans). High quality protein (about 1 gram per kg of body weight for seniors) is also important and keeping your saturated fat intake low (10% or less of your fat calories) goes without saying.

The last key for restoring energy is to be sure your water intake is adequate. As we get older our ability to sense thirst declines. As exercisers, this ability is crucial! According to Jenna A. Bell-Wilson, MS, RD, LD (*IDEA Personal Trainer*, April 2002), "The effects of dehydration during exercise can include an increase in core body temperature, elevated heart rate, decreased blood volume, and diminished physical performance."

So, be sure to eat, drink and be merry! Considering your activity levels, I suspect the two of you will be doing that for a long time to come.



**Linda Buch--Body Language--May 19, 2002**  
**Reorganize and Reassess to Cope with Weight Frustration**

*"I'm doing everything right and can't lose weight-help! I am 37, 5'5", about 15# overweight and at wit's end. I'm at the point where i am just trying to eat as little as possible. i don't believe the whole "you can't lose weight by not eating because your metabolism slows;" anorexics lose weight by not eating. I don't eat fast food and do ashtanga (heat) yoga 3-5 times a week. I eat fruit, veggies and protein. I count carbs and try not to eat more than 100 grams per day (a Doctor told me i ate too many so i really cut back-lost weight initially but gained it back). My thyroid is fine, i don't eat late at night, rarely drink alcohol (i drink water). I lift weights and now walk on treadmill at 4 MPH for an hour 3-5 times a week. my clothes are sooo tight and i just get more and more depressed. i wake up every morning feeling bad and obsess over my weight all day, every day." MZ, Denver*

Holy frustration, Batman! I ran out of red flags after you mentioned "counting carbs" so what we are going to do, MZ, is start from scratch. Your first task is to throw out all of your diet books, pack up all the clothes that do not fit properly, and lock your bathroom scale in the basement. We are going to reorganize your diet and exercise habits and, hopefully, your priorities.

Your second assignment is to contact the Colorado Dietetic Association (1-866/790/2200) for a referral, specifically asking for a registered dietitian who specializes in women who exercise. Your dietitian will do a body composition assessment to determine what percentage of your total weight is body fat. The lean mass-to-body fat ratio is infinitely more important than your weight as it appears on a bathroom scale. A woman your age and height would be healthy at about 25% body fat. Your total weight at this percentage is immaterial. A registered dietitian can design a healthy diet to suit your lifestyle and metabolism.

Like it or not, millions of years of evolution, where humans have had to deal with feast and famine, have taught our systems to hold onto fat (which, at 9 calories per gram, is like gold to Ft. Knox) when calories are reduced and to store fat when food is plentiful. Anorexics don't "lose weight," MZ, they starve themselves by refusing to give their bodies the calories necessary even for organ function. This forces the body to feed off itself--creating a cascade effect where organs cease to function and electrolytes go severely out of balance--often causing death. I am going to guess that you are not eating the recommended 1,700-2,000 calories per day. Since you were unfortunately talked into the "low carb" lunacy, rife among the "lose weight fast" charlatans, you are depriving your body of its preferred fuel: *carbohydrates*, specifically fruits, vegetables, grains, and beans. 60% of your caloric intake should come from these nutritionally dense sources, with 25% from fat and 15% from protein. Working with a dietitian will help you get your systems back on track and help your body release the brakes put on your fat stores

due to inadequate caloric intake and out-of-balance food choices. A great book to buttress your reeducation is *Nancy Clark's Sports Nutrition Guidebook* (Human Kinetics).

Your third task is to obtain a heart rate monitor. Walking on a treadmill is fine but you may not be pushing yourself to appropriate fitness achievement levels. A working heart rate of up to about 150-155 beats per minute (BPM) for 20+ minutes (excluding warm-up and cool down) is probably what you need to strive toward. A fitness professional at your gym could help ascertain what is best for you. This sort of assistance should be free with your membership.

Yoga and strength training are both worthy endeavors and should be continued if you enjoy them. Exercise is a tool, not a weapon. If you do not really enjoy them, keep trying new things until you find an activity you just plain *love*. You are fortunate to be living in Colorado because just about every organization helping people afflicted with a disease or disability sponsors races, walks and bike rides almost every weekend to raise money and awareness. Training for and participating in more altruistic endeavors might make exercise more fun. You would be doing good for others, be outside, and add some depth and breadth to your personal goals.

Your fourth task is to get a referral to a therapist who can help you with body image and possibly treat you for depression. It is not wrong to want to improve your health and to lose body fat that could endanger your well-being. Allowing a number on a scale to suck the joy out of your life, however, is a torment best dealt with through professional counseling. You are not alone in this self-flagellation. Author and fitness professional Deborah Low writes in *The Quest for Peace, Love and a 24" Waist* (Bonneville Books), "The weight struggle is very real when we praise the scale as our personal deity, yet scales merely measure objects, not human worth." Your ultimate goal, says Low, "must be to make peace with your body, and reverse your negative self-image." You are worth far more than the number on the scale, MZ! Good luck and I hope you can find the fun and the joy. You deserve it.

**Linda Buch-Body Language-March 24, 2002**

*"Do facial exercises really work to alleviate and/or prevent wrinkles?"*

Marianne K., Denver CO

Christopher Marlowe wrote that Helen of Troy's face, "launch'd a thousand ships" (*Doctor Faustus*). Indeed, the desire for facial pulchritude not only spans eons of history, but is also unlimited in scope regardless of age, gender, or race. But, Shakespeare really nailed the essence of facial relevance when he observed, "There's no art to find the mind's construction in the face" (*Macbeth* I. iv). Indeed, after a lifetime of joy, sorrow, tension, stress, pain, and pleasure, our faces often tell the world way more than we want it to know!

We all have features that we either dislike from the beginning, or features that have become less agreeable over time, like bags under the eyes, double chins, sagging skin around the cheeks, wrinkles around the mouth, and so forth. There are many factors involved in the aging of facial skin: environment, complexion, a smoking habit, weight gain/loss, skin type and menopause just to name a few. I found pages and pages of "solutions" to these problems all over the Internet--everything from Chinese herbal wraps, chin straps, and face-muscle flexing equipment, to lotions, potions, and massaging techniques. I have no idea if any of these work but I do know that our faces have a few hundred muscles (plastered every which way over our skulls) that allow us to speak, chew, laugh, frown, smile, sleep, and scream. It would stand to reason that there would be exercises designed to help keep our faces from falling into the soup as we age.

George Foreman, whose face has experienced some serious pummeling during his boxing career, answered a similar question in his column in the USA Magazine insert in the Sunday Denver Post a few years ago. He advised a woman complaining about her double chin to do what he referred to as his "time-tested neck workout." Here it is verbatim:

"1. Lie on your back with your shoulders lifted slightly off the floor. 2. Rotate your head to the left; repeat to the right. 3. With shoulders slightly arched, reach as far back with your neck as you can, then tilt chin forward toward chest. 4. Start with small sets (four times to the left, then four times to the right). Eventually build up to 10 reps."

Michael Meyer, at [www.ageless.co.za](http://www.ageless.co.za), listed a number of exercises (involving various positions of the eyes, nostrils, eyebrows, and lips) designed to help make the face look younger. His company, working in concert with Sallamander Concepts, recommended a book, Facercise: The dynamic Muscle-Toning Program for Renewed Vitality and a More Youthful Appearance, by Carole Maggio. I cannot personally vouch for the effectiveness of any exercises listed on the website or in the book but they were professional enough to state that there are no guarantees on their effectiveness. Others have not been as forthright.

A St. Petersburg Times newspaper article by Deborah O'Neil (August 6, 2000) did an exposé on a battery-powered face mask called "Rejuvenique." Inventor George E. Springer (who claimed to be a licensed chiropractor in Florida) registered it with the US Patent & Trademark Office in 1995. According to the article, "Linda Evans became the paid spokeswoman for the mask, which has been claimed to tone skin and reduce fine lines and wrinkles by transmitting mild electric shocks to facial muscles." Many claims were made about the mask's effectiveness, including one stating that clinical trials conducted "show 80 percent of participants experienced a reduction in the appearance of lines and a more radiant complexion." These claims spurred an FDA investigation.

Dr. Debra Jaliman, a spokeswoman for the American Academy of Dermatology, encourages the FDA to pull the "Rejuvenique" off the market. "People are always exercising muscles," says Dr. Jaliman, "but facial muscles are totally different. The more expressive your face, the more you move those muscles, the more lines you're going to have in your face."

Most doctors say that the best beauty product you can buy for your face is sunscreen. I might also suggest yoga for stress-relief, exercise for good circulation (this *is* a fitness column!), and plenty of gut-busting laughter for overall rejuvenation.

## **Linda Buch-Body Language-May 26, 2002**

*"One aspect of weight loss that needs covering is the cost. How many dollars an hour does a physical trainer cost? What is the cost of Power Bars (or equivalent) and do you recommend them? Most of all, why the big emphasis on taking 2 hours to prepare expensive special meals which are consumed in less than 15 minutes--isn't there a more cost-efficient and time-efficient way for us to eat proper food?" Bob Askey, Longmont, CO*

### **HEALTHY EATING ON A BUDGET**

One of my clients has this sign by her front door: "Martha Stewart Does *Not* Live Here." Short of having the ubiquitous "Martha" do all of our food preparations, healthy cooking can be both a struggle and a challenge for busy, weight-conscious adults. Since the bulk of your concerns seem to be with food cost and preparation, let's start there.

The first rule is: ALWAYS MAKE A LIST AND STICK TO THE LIST. Your list should include certain staples which will ensure that, regardless of time constraints, you can always toss together a healthy meal. Before heading to the store, take stock of what you have in the cupboards...including the stuff jammed way in the back that hasn't seen daylight since the Carter administration. Once you have assessed your soup, canned food, dried bean, rice, and pasta situation, check your herbs and spices. If you keep a variety of spices on hand, you can turn any meal into a United Nations smorgasbord. After taking inventory, create a menu for the week. At first, it may be time-consuming to ensure proper nutritional balance has been taken into account. Experience and a few good books (like those by Jane Brody and Nancy Clark, and magazines like "Cooking Light") contain good information about nutrition along with many recipes that are easy to prepare.

The second rule of food gathering is: NEVER SHOP WHEN HUNGRY. Obey this rule and you will have greater resolve when you pass the snack cake display. Hungry shoppers have far less resolve when Ding Dongs are on sale. When shopping in the large supermarkets, *stick to the perimeter of the store*. Most of the fresh produce, dairy products, meat, fish, and bread are located around the edges while the highly processed prepackaged junk foods are located in the aisles. Except for your purchases of soups, grains, and canned fruits and vegetables, try to avoid the centers of the aisles. Other great items to keep in stock are frozen fruits and vegetables. When you hit the frozen food area, be aware that pizzas and ice cream have been known to leap into shopping carts entirely on their own power.

Your preparation time at home can be further reduced by cooking certain items in advance, such as chicken breasts and brown rice. Stored properly, these items can keep for 4-5 days until you need them for a stir-fry recipe or a crock pot stew.

As for “meal replacement” bars, Bonnie Liebman, Director of Nutrition for the Center for Science in the Public Interest (publisher of the Nutrition Action Health Letter) reminds us that only whole foods (which can come from canned and frozen sources as well as fresh) contain the necessary phytochemicals and other nutritional nuances required for optimum health. No two to three ounce bar can accomplish that feat. I suggest that you use good sense with anything that claims to “replace” actual food. Keep them around for “emergency use only” to keep the hunger, and the junk food, at bay.

Personal training fees will vary. In Denver, fees range from \$40.00 to \$80.00 per session, often depending on whether you are using trainers who are employees of a specific gym or whether you hire an independent trainer. Fees can also be indicative of the person’s experience, education, and areas of specialization.

If you have doubts about your ability to organize your food choices, a few sessions with a Registered Dietitian would be a prudent investment. Keep a food diary for a week or two before your first appointment to facilitate the discussion. Most dietitians are experts at food/time management and can be very helpful when organizing your menus. By the way, eating more slowly can be a helpful habit for weight-loss. Try to stretch your dining to 25 minutes!

**Linda Buch-Body Language-April 28, 2002**

*"I have been on a fitness program for about 3-weeks now, eating low fat/carb food with cardio and weight training 3-times a week including cycling class. I am seeing results, have more energy and lost 5#. My main concern is that my butt seems to be getting bigger as I exercise. My trainer tells me the exercises he's having me do are to tone the glutes, but it's not really working. Do you know anything that will help decrease butt and upper thigh size? Also, how can I tighten the skin around my knees to make them look bonier?"*

Connie H., Lexington KY

**BODY SCULPTING ALWAYS A CHALLENGE**

One of the frustrating aspects of body transformation is the interminable time it takes to make the changes we want. Weight seems to pack onto the hips just by *looking* at chocolate! The fact that you have lost 5#, see results, and have more energy sounds like quite a lot in only three weeks time.

Your genetics may favor the pear shape (where the body fat tends to accumulate more at the hips and thighs), rather than the apple shape (which favors fat accumulation around the stomach and lower back). Regardless of your genetics, the only way you can reduce the fat from any particular place is by reducing your *total* body fat. In spite of the billions of dollars spent by the exercise equipment industry to convince you otherwise, there is no such thing as spot reducing.

A key phrase in your question is "my butt *seems* to be bigger." Remember that appearances can be deceiving. Keep in mind that exercise-starved muscle will respond very quickly. It is likely your gluteus muscles are developing faster than the fat is departing. As you continue with your exercise and diet program, you will begin to see the changes you are looking for. Since you are already working with a trainer, I will assume that you are doing a variety of exercises for the whole body. As long as your weight load is moderate and your repetitions are in the 12-15 range per set, you will see improved strength and shapeliness rather than increased size.

There are a couple of things I would recommend in order to round out, and perhaps speed up, your overall progress. The first aspect of your program to examine is diet. It is always a good idea to control your fat intake, keeping your fat calories at about 25% of your total for the day. Be sure that most of these calories come from unsaturated and monounsaturated sources like grains, nuts, vegetables, and fish. I also strongly advise you to avoid any diet that restricts your carbohydrate intake. Too many people are under the impression that carbohydrates are bread, potatoes and pasta, period. Carbohydrates are also fruits, vegetables, grains, and beans. These are high-fiber, highly nutritious foods that are absolutely essential for continuous energy and good health. High protein diets are not only unsustainable but also hard on the kidneys.

The Law of Thermodynamics is immutable: if calories ingested are fewer than the calories expended, weight will be lost. Eat more calories than you expend, weight is gained. A diet from a variety of sources will be easier to sustain and healthier for you in the long run. To determine the number of calories you personally need for weight loss, and to be sure your diet is nutritionally balanced, I recommend a visit or two with a registered dietitian.

Another area you may wish to examine is the frequency of your cardiovascular exercising. Try to accumulate 30 to 45 minutes of cardiovascular exercise five to six days of the week. Since the hips and butt area are a concern, be sure to do a variety of things such as kickboxing, rollerblading, and swimming.

I know it is hard to be virtuously patient, Connie! But keep at it and this time next year, you just might be surprised at how your body has changed.



## LINDA BUCH - BODY LANGUAGE - NOVEMBER 10, 2002

*"I work out 2-3x/week, doing cardio on the eliptocycle and weights with machines. My comfortable heart rate has increased from 110 to 135. How should I monitor my heart rate as I become more fit in order to increase my fitness? Should my target go up? Should I keep it at that rate for a longer time or try to increase my target? I do not clearly understand the physiology of this. Any suggestions? Irma, Colorado*

According to the MERCK MANUAL OF MEDICAL INFORMATION, "fitness" is defined as, "The capacity to perform physical activities." The CONCISE OXFORD DICTIONARY defines it as, "A state of good health, especially because of regular exercise." Your improvements in aerobic capacity are laudatory and certainly seem to fit with these two definitions. It is also terrific that you are more concerned with *fitness* than with *weight*! Two to three days per week is OK if you are happy with your current capabilities. However, if you are wanting more, you need to add another day or two to your current schedule.

A recent study conducted by Harvard researchers found that men (we can only hope that, one dazzling day in the near future, women will be included in such research) who exercised once or twice a week had 36% reduced risk of heart attack while men who exercised five or more times per week had a reduction of 46%. For pure health reasons, doing more is certainly worth considering. As for target heart rates, it is easy to get bogged down in little numbers which can distract from the larger, more important picture.

The human body loves change and challenge. The muscles, including the heart muscle, respond to increased work loads by becoming stronger and more efficient in the way they utilize fuel (fats, glucose, and oxygen).

The heart responds to increased training by becoming larger, which allows the heart to pump more blood with each beat. When oxygenated blood leaves the left ventricle of the heart, the cells in your body receive the energy they need to keep you moving. As your heart becomes trained through exercise, it becomes more efficient at pumping greater quantities of oxygenated blood, called stroke volume. Since the improvement in stroke volume carries over to rest as well, your heart will beat more efficiently even when you are not exercising. (Compare your current resting pulse rate to what it was before you started exercising and I will bet that number has dropped.) In short, you have replaced your small engine with one that is more powerful and efficient.

As for your actual beats per minute during exercise, what is good for you is specific to you and you alone. Age, health, and level of fitness are some of the determining factors. The standard "220 minus your age" formula has been used for decades to determine a persons maximum heart rate during an all-out "can-I-call-you-back-I-am-trying-to-out-run a cheetah" mode. Hirofumi Tanaka, PhD, researcher at the University of Colorado,

has proposed a new formula of 208 minus 70% of your age. According to Dr. Tanaka, the first formula tends to “overestimate maximum heart rates for younger adults and underestimate it in older adults.” He also acknowledges that his new formula could be off by 10 beats either way as well.

Another method for gauging exercise intensity is the Rate of Perceived Exertion scale created by Gunner Borg, PhD. The Borg scale qualifies “six” as no exertion and “20” as maximal. Somewhere between these numbers is where you will feel your appropriate exertion level.

As long as you are in good health, don’t be afraid to challenge yourself by experimenting with different levels of intensity. As fine as heart monitors are for determining exertion levels, listening to your own body is always best.

Home Workouts for the Holidays

Like it or not, ready or not, here come The Holidays. Our good intentions for abstemious eating and consistent exercising during the previous ten months usually end up at the bottom of the "To Do" list. The best way to survive is to immediately forgive yourself for falling off your otherwise sensible program and just get out there and enjoy the madness. There is a way, however, to keep the crushing post-holiday guilt-fest from becoming too all consuming: do a little bit for yourself every day that you can, even if you cannot get to the gym on a regular schedule.

You don't need a bunch of equipment and hours of time to remind your muscles that you haven't forgotten about them. Just buy a copy of THE COMMERCIAL BREAK WORKOUT, by Linda J. Buch and Seth Anne Snider-Copley, from the Tattered Cover or Amazon.com and take a gander at all of the exercises and stretches you can do in front of the TV in the comfort of your own living room.

Way back in the last millennium, the Surgeon General determined that inactivity was so detrimental to good health that it was akin to smoking a pack of cigarettes a day! So, for those who are contemplating a change in habits for the New Year, start now by performing some simple muscle and heart strengthening exercises during the holidays so that your good intentioned resolution seems less daunting.

For those who are already into an exercise groove, the suggestions in our book will keep you from falling completely off the sleigh, and will take the edge off the stress often felt when regular routines are interrupted. You can perform dozens of strength-building and metabolism boosting routines while watching TV, waiting for computer downloads, for water to boil, or laundry to dry. Take a two-minute break from gift wrapping, cleaning, cooking, and decorating and do something good for your body by taking a short fitness break.

The best exercises are the ones that you will do. We believe that, if they are easy enough to understand and perform without a lot of hassle, you will be able to sneak in a quick workout without having to spend a lot of time organizing for the task. Here are some exercises you can do any time and just about anywhere:

**PUSHUPS:** These are great for muscles in the chest, back shoulders and even the arms. Many people shy away from doing them because visions of "G.I. Joe" and "G.I. Jane" create a paralysis of confidence. Not to worry! Pushups can be performed against a wall, on all fours, on your knees, with your knees on a chair or, yes, even like "G.I. Joe/Jane." [page 48: "All-Fours Pushup]

LUNGES and SQUATS: Both of these exercises are great for the muscles in the legs (quadriceps, hamstrings, and gluteus, to name a few). The easiest squat exercise to perform is simply to stand up and sit down from your chair. An easy lunge is performed with one leg in front of the other. Variations abound. Buy the book and see for yourself! **[page 75: Lunges]**

CRUNCHES: These are staples for everyone who wants their abdominal muscles to be and feel strong and tight. While there is no such thing as spot reducing (drat!), strong abdominal muscles are essential for a strong back and can be performed quickly during a short break of 30 to 60 seconds. **[page 100: Crunches]**

THE HEART AND LUNGS: No time to run a marathon? Having trouble even scheduling a quick spin around the block? Try marching in place or even dancing to the car and food commercials. Little bits of activity can add up in a day. Don't pass up any opportunities to huff and puff a little. **[page 122: Marching in Place]**

*[NOTE: I do not think detailed explanations of how to execute the exercises shown is necessary. I chose samples for your consideration based on clear drawings and easy implementation] I*

## **Linda Buch - Body Language - November 24, 2002**

*"I've done a Pilates workout twice a week for the past six months. Can Pilates or other forms of resistance exercise take the place of strength training with free weights or machines? How can you balance Pilates with weight training? It feels like I'm using a lot of the same muscles, and I'm concerned about overuse if I try to do both." ET, Denver*

### **DIFFERENT FORMS OF RESISTANCE TRAINING**

For those of you have been off the planet visiting distant galaxies for the past 10 years, "Pilates" is an exercise system where moves are performed on equipment ("reformer") fitted with springs and pulleys. The eponymous "Pilates" was brought to this country in the 1930's by Josef Pilates, a German-born gymnast who worked in a British internment camp in World War I. He distilled holistic exercise methods of early physical culture scientists (notably Russian, Eugene Sandow) prominent in the early 1900's, organizing exercises with weights and pulleys, to help wounded soldiers become rehabilitated while on their backs in hospital. In the 1930's, Josef Pilates utilized this experience in America by opening a studio to help dancers become stronger, less prone to injury, and more supple. The Pilates exercise regimen evolved from an esoteric prescription for ballet dancers, to a Hollywood-esque craze, to a mainstream discipline for people who want to work on flexibility, core strength, and posture. It is now being taught not only on the aforementioned reformers, but also on mats, balls, and in swimming pools.

As a cross-training option, I like Pilates and have recommended it to friends and clients. Many of them have credited Pilates with helping them recover from injury, improve posture, and generally feel better. A properly conducted class taught by a well-trained professional can leave you feeling energized and more flexible. Pilates has its limitations, however. While anecdotal evidence abounds, there really isn't much scientifically researched evidence proving Pilates is *superior* to heavier resistance exercise for correcting muscle imbalances, improving posture, or strengthening the core. According to author, sports scientist and biomechanist, Dr. Mel Siff, "Suitably individualized Pilates and progressive weight training programs both can be used to 'correct imbalances' and improve postural alignment, which actually have a lot more to do with motor education than what means is used to achieve those ends." Also, there is no evidence Pilates builds enough muscle to completely replace the muscle-building benefits of a periodized strength training program. (A "periodized" program is one where the weight, number of sets and repetitions performed will systematically cycle over a period of weeks, alternating in intensity [the amount of weight] and volume [the number of repetitions per set] [Fleck 1999]).

It is a myth that strength training builds bulky, inflexible muscles, or, that this activity improperly stresses the joints and the back. A good strength training program will include exercises for all the muscles in the body, and will, of course by the very nature

of lifting, activate and help stabilize the core. Additionally, strength training can be performed in a variety of planes, with varying intensity, power, and speed, all of which are essential for strong muscles.

Another big plus from lifting weights is its positive effect on the bones. NASA research on astronauts found, "Exercises that best enhanced bone mineral density were high-load or weight-bearing exercises and those that increased muscle strength." Simply put, exercises using your own body weight (like push ups), walking and jogging, and weight training are listed as bone-builders. There is no evidence that Pilates provides enough stress on the muscles and joints to facilitate an increase in bone mineral density.

While Pilates does not own the patent on spinal stability, strength or power, it does work well *with* strength training. Since you are already enjoying Pilates twice a week, I recommend adding a couple of strength training sessions to your current program. This sort of variety is good for the whole body and will enhance your muscles without overtraining them.

## LINDA BUCH - BODY LANGUAGE - OCTOBER 13, 2002

*"I am planning on doing a triathlon (my first) in August, 2003. I wanted to make sure I was in shape for this. I started running a year ago, and I now run four times a week (4 miles three times a week, and 6 miles once a week). I do kick boxing twice a week as well. I am 5'5" and 145# (down from 178 a year ago). Do you have any training suggestions or a good training schedule for a first-time triathlete?" Katie Ruggle*

### TRAINING FOR A TRIATHLON

Those who participate in triathlons are uber-athletes performing in three different venues (swimming, bicycling, and running) all on the same day, usually in the blistering heat of summer. Successful triathletes have amazing cardiovascular systems and seemingly preternatural endurance capabilities. My sweatband goes off to both your goal to complete a triathlon and to your achievements thus far!

This is the perfect time to get your training organized for an August triathlon. Your first step should be to get a good log book so you can track your workouts and stay focused on the many tasks ahead. You can find information on log books (as well as tons of other useful information) in *Triathlon Magazine*, or by reading one of the books written to help people new to the sport, such as *THE COMPLETE BOOK OF TRIATHLONS*, by Sally Edwards. You should also check the web site, "[www.teamintraining.org](http://www.teamintraining.org)" (sponsored by the Leukemia & Lymphoma Society) which helps thousands of people like you train for events while simultaneously raising money for a good cause.

You did not say if you were training for the "Danskin Women's Triathlon," "The Peak" or the "5380." Regardless, you have a lot of work ahead of you. The first thing you need to do is have an experienced fitness professional check your form in swimming, bicycling and running. Technique is very important. You will want to correct any technical errors now in order to both prevent injury and to help your body operate at peak efficiency.

According to Matt Fitzgerald, an experienced triathlete and contributing writer for *Triathlete Magazine*, there are three phases of training for each of the three events: base, build, and peak. In general, the "base" phase is heavy on volume "to improve aerobic fitness at low-to-moderate intensity" which will build endurance. During the "build" phase, you work on "intensity over volume" by pushing your pace with drills of varying speeds and distances. For the "peak" phase you exceed the distances required for the triathlon, training at a fast pace in order to "improve speed as well as the ability to handle the pain of muscle fatigue." The length of each phase will last anywhere from four to 12 weeks, depending on your level of fitness for each event.

For your swimming, join a swim group which can give you access to coaching, a pool, and the experience of swimming in a group. Since swimming is only about 20% of the days event, your swim training should be organized accordingly.

Your bike training should include hills, sprints, long, endurance, and group riding. Joining a bike club, particularly one that tends toward hard riding, would be of great value. Check out *www.bicycle-rides.com* to find a compatible group. Riding in a group will also give you valuable experience for race day.

For your running, along with the different training regimens of the base, build and peak phases, you will also need to train on transitions (called “bricks”) where you ride, and then immediately follow with a run.

Excellent nutrition and plenty of rest are essential. Triathletes are often on the edge of over-training, so listen to your body. Schedule some time with a registered dietitian, a triathlon-savvy personal trainer, and/or some experienced triathletes to get reliable information. The kick boxing you are currently enjoying is good for flexibility and provides necessary cross-training. Some weightlifting during the winter months will also be beneficial for your overall strength, endurance, and power. Good luck!



## LINDA BUCH - BODY LANGUAGE - OCTOBER 20, 2002

*"I have been walking for the past three weeks but my shins have hurt so badly. I have tried new shoes, socks, etc. What else do I need to try?"*

Julie Y.

### Remedy for Aching Shins

The Greek philosopher, Epicurus, defined pleasure as "the state wherein the body is free from pain and the mind from anxiety." Apparently your walking program has created an unfortunate reversal, both physically and mentally, of what probably started out as a pleasurable venture. It sounds like you are suffering from one of two possible pathologies: shin splints or a stress fracture. Fortunately, neither of these is terminal, although the recovery from either of them may seem interminable.

According to Jeff Oliphant, head athletic trainer for the University of Wisconsin, stress fractures and shin splints have similar root causes. Both can be brought on by continuously using unforgiving surfaces (like cement), by excessively pronating the feet (walking on the inside of the foot), by starting out too hard at the beginning of a new program, or by suddenly increasing the intensity of the program. Stress fractures, however, can also be caused by foot abnormalities, such as rigid/high/flat arches or by being overweight.

Shin splints (defined by the American Runners and Fitness Association as "leg pain resulting from very small tears the leg muscles at their point of attachment to the shin") can also be traced to muscle imbalances (hamstring and butt muscles may be too tight), improper shoes, or improper technique (walking on the balls of the feet).

The pain for both of these syndromes feels similar at the beginning but, as the condition worsens, the difference becomes obvious. The pain from shin splints (medial tibial stress syndrome) seems to be everywhere along the shins; the pain from a stress fracture will probably be more specific to a certain area. The very first thing you should do is get your condition properly diagnosed. If your physician suspects a stress fracture, a simple x-ray may confirm this, with a bone scan as a higher-tech backup plan if the x-ray is not productive.

If the diagnosis is stress fracture, your primary option is rest with complete immobilization of the affected area with either a leg brace and/or crutches. Recovery could take as long as six to eight weeks. You would probably be permitted to swim or bike, but walking or running would be off the menu for the duration. You will eventually be able to return to walking, but only at a very gradual pace.

Treatment for shin splints is not as complex but it is equally frustrating to people who do not like to sit still. REST is the number one recommendation, with ice and aspirin (or other anti-inflammatory) immediately following any activity which produces pain. I would also recommend a visit with a physical therapist to determine if you have any of the aforementioned muscle imbalances or foot/ gait abnormalities. A therapist can also teach you some great flexibility, strengthening, and stretching exercises to help you get you back into your walking program. In the meantime, don't forget to mix up your exercise program with some cross training. Try swimming, bicycling, yoga, rollerblading or other activities with less impact.

## LINDA BUCH - BODY LANGUAGE - OCTOBER 27, 2002

*"I am a 60-year-old who would like to start doing weight exercises. I cannot find anywhere where they tell me how to get started and what weights to use and what goals to set as to weights I should eventually be using. Can you help me?" Ray Kier, Vernal, UT and Mesa, AZ*

It is too bad that so many Americans feel they must sit out some of the best years of their lives by attaching themselves to their recliners like 'fridge magnets. The notion that aging means "time to sit down and take it easy" is antediluvian at best. After all, what you don't use, you WILL lose.

Weight training not only strengthens muscles, it also increases bone density, lowers blood cholesterol, and strengthens ligaments and tendons, which helps ease the pressure on joints. Prior to 1989, it was thought those with high blood pressure, arthritis, or heart disease should avoid weight training. That year, researchers from Tufts and Harvard conducted a landmark study on the effects of strength training on men and women over the age of 80. They recorded remarkable improvements in strength, gait, mood, and general wellness in a period of just six weeks. What is more, there were no adverse effects on blood pressure, arthritic joints, or the heart.

Before beginning any exercise program, be sure to get a thorough checkup from your physician. Once you have the green light, your next step is to find a professional who can not only help you organize a good, overall lifting program but also teach you the correct form for the exercises. IDEA, Inc. offers a trainer locator service at [www.ideafit.com](http://www.ideafit.com), or, by calling 1-800-999-4332. Other resources for supervised learning include YMCAs, YWCAs, community centers, colleges, continuing education programs, and health clubs.

If it is too difficult to find someone to help you in person, books and videos are your next best option. I strongly recommend discarding any old books you may have lying around from past decades because many of the exercises from the 50's and 60's are no longer considered safe or even effective. Restock your library with "Weight Training for Dummies," by Suzanne Schlosberg and Liz Neporent, and "Strength Training Past 50," by Wayne Westcott, Ph.D. The "For Dummies" publishers also have a video available titled "Shaping Up With Weights for Dummies." Another video which looks interesting is "Fitnessology-Exercise and Weight Training, The Basics." All of these will require the purchase of some hand weights. If you do not want to buy any equipment, check out "The Commercial Break Workout," co-authored by yours truly, for strength exercises you can do at home using just your own body weight and your furniture. Books and videos can be ordered from bookstores, through [www.Amazon.com](http://www.Amazon.com), or [www.seniorjournal.com](http://www.seniorjournal.com)

If you have Internet access, you can contact [www.fitnessdesigns.net](http://www.fitnessdesigns.net), an online coaching service, which promises to help senior exercisers gain information, develop an action plan, and stay motivated.

The American Senior Fitness Association (1-800-243-1478 or [www.seniorfitness.net](http://www.seniorfitness.net)) publishes Mature Fitness Magazine and offers a wealth of other information as well. Government resources include the National Institute on Aging (1-800-222-2225, [www.nia.nih.gov](http://www.nia.nih.gov)), and the U.S. Department of Health and Human Services Administration on Aging (1-800-677-1116, [www.aoa.gov](http://www.aoa.gov)). And, don't forget the AARP (1-800-424-3410, or [www.aarp.org](http://www.aarp.org)).

Sounds like you have the will, Ray! I hope these suggestions help you find the way.

## LINDA BUCH-BODY LANGUAGE-October 6, 2002

*"I am 78 years old and had a hip replacement 3 years ago. The hip has dislocated twice and my surgeon has promised that if it happens again, he will have to operate again. I also have a torn rotator cuff that is fairly painful if I push it too much. I have tried walking my dog but after a block or two I am in so much pain I cannot continue. I need to lose about 5# but everything I try I find impossible to continue. I would like a real chance to exercise without endangering my hip. I certainly do not want any further surgery!" Lucille Weiss*

### WATER FITNESS CAN BENEFIT HIP-REPLACEMENT RECOVERY

It is good to hear that you do not want to tolerate any suggestion of inactivity, Lucille! There are quite a few avenues for you to explore in order to help you to stay active safely. Before heading off into any exercise program, especially with a dangerous disability such as yours, I highly recommend a visit with a physical therapist. An experienced physical therapist should be able to pinpoint which muscles in the shoulder, hip, butt, and/or leg areas that are weak or non-responsive to your basic lifestyle activities. The therapist can then recommend some simple movements you can do on your own to strengthen the muscles that aren't cooperating.

The next thing to do is find a facility in your area with a swimming pool. Most community pools offer water fitness programs at many ability levels and just may be able to recommend a class ideally suited for you. Water has tremendous healing properties, providing three very important aspects: buoyancy, resistance, and compression. Water is about 800 times more dense than air which can decrease gravitational forces by as much as 90%, depending on how deep you go. Because water is denser than air, it creates resistance in all directions. The great thing about this property is the harder you push or pull the more resistance you will feel. This allows you to participate at *precisely* the intensity you desire every moment of your workout. Because of atmospheric pressure, water provides approximately 14 pounds per square inch of compression (This varies according to how deep you go in the water.) Gentle water compression relieves swelling and can increase blood flow in the limbs.

Another way to increase muscle strength while remaining seated is with resistance bands. Resistance bands are rubber tubes with handles which come in varying degrees of difficulty, from very light to heavy. These can be attached to a secure object in the home, allowing you to pull and push from a seated position. This way you can build muscle without the risk of falling. Muscle loss, called sarcopenia, can bring on frailty which can domino into increased risk of further disability. High intensity resistance training can keep this condition at bay.

It is not necessary to go out and buy equipment, however. You can keep your muscles sound by lifting cans of soup, bags of dried beans, or boxes of pancake mix. The

important thing is to find a way to keep your muscles viable so you can stay active and independent.

**LINDA BUCH-BODY LANGUAGE-September 1, 2002**

**TRIMMING THE TUMMY**

*"I want to trim my tummy area. My unique problem is that I am not overweight (I am 5'5" and weight 122 #'s.) I am happy with my weight and overall body tone, except I have a tummy. That is where I carry weight. This makes it difficult when buying shorts and pants because in order to get them to fit my waist, they are very baggy everywhere else. I do regular ab exercises and walk 30 minutes most days. I have heard that you cannot spot trim and that to trim your abs you have to lose weight as well. Can you help me with this dilemma? Do others have this problem?"*

Concerned in Colorado Springs

"How do I get rid of *this*?" is probably the question most frequently asked of fitness professionals. Sometimes it seems that no matter how hard you work and diet, pockets of fat remain in certain spots just to drive you *crazy*. The truly maddening part of all this is that we seem to be designed this way!

Fat cells contain fatty acids, which got into the cell in the first place from eating. Eat too many calories, the fat cells fill up; cut back on the calories and bump up the exercise, the fat cells empty out. On the surface of each fat cell is either a high distribution of alpha or beta receptors. The alpha receptors slow down fat utilization; beta receptors speed it up. These receptors are genetically determined, usually by sex. Surprise, surprise. Women tend to have more alpha receptors on the lower body, back and legs; men on the midsection and chest area. According to an article printed in the *Journal of Applied Physiology* (January, 2000), the distribution of alpha and beta receptors on each fat cell explains why certain parts of your body lose fat faster than others. Beta receptors allow fat to move out more easily than alpha receptors.

Log on to *www.Google.com* under the subject of "tummy fat" and you will be presented with a plethora of questionable options for dealing with your particular area of concern. There are the usual abdominal exercise machines, with and without "magic" electrodes designed to buzz the fat away; advice on liposuction/tummy tuck procedures; herbs and elixirs; and my personal favorite, a tummy flattening gel which "forces fat into the bloodstream." They advise exercise and a reduction in calories along with the gel "so that the fat isn't redeposited." Sounds like bullfeathers to me...

It is easy to be persuaded to go the herbal supplement route. Ephedra is the most common ingredient in the so-called "metabolism boosters" that are rife these days. Some people taking these products have had serious side-effects including hemorrhage, hypertension, cardiac arrest and death. The FDA has, therefore, red-flagged this substance as potentially dangerous. As for other supplements (carnatine, chromium picolinate, DHEA, pyruvate, amino acid/protein supplements, yohimbe, etc.), do appropriate due diligence before buying into the "miracle" of money disappearing from your wallet in order to "magically" lose the tummy fat.

In her book, *Fight Fat After Forty*, Pamela Peeke, MD, recommends weight lifting as a way to pummel the “pooch.” This suggestion is supported by subsequent studies at the University of Alabama. Doing cardiovascular exercise and crunches is good but nothing builds and maintains muscle mass like good old strength training, which seems to be missing from your current exercise routine. There is no such thing as spot reducing so no amount of crunches in any of their many extrapolations or incarnations will ever get rid of belly fat. Increasing your total muscle mass, maintaining a sensible caloric intake, and continuing your walking should get you started toward your objective. Remember, muscle is more metabolically active than fat and just might solve your sartorial dilemma.



## **Linda Buch - BODY LANGUAGE - September 29, 2002**

*"I need to know where to go to get my body fat measured. At the gym I use they only measure you for changes. I have a poor self image because I have these last few pounds that won't go away, and I don't know if I've built up my muscle too much, my diet is way off, not enough cardio or what the problem is. But I need help. I don't want to try pills, 'metabolizers,' 'fat burners'... I just want to know how hard I should be working to get rid of my extra baggage."*  
*"In Between Sizes"*

### **BODY FAT AND BODY IMAGE**

You are on the right track wanting to know your body composition because "weight" all by itself is about as relevant as your "sun sign," it is only a part of the larger puzzle. If you are concerned with privacy, you will want to do this in your own home (without other gym members swirling about).

My two favorite measuring devices are the Tanita® bathroom scale and the Accu-measure® body fat calipers. The advantages of the calipers are that they are inexpensive (under \$20), easy to use (you only measure one spot above the hip), and reasonably accurate (within @ 3%). The advantage of the Tanita scale is that it acts as both a body weight and body fat calculator. As long as you use it at about the same time and under the same (well-hydrated) conditions, you will get an amazingly accurate read. All you need is about \$70 and a bathroom floor. If you are anywhere near Glenwood Springs, the Glenwood Medical Associates have a DEXA, a high-tech machine that measures body fat [including the all-important girth measurement], as well as bone density. Call Jeanne Golay (970/379/5581) for more information.

Once you know how many of your pounds are fat, you can easily calculate your BMR (Basil Metabolic Rate). It takes 3 calories to maintain a pound of fat and about 35 calories to maintain a pound of muscle. Do the math on your own numbers and you will have a rough estimate of the calories needed to stay where you are.

As for your "poor self image," good health and fitness trump "skinny" every time. Unless you are lifting weights every day at an intensity level equal to that of body builders, power lifters, or other athletes who strain for strength and muscularity, it is unlikely that you are putting on "too much muscle." Muscle is, after all, the stuff that boosts your metabolic rate. Muscle is living tissue which contains the "engines" (mitochondria) necessary to burn calories. As for your cardio program, if you are engaging in 30 minutes or more of good old fashioned huffing and puffing most days of the week, you are probably doing just fine in that department as well. That leaves food...

Most people forget that the body is a callous accountant, ruthlessly measuring every calorie consumed against every one expended. Keeping a food diary for a week or two may reveal some startling facts about your caloric intake. Most of us underestimate by as many as 500 calories a day, which can equate to a pound of body weight per week! In order to properly calculate your food portions, buy a food scale, a nutrition/calorie reference book, and some measuring implements.

To make this process pleasurable rather than punitive, respect yourself for the efforts you are already making toward good health, take pleasure in the food you eat, and partake in body movement activities you truly enjoy.

## LINDA BUCH-BODY LANGUAGE-September 8, 2002

*"Could you give me some advice regarding "medicine balls"? I am 6' tall, 59 years old, 180#. I lift weights (a periodized program), ride my bike and walk my dogs 4 miles a day. Given this information, can you advise me? Should I use medicine balls that are progressively heavier?*

Gary Goins

### MEDICINE BALLS ADD VARIETY TO A WORKOUT

"Medicine Balls" have been around since bare-knuckle boxing. The ones I remember from childhood visits to the YMCA were cumbersome, leathery, and (somewhat) spherical, often with cotton batting peeking from the heavily stitched seams. While some of these relics may still inhabit the fetid corners of a "Rocky" movie set somewhere, the ones found in gyms today are downright glamorous. Most are made of easy-grip rubbery materials and are either filled with gel (and don't bounce) or air (which do bounce). Some are even fitted with a cord through the middle for core exercises where the ball is swung; others are designed with a handle to make gripping easier for special populations.

The many benefits of sports training with medicine balls, known and employed by college coaches for decades, are finally becoming mainstream. According to Ryan Lee, MS, and exercise physiologist at the Blythedale Children's Hospital in New York,

"Medicine balls:

- \*can be used to mimic sports movements,
- \*can be used to effectively train the aerobic/anaerobic energy systems,
- \*are completely portable,
- \*are relatively inexpensive,
- \*add variety and fun to workouts."

Since you are a weightlifter, you can improve your lifting by integrating a medicine ball into your workouts. For example, a bench press requires an explosive push in order to get the barbell away from your chest. Push too hard and too fast and elbow injury is a potential problem. How can you improve this phase of the exercise without injury? Do standing chest passes. This will allow you to explosively push the weight away from you, releasing it safely as you improve your upper body power.

Medicine balls are amazingly versatile. Hold one while squatting or lunging for a change from dumbbells and barbells. Now perform these same exercises while holding the ball overhead with both hands...or with one hand. You now have a whole new leg routine. Work your abdominal muscles by tossing the ball side-to-side with a partner; toss it between you as you simultaneously perform crunches on a Fitball®. Exercise the arms and shoulders with overhead passes using two arms, then with one arm. Your imagination is the only limitation here. Watch the movements made by the athletes in the sports you enjoy (rotation, twisting, lunging, throwing, squatting or any

combination of these moves) and imitate them with the medicine ball to add some variety and fun to your next workout.

As for what weight to use, I suggest you try any new exercise with a light weight first (2-4#) and then progress to more weighted balls (6-8# or heavier) as you become comfortable and proficient. If heavier balls are not available in your facility, you can increase the difficulty of the exercises by increasing the distance between yourself and a workout partner, or by throwing harder and faster.

A good resource for learning more about exercising with medicine balls (and stability balls) is *STRENGTH BALL TRAINING* by Lorne Goldenberg and Peter Twist (Human Kinetics, 2002), and there are numerous sites on the Internet.

*[Medicine Ball Training," by Ryan Lee, MS (IDEA Personal Trainer, June 1999) was the primary resource for this article.]*

### **Linda Buch-Body Language-April 21, 2002**

*"I was told that after doing any training with weights, protein should be eaten within one hour. The reason is supposedly that if you don't eat protein within an hour, the body goes through some metabolic process which breaks down muscle, making the workout less effective. Is this true and, if so, what is the process?"* Linda Martin, Denver

### **MUSCLES NEED MORE THAN JUST PROTEIN**

In ancient times, the victor of a battle often "honored" his valorous (albeit vanquished) opponent by eating his heart to obtain some of the dead hero's spirit. In the minds of many athletes and exercisers, the erroneous "muscle=protein, therefore, to get lots of muscle, eat lots of protein" analogy seems to be the modern-day reconstruction of this ancient practice. Before getting into the nutritional imperatives, let's look at what goes on with muscle when it is exercised through weight training.

Muscle is composed of many fibers bundled together into groups. Each muscle group is comprised of numerous types of cells which do everything from regulating fuel, producing force, converting fat and carbohydrates into usable energy, to allowing contraction to occur, and repairing the muscle after a hard bout of work. Capillaries link the muscles to our cardiovascular systems, bringing in oxygen and other nutrients carried by the blood, and carrying out waste products created by muscle contraction. When someone engages in regular strength training exercise, the body learns to recruit more and more muscle fibers in order to help complete the task. Over time, strength is improved and, often, muscle size increases.

According to *Understanding Nutrition* (Whitney and Hamilton, West Publishing, 1987), metabolism is "the sum total of all the chemical reactions that go on in living cells." Metabolic activity, therefore, takes place all the time, head-to-toe, all day long. Muscle cells are unique in their ability to increase their metabolic rate when trained to do so through exercise but, I am sorry to say, a high protein diet does not guarantee increased muscularity. Larger muscles are a result of proper training along with some nicely inherited genetics, not diet.

While it is a fact that protein is necessary to build, maintain, and repair tissue, it only contributes part of the total energy (calories) needed to keep you going during and after exercise. Just as with all calories, the excess is usually stored as fat. Muscle cells need glycogen (a storage form of glucose) in order to function, recover, and continue functioning. Carbohydrates (the primary source of glycogen), along with fat, are actually the preferred foods for energy during exercise and for recovery afterwards. Daniel Kosich, Ph.D. (president of *EXERFIT* Lifestyle Consulting in Denver) reminds us that "Fat burns in the flame of carbohydrate," which means fat can only be utilized when glycogen stores are adequate. It is true that athletes do need more protein than non-athletes (about 0.7 to 0.9 g of protein per kg of body weight, according to Nancy

Clark, MS, RD). But athletes need more calories in general, in addition to increased protein.

I did find two very small studies that seem to indicate that protein absorption is improved when it is ingested right after exercise. Danish researcher, Brigitte Esmark (Sports Medicine Research Unit at Bispebjerg University Hospital), reported in the August 15, 2001 issue of *The Journal of Physiology*, "Consuming a high-protein supplement within minutes after strength training may help healthy older men [13 healthy men aged 70-80 were studied] ward off muscle loss that comes with age." Another study (1997) with six untrained men at the Department of Metabolism, Shriners Burn Unit, Galveston, TX (researchers Tipton, Klein, and Wolfe), yielded results that "imply that protein intake immediately after exercise may be more anabolic [growth promoting] than when ingested at some other time." More research should be done on a wider sample of humans (like maybe studying some *women*?) before conclusions can be properly drawn.

My suggestion is that after your workout, eat a small meal with a balanced mix of protein, complex carbohydrates, and fat. If you pushed yourself hard during your workout, you are going to crave a healthy meal anyhow. You just don't have to limit yourself to one food group.

## LINDA BUCH - BODY LANGUAGE - DECEMBER 15, 2002

### REDESIGNING STRENGTH TRAINING PROGRAM

*"I am a 52 year-old woman who really needs some advice on redesigning my weight resistance program. I began working out at the gym 10 months ago, and have lost 40 pounds through diet and exercise. The trainer at the gym got me started with some basic exercises, and I've added weight as well as additional exercises. But my routine has become too "routine" and I need some variety. I like machines rather than free weights, since they keep me from getting hurt. I cannot afford more sessions with a trainer. Do you have any recommendations that can help?" Janie V., Colorado*

"The joy of life is variety," (Samuel Johnson) so it is time to add a little salsa to what has become a bland workout. Even if you cannot afford additional sessions with a trainer, it is possible to stay with the same machines you currently enjoy and simultaneously infuse new life into your "routine" routine. Since most experts believe a program should be changed every four to six weeks, you are overdue for an overhaul.

**Tip #1: Stack exercises in the same muscle group.** "Stacking" involves performing two to three exercises, one right after another, without resting. For example, as soon as you finish your chest presses, go right to the pec dec and do a set of chest flies. By not resting between machines, your chest will have to work harder and recruit more muscle in the process. Rest after each stack is completed.

**Tip #2: Stack antagonistic muscle groups.** "Antagonistic" muscle groups are like opposite sides of a coin: chest/back, hamstrings/quadriceps, biceps/triceps. Observe your muscles while exercising. Notice when one group of muscles is shortening, the opposite group is lengthening. For example, during hamstring curls, when the hamstrings flex, the quadriceps stretch. The opposite occurs during leg extensions (i.e., when the quadriceps flex, the hamstrings stretch). Use the same method described above in Trick #1 and quickly move between the machines which work opposing muscle groups. Rest after each stack is completed.

**Tip #3: Change the number of sets.** Instead of going through your circuit by doing one set per machine, do two or even three sets. Prioritize the areas of your body which are most in need of extra attention and give those areas some additional sets.

**Tip #4: Pyramid training.** This is a great way to really blast your muscles in a short period of time. There are two types of pyramids: ascending and descending. For an ascending pyramid, set your weights at the heaviest setting at which you are comfortable and perform as many repetitions as you can. As soon as you get stuck, drop the weight a couple of plates and, again, do as many repetitions as possible. Keep doing this until you can barely lift the weight at all. A descending pyramid will be the

opposite. Set the weight light enough to perform 15 repetitions; increase the weight a plate or two and perform as many repetitions as possible. Repeat your efforts until you feel completely fatigued.

**Tip #5: Change your speed.** Most lifting is performed faster on the muscle shortening phase (called the concentric contraction) and a bit slower on the muscle lengthening phase (called the eccentric contraction). By using superslow resistance training, you can increase the intensity of your workouts. Reduce the weight you normally lift by about 20% and use ten seconds to flex the muscle and five seconds to return to the starting point. One set of ten repetitions in each muscle group will be all you can stand before you feel completely fatigued!

**Tip #6: Change everything, every workout.** Week one, lift lighter weights with more repetitions; week two, lift heavier weights with fewer repetitions; week three, lift heavy for your first workout of the week and lighter for the second one. Toss in some of the other suggestions mentioned in this article (stacking, pyramiding, superslow) and you will have a new workout each time you go to the gym.

As long as you maintain proper form, any of these suggestions will invigorate your next workout and bump you off your current plateau.



## LINDA BUCH - BODY LANGUAGE - DECEMBER 22, 2002

### UNDERSTANDING BASIL METABOLIC RATE CALCULATIONS

*"I am a family physician and ACE certified trainer. I read each of your columns. Many I give to patients. Help me understand the BMR [Basil Metabolic Rate] calculation from body composition measure. I know about the metabolic rate of fat and muscle. How should calculations be adjusted for muscle being about 50% (average according to various reputable sources) of lean body weight, the remainder being skin, bone, blood and organs?"* Earl J. Carstensen, MD, Aurora, Colorado

I know Dr. Carstensen already knows the answer to all of this, so I must acknowledge his diplomatic way of saying, "Hey, explain this better for everyone, Linda!" Fortunately for me, Dr. Carstensen sent me some of the excellent materials he uses with his patients, including a complete explanation of body composition. Since he is a physician and a fitness professional, his information was both illuminating and succinct.

Humans are composed of fat, water, and lean tissue (muscle, skin, bone, organs, and blood). *Fat* is located under the dermal layer of the skin, intramuscular, and around vital organs. It is important for protection of the organs, insulation, and energy, and, in fact, is essential for us to stay alive: women require 10-12% and men require 2-4%. *Lean tissue* is 50% muscle, 14% skin, 14% bone, 14% organs, and 8% blood. It is easy to see why so many factors come into play as we try to not only figure out personal metabolic rates, but also body composition.

The three most popular methods for figuring body composition (from cheapest to most expensive) are skinfold (using calipers), Bioimpedence Analysis (scales that electrically measure body fat), and the DEXA (Dual-Energy X-ray Absorptiometry), which is a type of X-ray most commonly used for bone scans. Body composition readings (percentage of body fat to lean mass) can vary depending on time of day, how hydrated you are, eating schedule, and so forth. It's a good idea, therefore, to pick one method and stick with it for at least a year, checking progress only about every eight-weeks.

Once you know your starting point you will be able to figure out how to safely change your body composition. *Remember, weight loss doesn't always mean fat loss.* The wisest course of action is to concentrate on reducing body fat percentage, rather than just "weight." Since muscle is more metabolically active than fat (muscle burns 35 to 50 calories per pound per day, while fat burns about three calories), it is important to keep and/or increase muscle at the expense of fat. Thus, at the beginning of an exercise and diet program, by knowing your weight and the accompanying percentage of which is body fat and muscle, you can come fairly close to figuring out your caloric needs. For example. If you are 150# and 30% body fat, you are carrying about 45# of fat and 105#

of lean tissue (of which about 52# is muscle). This means a daily caloric intake of about 2,000 calories just to stay status quo.

The safest way to reduce calories without compromising health is to reduce your daily intake by 20% (about 400 calories), increase your output by the same amount, or some combination of the two. This way valuable muscle can be spared at the expense of excess body fat.

*(I would like to thank Earl J. Carstensen, MD, of HEALTHY PRACTICES, Prof. LLC, for his kind assistance in writing this article. I would also like to thank my math teachers for not rolling over in their respective graves as I attempted any math whatsoever, thus preventing worldwide catastrophe from the seismic shifts in the earth's core that said "rolling" would have engendered.)*

## LINDA BUCH - BODY LANGUAGE - DECEMBER 29, 2002

*"I am a successful heart transplant (got a ladies heart, so now I change my mind all the time and sometimes even ask directions) and have extreme weakness and inability to build muscle. This is not caused by the anti-rejection drugs, according to my cardiologists. They are stumped. So, I am seeking some suggestions as to muscle disease, possibility rather rare, or other debilitating factors. There are quite a few transplant patients out here so maybe you could do a column?"*  
Joseph Morin, Colorado

### EXERCISE FOR HEART TRANSPLANT PATIENTS

It is hard to stay in such good spirits after an ordeal like yours so you just might be the King of Hearts, Joe! Exercise after a transplant is touchy business. It is necessary for health, but must be approached with extreme caution and the vigilant oversight of your physicians and physical therapists. Exercises that are recommended most frequently by all of the sources I checked out (Temple University, Cleveland Cardiac Clinic, University of Florida) came up with similar suggestions: walking, biking, swimming and dancing were high on the list for aerobic activity with light strength training (nothing over 20# unless cleared by your doctor) also strongly advised. Boxing with a heavy bag is also good for building muscle, bone density, and cardiovascular capacity. Start slowly with a competent instructor because boxing is more strenuous than it looks!

Your situation is critical because the viability of muscle directly affects the strength and density of bones. Since osteopenia (weakening of the bones) shows up in almost 100% of heart transplant patients, University of Florida researchers found weight lifting to be the best and simplest solution. "It's well-known that people who engage in weightlifting exercises have very thick, strong bones. We measured bone mineral density in heart transplant patients and began a program of weight lifting after surgery to see what effect, if any, exercising might have on strengthening bones," reports Randy Braith, an exercise physiologist with the University of Florida's Center for Exercise Science in the College of Health and Human Performance. They discovered that "transplant patients who began strength training two months after the transplant surgery were able to restore and maintain bone mineral density to the same level it was prior to the operation." Braith recommends resistance training for any postoperative rehabilitation program for heart transplant patients in addition to the commonly prescribed cardiovascular program.

A similar study by the Division of Cardiology at the Los Angeles School of Medicine also found that those patients who were involved in a six-month program of both muscle-strength and aerobic exercise (under the guidance of a physical therapist) had "significantly greater increases in peak oxygen consumption and a decrease in carbon dioxide production." It should be noted that the exercise program was started with the control group "as soon as feasibly possible after [the] heart transplant." (New England

Journal of Medicine, 340:272-7, 1999 Jan 28) Better oxygen consumption means better levels of energy and general health.

None of this will do you any good, however, if lifting is a struggle. Muscle weakness either originates in the nerves or in the muscle itself. Your doctors and physical therapists are the best professionals qualified to evaluate your muscles either through pushing and pulling resistance, functional moves (such as standing up from a chair), or other such tests. A second option is to have a muscle biopsy to check for a protein enzyme called creatine kinase. This enzyme is part of the phosphocreatine energy system which is important for muscle function. Use of the supplement, creatine phosphate, has often been successful in treating postoperative muscle atrophy caused by extended bed rest and, if your physician concurs, could help you overcome your current feelings of weakness.

I hope something this simple will do the trick for you, Joe! Your good humor will help you as well.

## LINDA BUCH - BODY LANGUAGE - DECEMBER 8, 2002

*"Could you please address weight-loss supplements like chromium and ephedra? My friend is taking ephedra and she says it speeds up her metabolism--and her heart. Are there any safe foods or supplements that increase metabolism?" Gabrielle Devenish, Superior, CO*

### BEWARE OF "WEIGHT-LOSS" SUPPLEMENTS

We have all seen the ads. Take this pill to lose weight. No dieting or exercise required. The company will tout the "guaranteed" efficacy of some potion (usually with an "X" or "metabo" somewhere in the name), said to have been widely used for centuries in China. All you need is a credit card and a large dose of desperation.

But first, what exactly is 'metabolism' and why does everyone want theirs boosted? Simply, metabolism is the rate your body burns energy (calories). Basal Metabolic Rate (BMR) is the term used to describe energy usage when at rest. Reputedly, a higher metabolism means a leaner body. Determining factors for your particular metabolic rate are weight (the heavier you are, the higher your BMR), your age (BMR is slower by 2% per decade after age 20, and is higher in children than in adults), your ratio of muscle to fat (people with more muscle tend to have a higher BMR), and whether or not you are restricting calories with a new diet (metabolic rates fall if you shed pounds through calorie restriction).

One of the herbs touted as a "fat-burning metabolism booster" is ephedra (from the herb, ma huang), which has been used medicinally for thousands of years to treat asthma, allergies, and sinus problems. Diet potion manufacturers like it because it stimulates the central nervous system, elevating the body's temperature, which slightly elevates the body's metabolic rate. According to a study published this year in the *International Journal of Obesity and Related Metabolic Disorders*, ephedra did aid in weight loss in overweight (but otherwise healthy) individuals *if* taken only as directed under Industry standards, and following all the warnings and precautions set by the Industry.

In October 2002, however, the Senate Government Affairs Subcommittee held a hearing in which evidence of serious problems with a popular diet supplement containing ephedra was discussed. According to committee chair, Senator Richard Durbin, there have been plenty of problems with the supplement including "three deaths, 20 heart attacks, 24 strokes, 40 seizures, 465 episodes of chest pain, and 966 reports of heart rhythm disturbances." It was also mentioned in the hearing that many of the complainants were "young people in good health and taking recommended doses of the product." The diet supplement industry argues that more people die of being overweight, which they say makes the risks with ephedra worth the gamble.

If you chose to ignore the red flags, it is generally recommended you use these products one month at a time, with breaks of a week or two before resuming, and never for longer than three months without a break. Herbs of this nature are medicine, after all, and are not intended for constant use. Remember: nothing exceeds like excess, and more is not necessarily better.

Another popular supplement for weight loss is chromium picolinate. Chromium helps insulin in the making of blood sugar. Picolinate acid is thought to help with chromium absorption. It would seem the combination of these two into a single pill would be helpful for both weight loss and to those with Type 2 diabetes, which often occurs in sedentary, overweight humans. Unfortunately, a laboratory study conducted at Dartmouth in 1996 found that chromium picolinate could harm chromosomes. Since cancer can get its start from damaged cells, the panacean claims of chromium picolinate are specious at best. To date, there are no studies to show that this product will aid weight loss or that it helps diabetics.

Considering the serious risks with both supplements, I believe you'd make a safer financial investment in healthier food and a good pair of walking shoes.

## Linda Buch-BODY LANGUAGE- February 10, 2002

### Body Image

*" Last February 2001, at 44 years and 5'5", I weighed 135#, which isn't fat but my body composition was getting fatter. I started lifting weights every other day and now lift three times a week. By May 2001, I was down to 122 # and I've gone from a size 8 to a 4. I am a runner but in the winter I am lucky to get in 2 runs a week. My question: When I look at myself naked I still see an inch or two of body fat all over. I increased my running in the summer to 4 times a week, I don't have a treadmill, and don't want to join a gym. I eat well but what do I need to do to get leaner? More weight training? Cut all the fat out of my diet? Betty H. Denver*

Your question has unfurled a couple of red flags on my fitness flagpole. The key to your inquiry is in your own words, "I still see...body fat all over." While it is not unusual to continue to see our old selves in the mirror in spite of becoming leaner and more fit, at some point it is important to step back from the mirror and reassess our goals and objectives. Exercise, when integrated properly into our lives, is a great tool for health and wellness. It should build self-esteem, not destroy it. When self-esteem suffers, exercise is no longer a tool--it is a weapon.

A quick calculation of your Body Mass Index\* comes out to slightly over 20. Normal range for women is 21-25. This calculation is a cursory measurement at best but seems to indicate that you are plenty lean already. The "fat" you see is possibly from unrealistic images that have burrowed into the brain via Hollywood and magazines. The "lollipop" look is rife among the female stars and, if we continue to juxtapose our bodies next to the Callista Courtney Laura Flynn's of the world, we can start to think we look like beached Beluga whales. Another great demoralizer is the bodybuilder magazine where the women all have shrink-wrapped looking muscularity. Neither of these portrayals of womanhood are particularly accurate!

As for severely restricting fat intake, this will impair your energy levels and lead to some serious nutritional deficiencies. Vitamin A, E, D, and K are all fat soluble and are vital to staying healthy. At least 30% (20% unsaturated) of your calories should come from fat. Fat will also keep you satisfied with your meals and prevent any binge eating that often comes from feeling deprived. I STRONGLY recommend that you consult with a Registered Dietitian, (not a "nutritionist"), particularly one who is involved with athletes and exercisers such as yourself. A Registered Dietitian can calculate your basal metabolic rate, more accurately determine your body mass ratio, design a healthy eating plan, and, refer you to other fitness and health professionals who can help guide you to a healthier track.

There is one gap in your general fitness program, however. Your wintertime cardiovascular program does need some attention. It is easy to forget that the heart is a

muscle and that it needs and loves a good workout just like your other muscles. There are some very compact and inexpensive methods to work in some cardiovascular exercise without plopping a treadmill in the basement. A Fitball® can be a very effective tool, not only for flexibility but also for a good aerobic workout. Another great piece of equipment is the mini-trampoline, sold at most sporting goods stores, which is both fun to use and safe for jogging. The cheapest method of all is the good old jump rope, which has been an effective cardiovascular device for decades. Since you are a runner, I am going to assume that you have some appropriate shoes with proper support so that the impact of jumping or bouncing will not cause injury.

As Sarah, the Duchess of York says, “It's a question of a fit mind, fit body. If you are able to start loving yourself and have a better sense of self-worth...well, free your mind, and your bottom will follow.”

- [\*-Divide your weight by 2.2=kilograms
- Divide your height in inches by 39.4 to get meters and multiply that number by itself (i.e. square it)
- Divide your weight in Kg by your height in meters (squared) to get your BMI]



## LINDA BUCH-BODY LANGUAGE-FEBRUARY 17, 2001

### Change Routine to Bring About More Change

*"I am a 48 year old woman who is about 40 #'s overweight. I joined a fitness program two months ago where we move from station-to-station alternating between resistance machines and aerobic stations. We spend 30 seconds at each station and go around twice. I have been working out 5-6 times a week for two months and, while I feel stronger, I have experienced no change in weight and have lost only about 1/4 inch from hips, waist, abdomen, and bust. My goals are to firm up, build some muscle and lose some fat. Should I be doing this program every day? Are there modifications I can make to maximize my efforts? Violet J., Denver*

You are to be commended, Violet, for making the decision to exercise regularly! Let's look at the positive changes you have made in two months. First of all, you have established a consistent, almost daily, routine for improving your health and wellness. According to the Centers for Disease Control and Prevention (CDC), American obesity in the adult population has reached 60%, and three out of four women do not participate in regular physical activity. Your current activity level puts you in the top 25 percentile of American adults! By becoming physically active, you are reducing your risks of heart disease, some cancers, Type 2 diabetes, osteoporosis, hypertension, and many other conditions related to inactivity and obesity.

The loss of even 1/4" in your hips, waist, abdomen, and bust--without the apparent drop in "weight" on the bathroom scale--can be discouraging on its face value. The truth, however, is that you have lost body fat while increasing muscle mass. Since you did not mention your percentage body fat (compared to your lean body mass) I recommend that you either have one of the fitness professionals at your gym calculate this for you with skinfold calipers, or, invest in one of the new bathroom scales that measure both weight and body fat. This will give you a much healthier perspective than just *weight*. It is important to remember that muscle is metabolically "hungrier" than fat. Muscle requires about 50 calories per pound per day while fat only requires THREE. More muscle = higher metabolism = less body fat.

What you are feeling with your current exercise routine is stuck. Our bodies respond positively to change but our brains prefer predictable efficiency. After about 6 weeks of doing the same routine over and over, your brain has figured out how to streamline your efforts and is humming happily along on a nice, flat plateau. It's time to pump up the volume!

Your heart has become more efficient with exercise and needs more of a challenge. There is currently some controversy surrounding the viability of "heart rate" as a good indicator of aerobic output. While I find nothing wrong with using a heart rate monitor to check the heart's output, a simple and inexpensive way to determine if you are working hard enough comes from fitness author Covert Bailey. In his book, Smart

Exercise (Houghton Mifflin, 1994), he suggests that you, “Find out how fast you can cover a mile comfortably, repeatedly and consistently.” In other words, find your “pace,” which will improve with consistent participation.

Now that you have experienced some success with circuit training, I recommend that you expand your horizons and try some new activities, such as a more strenuous aerobics class, a vigorous walk outside for 30 minutes, a more intense immersion into weight lifting, a class that uses Fitballs®, a dance class, and so forth. You can still participate in your current class but experiment with every third day instead of every day, putting different activities in between.

Whatever you decide, Violet, DON'T STOP. Even if you choose to just stay put and stick with your current routine for a while, you are still way ahead of the rest of the pack.

**Linda Buch-BODY LANGUAGE-February 3, 2002**

**Snowshoeing is Great Exercise and Lots of Fun!**

*"I have heard that snowshoeing is a great way to cross-train. What do you think? Lisa, Denver*

The sport of snowshoeing is growing by stomps and steps (let's face it-it's hard to 'leap and bound' in snowshoes!). According to American Sports Data, Inc., snowshoeing is up 18 percent over last year, putting the number of participants at over 2 million. The reasons for this are obvious to anyone who has lived in the Rocky Mountain area for any length of time: 1. It is inexpensive, 2. You can do this almost anywhere there is snow, 3. It is inexpensive, 4. The learning curve is more like a straight line, 5. It is inexpensive, 6. It is an excellent and simple way to exercise, and, 7. It is inexpensive. Families who quake at the price of lift tickets can instead have fun with the family outdoors without mortgaging the house. Anyone who wants to get, or stay, in shape during the winter months can do so by marching through the snow in the great outdoors as a break from indoor treadmills, stair-steppers, and spinning classes. Since snowshoeing involves the arms, legs, and cardiovascular system, this is a great sport for cross-training!

If you can walk, you can snowshoe. All you need for your feet is a pair of water resistant boots and you are set to go. Rental snowshoes are readily available at most ski and sport stores and fees are downright cheap. "Snowshoeing transforms your body into a calorie-burning machine," writes Suzanne Schlosberg, fitness author and contributing editor to *Health* magazine. "A brisk 20-minute per mile pace on packed snow burns about 510 calories per hour; that's close to what you'd use up jogging five miles an hour."

Ski poles are also recommended, not only for additional calorie-burning benefits, but also to help out on the hills. Dress in layers, with clothing designed to wick away moisture. Do not make the mistake of wearing cotton next to your skin and feet! There are some fabulous innovations in cold-weather exercise wear that are light, warm, comfortable, and that--more importantly--KEEP YOU DRY. You will work up a sweat out there. Frequent stops for snacks and water will allow you to cool down. If you are wearing cotton, it will hold the moisture next to your skin, making you feel cold and clammy. At best, you will feel chilled and clammy; at worst, you could develop hypothermia.

Colorado's parks and ski areas all have great trails and many offer guided tours. The Denver Post publishes a special section twice a year called *Ski and Snow* in November and January which is a great resource for finding areas to explore. Call your favorite area for up-to-date information on trails and guided tours.

The sport of snowshoeing sounds easy, but carefree it isn't. Keep in mind that you are heading out into the elements, so caution is always advised. Inexperienced snowshoers should do their first few treks with either guided tours or participate in well-organized activities, such as races and fund-raisers.

According to a California survey in 1999, snowshoeing has seen a 56% increase in the number of women trying the sport over 1998 (Carlos Alcala, *Sacramento Bee*, 2/6/01.) There are lots of women-only trips which can be found on the internet or you can call your favorite travel agent. These trips are popular because, unlike Alpine skiing, snowshoeing tends to promote a more convivial and social atmosphere among the participants. So, get your friends together and get out there. With snowshoeing, you can be intrepid, get in shape, and enjoy great camaraderie as well.

**LINDA BUCH-BODY LANGUAGE-JANUARY 6, 2002**  
**"BODY FAT RATIO MORE IMPORTANT THAN WEIGHT"**

*"I know that body fat percentage is more important than weight , but how do I find my percentage? L.C., Westminster*

"I need to lose some weight," is probably the most repeated sentence in America. But "weight" per se is only a small piece of the body puzzle. The bigger truth answers the question, "What percentage of your body is composed of fat?" The unfortunate reality for most of us is "too much."

Body fat is extremely necessary for our survival. It cushions our organs, insulates us from the elements, and is the richest source of energy in our body. It behooves us, therefore, to have body fat, we just don't need to be so possessive of it. According to the national Centers for Disease Control and Prevention, 60% of Americans are now considered obese. This population is, by the medical definition of "obese," at least 30 percent over ideal body weight. How much is *too* much and how do we find out how much we have?

The bathroom scale does not tell us everything we need to know about body composition. Take two people of identical height, sex, age, and weight. One will be in a pair of size 28 Levi's and the other will be in a size 36. The difference between the two is the ratio of body fat to lean mass. But does being thin automatically mean healthy? Not necessarily. Two individuals of the same height, sex and age, one weighing more than the other, but both wearing the same size 501's, probably means the heavier person has more muscle and less fat than the lighter person.

Obtaining your exact percentage of body fat is the tricky part. Let's face it, outside of autopsy, we are never going to get an EXACT percentage.

The easiest way to check body fat is via the "naked truth" test. Check yourself out critically in the mirror. If you can "pinch an inch" (or worse, "grab a slab") just below and to the immediate right of the navel , you are probably too fat.

Another method for calculating whether or not you are over fat is the Body Mass Index (BMI). This requires a bit of math (trust me-get a calculator!) but can be calculated as long as you know your weight and height. First, recalculate your body weight in kilograms (your weight in pounds **divided** [corrected from original error which said "X"] by 2.2). Next, convert your height in inches to meters and then square it (divide your height in inches by 39.4 to get meters, then take that number times itself). Divide your weight by your height (squared) to obtain your BMI. Federal guidelines now recommend a BMI below 25. For women, obesity begins at 27.5 and for man it begins at 28.5. This is not a "percentage body fat," per se but does give you a number (we Americans LOVE numbers) to see where you stand regarding personal corpulence.

The most popular body fat percentage calculator is the skinfold caliper method. This requires a skinfold measurement from at least three-to-seven areas of the body (at areas from the triceps, back, hip, front thigh, chest and abdominals) which are added together and checked on a chart delineated by sex and age. It is important not only to have this done by an experienced exercise professional, but also to have the same person check it again a few months into your exercise program in order to provide some semblance of measuring consistency. Keep in mind that the fat being measured is only that which is stored under the skin. Fat located around the organs and in the muscle will be missed. These measurements are useful because, over time with proper exercise and diet, you can see all of the numbers in the measured sites come down.

Another gadget on the market is the bioelectrical impedance scale which sends an imperceptible electrical current through the body to measure the amount of water therein. The scale calculates the body fat by reading where the water is NOT located (water is only located in fat-free tissue). Again, the accuracy is specious because so many factors can skew the readings, like levels of hydration or whether you weighed pre- or post- exercise. If you purchase one of these for your home, be sure to use it at the same time of the day on the same day of the week for better accuracy.

Underwater weighing has almost gone the way of rotary dial phones. In its place as the “gold standard” is the DEXA (Dual Energy Xray Absorptiometry) at the University of Colorado Health Sciences Center for Human Nutrition. This machine (a reading costs about \$250) was designed to read bone density but was found to do an amazing job of measuring body fat and lean mass as well. The computer also gives you a color picture of where you fat is located...which, unfortunately, many of us can already see by looking in the mirror.

## LINDA BUCH-BODY LANGUAGE-JANUARY 13, 2002

### Tissue Damage and Exercise

*"I had been exercising 3-4 days a week using 'The Firm' videos. When I increased my weights, I think I hurt my back but it went away after about 2 weeks. After a massage at work, my back started hurting again and, one month later, still hurts. I was told by a trainer friend that it was probably soft tissue damage and would take about 6 months to heal. I don't normally feel the pain unless I stick out my stomach and lift my butt. What is soft tissue damage? What should I do regarding exercise? Should I insist that my doctor send me to a specialist? Do I need physical therapy? Pilates? Yoga? How about Karen Voight's "Pure and Simple" stretching tapes? Susie, Denver, CO*

As the bumper-sticker says, "Eat right, exercise, and die anyway." Seriously, anytime we exercise we can experience strains and pains previously unknown to us as we sat motionless in our recliners. The occasional twinge of pain and discomfort is still far less egregious than diseases that arise from relative immobility, like obesity, heart disease, stroke, diabetes, high blood pressure and the like. The "soft tissue" being referred to is the muscle, fascia, and other connective tissue located in and around the skeletal structure of the body; in your case, the lower back. Tissue damage does not often show up on x-rays so it can be difficult to diagnose. Any injury should be taken seriously, however, and dealt with immediately.

"Working through the pain" may be helpful advice if you are running from ravenous wolverines but should not be done otherwise. The best general advice anytime aches and pains occur post-exercise is RICE: Rest, Ice, Compression, Elevation. "Rest" in your case would be to shift from the higher-intensity workout you had been doing with weights to something like yoga, pilates, or tai-chi, all of which involve putting the body through its paces but without the addition of heavy, handheld weights. These disciplines also teach you how to keep your body in alignment. By "sticking out [your] stomach and lifting [your] butt" you are putting excessive strain, on the injured area- perhaps even keeping it from healing. While this may be a great imitation of Sarah Jessica Parker's "Carrie" or "Sex and the City" fame, over time this could cause damage to the disks in that part of your back. But, I digress....

"Ice" (either a professional cold-pack or crushed ice wrapped in a towel) should be applied to soft-tissue injuries for about 20 minutes, 3-4 times a day. This may or may not help you at this point since it has already been a while since your initial injury. However, it may make the area feel better and, assuming you have not fractured any bones, certainly will not cause any damage.

"Compression" of this area can be accomplished at the same time by wrapping the cold-pack (or ice-in-a-towel) around you with an elastic bandage. Do not keep yourself

wrapped in the bandage while sleeping for the night. This sort of long-term constriction could cause further damage.

“Elevation” of the afflicted area (getting the injured area higher than the heart) is done to allow gravity to drain fluid and prevent excessive fluid accumulation. For your back, lie on the floor with the ice under you and support your legs under the knees with a bolster or hassock to reduce the pressure on the lumbar area.

A visit with a physical therapist is always a good idea in order to check the diagnosis and to insure proper form for the stretches that will inevitably be part of your recovery. As for using tapes like Karen Voight’s “Pure and Simple,” any tapes that are recommended by respected professional fitness organizations (like the ACSM, ACE, NASM, AEA, AFAA, and so forth) would work just fine. The key is to find one that you will use. Also, don’t give up on massage. You may need a sports injury massage specialist to help you with your recovery. Find someone appropriate for you via the American Massage Therapy Association at: [www.amtamassage.org](http://www.amtamassage.org) or call: 888/843-2682.



## LINDA BUCH-BODY LANGUAGE-JANUARY 20, 2002

### Exercise and Rheumatoid Arthritis

*"I have rheumatoid arthritis and wonder what exercises would be good for stretching and getting my heart rate up without too much stress on my joints. I have one warm water therapy session a week that is good for range of motion but not heart rate. Other water aerobics are during the day when I am at work. Fortunately, I can walk and have been doing so but wonder about weight training and step aerobics, which I used to love. My weight has gone up since I had to quit going but have been feeling well enough to start again. What do you think? Mary Barnard, Lakewood*

Approximately 43 million Americans (approximately 2/3's of them women) suffer from one of the many forms of arthritis. The two most common forms are osteoarthritis, where the cartilage between bones at the joints wears down causing pain and inflammation; and, the more crippling and disfiguring rheumatoid arthritis, (which usually strikes between ages 20-50) an autoimmune disease where the person's immune system attacks the healthy tissue and damages the joints. Over two million Americans suffer from the latter. Physical activity is a necessity for arthritis sufferers because weight-gain and inactivity can exacerbate the disease. You are to be commended for persevering through what is undoubtedly some teeth-grittingly painful moments in your quest to stay fit.

The Centers for Disease Control and Prevention (CDC) has worked hard to dispel the myth that exercise--specifically strength training, aerobic conditioning, and stretching--is harmful. In fact, Stanford University's Terri Heinrich Rizzo, MAS, reports that "appropriate, regular, exercise not only increases flexibility, strength and the ability to do every day activities but also reduces pain, fatigue and depression." Exercise is supported by both the American College of Rheumatology and the Arthritis Foundation. The trick is to find activities that you can enjoy doing that will benefit your health and general wellness without causing chronic, painful flair-ups. In answer to your question, there is good news.

If you have been away from exercise for a while, start back by doing 5 minutes/3 times a day and work up to 30 minutes a day, several days a week. Most of the experts warn arthritis sufferers away from high impact activities such as step aerobics. The good news is that walking, bicycling, inline skating, and ESPECIALLY swimming, are excellent substitutes. Swimming allows for nonimpact, full range of motion exercise which is great for cardiovascular conditioning, enhancing muscle tone, and maintaining flexibility. Hopefully your work schedule will permit more swim time at some point because this is far and away your best option. The Colorado Easter Seal pool has morning and some evening water aerobic classes throughout the week as well as open swim times. Since this a therapeutic pool, with temperatures above 92 degrees, a doctor's consent is needed to gain entrance. Call 303/233-1666, ex. 248 for information.

There are many Rec. Centers with marvelous swimming facilities in the Denver Metro area. Most of the pool temperatures at Rec. Centers are in the 82 degree range, however, which may not be comfortable for you. It is a good idea to call and check to see at what temperature the specific facility *maintains* its pool.

Since you are able to walk for exercise, definitely keep at it! Another great exercise, if you are up for the challenge (and your doctor gives you the green light) is inline skating. If that seems a bit scary or risky, bicycling is another great option. Check out spinning classes at your local Rec. Center, Health Club, or YMCA.

Weight training can help to ease pain by balancing the strength of the muscles that surround the affected joints. It is always best to either keep the weights light or to use therapy bands. Start back to weight training with extreme caution so that an inflammation response isn't generated. Warming your joints with hydrocolator pads or taking a warm shower prior to lifting may be a sensible option.

I would also recommend calling the Arthritis Foundation (303/756-8622 or 800/475-6447 or [www.arthritis.org](http://www.arthritis.org)) to find exercise and stretching classes. Call for their free pamphlet, "Exercising Your Arthritis." Good luck and keep moving!

*Thanks go to the good people at the Rocky Mountain Arthritis Foundation for their assistance with this article.*

### **LINDA BUCH-BODY LANGUAGE-July 21, 2002**

*"My question is about Myotherapy by Bonnie Prudden. She has a book out and trains therapists, and I am going to one she has trained. I have experienced wonderful results but my insurance won't cover the costs like they do for a Physical Therapist. What do you know about this therapy? Marilyn, Denver, CO*

The very first exercise book I ever purchased was by the venerable and redoubtable Bonnie Prudden. She has been a relentless proponent for fitness and wellness since the 1950's. "Myotherapy®" was developed by Bonnie Prudden in 1976 as a way of relaxing muscles, alleviating pain, and improving circulation by applying pressure with fingers, knuckles and elbows to the "trigger points" in the muscles for four to 20 seconds. The patient usually feels excruciating pain followed by no pain in the previous area of complaint. A certified myotherapist then determines what exercises and stretches the patient needs to learn in order to reeducate the affected muscle to prevent the pain from returning.

Many people, including athletes like Mark McGuire, have gotten relief and satisfaction by working with therapists certified as a Bonnie Prudden Myotherapist. It is a shame that insurance companies won't cover drugless, non-invasive methods such as this! Bonnie Prudden's Myotherapy program is promoted as an affordable, cost-effective way to get relief from pain and to learn how to prevent a recurrence through muscle reeducation. Perhaps, since cost is an issue, some extra time with your myotherapist learning a variety of exercises and stretches would be beneficial so that you could go longer between sessions.

Other "hands-on" methods include "Reiki," an ancient Tibetan healing art involving the placement of hands on the body to promote calm and well-being. It is even being embraced by a number of medical doctors. "Reiki empowers people and helps them mobilize their own inner resources for healing," says former surgeon and Chief of Alternative Therapies at St. Elizabeth's Medical Center in Boston, Pamela Pettinati, M.D., for *HEALTH* magazine, April 1998. This method is even being requested for study by medical students at Brown and Tufts Universities. You can get more information locally from the Reiki USUI Center for Natural Healing, (303)782/9657.

Other massage techniques include, but are not limited to: Accupressure, Lomi-Lomi, Myofacial Release, Rolfing, Craniosacral, Shiatsu, Reflexology, and Swedish massage techniques. All have their good points, limitations, supporters and detractors. The best place to start when looking for a therapist, or to find a method that is best for you, is to call the National Certification Board for Therapeutic Massage and Body work (800-296/0664) for a list of certified therapists in your area. You could also check with the Massage Therapy Institute of Colorado (303-329/6345) or any one of the other fine schools listed in the Yellow Pages. Massages can be pricey (fees average about \$1.00 a minute) but the right technique can work wonders!

You did not mention what sort of exercise you enjoy or participate in so I am going to take the liberty of suggesting a few that are gentle on the joints yet “kick butt” for both your muscles and cardiovascular system.

Swimming laps is a great way to get a total body workout while at the same time gliding along without impacting your joints (assuming you don’t lose yourself in the moment and crash into the pool wall!). If the idea of swimming laps causes your brain to go numb, try Aquatic Fitness, which is like aerobics in the water. Most classes are conducted in the shallower parts of the pool, with the advanced classes in the deep end.

Bicycling is also a great “easy-on-the-joints” way to get fit. Walking is the most affordable and can be done almost everywhere. Regardless of which method you choose, I hope you find a way to enjoy life as pain-free as possible!

**LINDA BUCH-BODY LANGUAGE-JULY 28, 2002**  
**STAMINA IMPROVES AS CALORIES BURN**

*"I've been doing cardiovascular exercise for about 7 months now to lose weight. Over time, my stamina has increased and I am able to do the same exercises without much difficulty. Does this mean I am no longer burning the same amount of calories as I did at the beginning? Do I need to increase the duration or the difficulty of the workout to continue burning the same number of calories? Also, is breathing rate a good measurement for how many calories I am burning? Some days it seems like the same exercises are more difficult than other days, yet I wonder if this makes any difference in the number of calories burned or if I just have more energy on certain days."*  
Donnee Brito, Westminster

Time for a simple study on what puts the "fit" into *fitness*! When you first started to exercise, it was probably a real ordeal just to push yourself through 15 minutes. As you continued to put work demands on your body, amazing things started to happen: your heart muscle became stronger, larger, and thicker, and your body started to build more "roads," called capillaries, not only to the heart and lungs, but to all of your other muscles as well. In addition, your blood vessels became larger (dilated) in order to accommodate the demand you put on them, which enabled them to carry blood and oxygen more easily. This means the work load for your heart and lungs *decreased*, allowing you to go further and longer than when you first began.

As for breathing, your ability to exercise longer and stronger improved with training. Your newly formed and expanded capillaries carried oxygen around more efficiently enabling you to breathe a lot easier. As for how hard to push yourself, if you can barely say your name without gasping, you are probably pushing too hard; if you can recite the Gettysburg Address without taking a breath, it is time to push your efforts up a few notches.

Since the larger muscles of your arms and legs are probably involved in your exercise routine, some additional muscle was acquired which also demanded more oxygen-rich blood. More capillary "roads" were built which helped to bring the oxygen-rich blood to the new muscle. When this all came together (probably after about six to eight weeks of consistent exercise) you suddenly realized you didn't seem to be working as hard. Congratulations! You have experienced the "training response," a gift to you from Mother Nature for being a good exerciser. You can continue to become more fit by challenging yourself with different and/or more difficult workouts.

Because exercise stimulates the growth of muscle, you are actually using more calories, not fewer. Muscle is more metabolically active than fat. This is because muscle contains the oxidative enzymes and mitochondria (a sort of cellular furnace) that help to utilize fat as an energy source, reducing its current role as seat padding! Trained (exercised) muscle becomes larger which increases the available mitochondria and oxidative enzymes. As Covert Bailey says in his book, *Smart Exercise*, "[The muscles] become fat-

burning machines, and you become a better butter burner.” Be sure to add some strength training to your routine at some point to keep valuable muscle viable and strong.

Rather than worry about how many calories you are burning, focus on how much healthier you are becoming by being consistent. Exercise keeps you young, keeps you mobile, reduces body fat, strengthens the immune system, and lowers blood pressure. Realize the enjoyment of the task at hand as opposed to using your body as an abacus for calculating “spent” calories. When you are 70 to 90 years old, you will probably still be mobile and independent--walking, hiking and traveling to your well-exercised heart’s content--rather than the alternative.

As for low-energy days, we all have them. But, where an unfit person might succumb to a touch of “the vapors,” you are up and moving. Way to go!

## **Linda Buch-BODY LANGUAGE-June 23, 2002**

*"What are the best exercises to do to improve posture? I know my shoulders are a weak link and I know Pilates is very good for posture."*

Sue Malone, Castle Rock, CO

I get downright peevisish about posture. Sometimes it is tempting to cast all those worries about assault charges aside and just push/pull the people's slumping shoulders and hips back into proper alignment! So far, I have managed to restrain myself.

Good posture is POWERFUL. It expresses confidence, vitality, and youthfulness. Our bodies are naturally designed to enable us to move gracefully and efficiently, yet many of us fall into poor postural habits. Everyday tensions and stresses are often absorbed by our bodies and compounded over time. This has a domino effect, creating a structure whose integrity is sorely compromised--emphasis on "SORE!" Poor posture is manifested in many different ways. Mentally, poor posture can contribute to tension as well as the heightened physical stress. Physically, when your spine is compressed, the internal organs are squeezed as if they are in a vice, and lung capacity can decrease, causing your nerves and blood vessels to become constricted. This can increase the potential for chronic back pain, neck pain, and headaches.

Women's posture is often a legacy of how we carried ourselves as young girls and adolescents. Many young girls ruined their posture during their formative years thinking, among other notions, that slouching forward would make them seem submissive, shorter or less visible. Men often assumed the "bully posture" to look "cool." So, pay attention to that annoying little voice in your head (your mother!) telling you to "Stand up straight! Don't Slouch!"

Standing and sitting properly keep your muscles in balance, allowing your spinal column and all of the surrounding muscles to work in harmony, thus providing you with pain-free mobility. Poor posture indicators, according to physical therapist Deborah Ellison, are: "collapsed arches in your feet; an elevated hip or shoulder; one side of the body rotated forward or back; pelvis and hips tilted to the front, back or side; rounded back; drooping chest and shoulders; head jutting forward." These misalignments are often caused by muscle imbalances from poor sitting or standing habits, or from the body's own ability to work around muscle weaknesses due to an injury.

But hope for the posturally challenged abounds! Pilates is an often strenuous technique previously used by dancers to strengthen the muscles of the back, hips, and abdomen. The exercises performed in a Pilates class will bring all of these muscles around the spine into balance and alignment. "Pilates uses spring-based equipment in all conceivable planes of motion, involving precision, awareness, and the use of breath. It is

designed to “strengthen and lengthen muscles from the core out to the extremities, open up joints, and release tension,” says the brochure from the Phoenix Center for Health Excellence in Cherry Creek. Pilates *mat* classes are offered at many fitness facilities as well. These classes mimic the Pilates exercises but without the machine (called the “Reformer”) component.

In the Denver area, Yoga classes and facilities are as abundant as “Road Work Ahead” signs. If a Pilates studio is too difficult to locate (or pay for), Yoga is another great way to get in touch holistically with your body’s strengths and weaknesses.

Another way to retrain your muscles is through the Alexander Technique (1-800-473-0620) or the Feldenkrais Method (1-800-775-2118). The Alexander Technique works on straightening the spine; the Feldenkrais Method uses a movement system that changes how messages are transmitted from the muscles to the brain. Both disciplines strive to change bad habits and help the body achieve proper balance and alignment.

Regardless of the path you choose, it is worth the time and effort because dysfunctional muscle patterns can create major health problems if allowed to persist over a lifetime.



**Linda Buch-BODY LANGUAGE-June 30, 2002**

*"After taking the heart recovery test I am wondering if a lower working heart rate skews the results? I can only get my heart rate to 136 beats per minute. So, with a one minute recovery of 120 beats, I have a 1.4 score. I am 43 and have been running for 19 years, currently running 16 to 20 miles per week at four miles per outing. Am I not working out hard enough? Any insights?"*  
"Rapid" Robert, Colorado

Way back in the last century, about 1997 or so, the standard formula for figuring out your maximum heart rate (the maximum number of beats per minute your heart should beat according to your age) was simply to take 220 (the presumed maximum number of beats the average person's heart can handle for one minute) minus your age. This formula was developed by William L. Haskell, MD, a professor at Stanford University and was only intended as a guide, not as a gold standard. It is thought that 30-40% of the population does not fit this formula at all. Research by Hirofumi Tanaka, Ph.D., University of Colorado, reveals that the traditional formula "underestimates maximal heart rate for older adults and overestimates it for younger adults" (*IDEA Personal Trainer, Nov.-Dec. 2001*). In spite of newer formulas being drafted by researchers, the majority of fitness agencies still use the original as their primary guide.

Why does this even matter, you ask? Because the heart is a muscle and it, like the other muscles in your body, needs to be exercised at 55-80% of your maximum in order to stay healthy and strong. One way to check your heart's fitness is to observe how quickly it recovers after huffing and puffing your way through an aerobic workout of at least 20 minutes or more (where you are breathing deeply yet still able to say "Mary Had a Little Lamb" without gasping for air). Most of the resources I use suggest stopping after the aerobic portion of your exercise session, immediately take your pulse, then rechecking your pulse again after one minute. Subtract the two numbers to see how quickly your beats per minute (BPM) drop toward your resting heart rate (to find this number, take your pulse first thing in the morning). The quicker it falls, the stronger and better trained the heart muscle.

According to the customary standards mentioned above, your maximum heart rate is approximately 177 BPM, give or take 10%. Using these numbers, you are working out at approximately 77% of your maximum, which sounds like a decent pace. This means you have either an exercise problem or a cardiac problem.

In a 1999 national radio interview, Dr. Michael Lauer, cardiologist at the Cleveland Clinic, Cleveland Ohio, reported "We found was that this change in heart rate during the first minute after exercise was an extremely powerful predictor of mortality, in fact it was the most powerful predictor of mortality." He continued to report, "We'd like to see is the heart rate fall by at least 20 beats per minute during that first minute after

exercise." (Reference: Cole et al. *Heart-rate recovery immediately after exercise as a predictor of mortality. New England Journal of Medicine* 1999; 341:1351-1357.)

Since I have no way of knowing how hard you are working out, what sort of terrain you are encountering, how long it takes you to run the four-mile average, what sort of genetics you have inherited, or what medications you may be on to prevent your heart rate from getting above 136 BPM, I strongly encourage you to contact a cardiologist and set up a complete battery of tests for your cardiovascular system. These tests should at least include a stress test on a treadmill, blood work, and a lung capacity test with a spirometer (a device which measures the lungs' capacity to hold air, ability to exchange oxygen and carbon dioxide, and so forth.)

Once this information is analyzed by your cardiologist, you will have a better understanding of your situation. I know you want to jog worry-free so don't procrastinate-call today!

Linda Buch-Body Language-June 9, 2002

### Figuring Fat Grams and Daily Calories

*"How many fat grams per day are recommended and how do I determine how many calories per day to consume to lose weight? I'm 5'9" and wish to lose 50#. I try to get in 4-5 half-hour sessions on the cardio equipment per week and lift weights twice a week. Mary Billmaier, Adams County, CO*

On National Public Radio recently, I heard an interview with an immigrant from Bangladesh. When he was asked why he worked so hard to emigrate to America, he replied, "I wanted to live in a country where even the poor people are fat." Seems the whole world knows Americans do not suffer from too few fat grams. Interestingly, the more fat-gram conscious we have become, the fatter we have gotten. Thanks to some nefarious marketing, "fat-free" has somehow become an "all-you-can-eat-for-free" concept. If you are a label-reader, you will notice that the calories in the "fat-free" items are often greater than the calories in the regular items. Fat carries flavor. In order to make up for this, the sugar content often escalates, bumping the caloric content in the process.

Humans need *some* fat in their diets. Vitamins A,D,E, and K are all fat-soluble so without some fat in our food we would suffer nutritionally. But not all fats are created equally. Some are good, some are bad, and some are REALLY ugly. Everyone has heard the terms "saturated, polyunsaturated," and "monounsaturated." What makes each of these fats different from one another is how they look chemically. If you jump into the "Way-Back Machine" and peek into your high school chemistry class, you will recall that chemical compounds are composed of two or more elements. The key elements in fat are hydrogen and carbon. How they are bonded together is what makes them saturated or not. "Saturated" fats (from tropical oils and animal fat) have the maximum number of hydrogen atoms. This make this fat harder for the body to break down but really easy to store (like on the butt or on the arteries). "Polyunsaturated" fats (vegetables, some nuts, grains, and fish) and "monounsaturated" (olive oil, avocado, peanuts, cashews) fats lack some hydrogen atoms, which makes these fats easier for the body to break down and use for energy, vitamin transportation, and so forth.

The truly "nasty" fats, however, are the *trans fatty acids* which are artificially created in a lab by adding hydrogen to a perfectly good polyunsaturated fat in order to improve the shelf-life. This is know as "hydrogenation" and has been found to be even more harmful to cardiovascular health than saturated fat.

Studies published in the INTERNATIONAL JOURNAL on OBESITY (vol. 25, #1503, 2001) have shown that people who included unsaturated fats from olive, nut and canola oils (often called the "Mediterranean Diet") stuck to their reduced calorie diets better than those who drastically reduced their fat intake. Also, those who increased their

fruits and vegetables (8 to 10 servings per day) also had long term success. As for how many fat-grams you should eat in a day, you must first find out how many calories you need to stay right where you are weight-wise and, in the process, do the math to figure out what percentage of your calories need to come from fat (30% should come from fat, primarily from unsaturated sources). To do this you must calculate your Basal Metabolic Rate (BMR), which means you will have to figure out how much of you is fat and how much is lean mass (muscle and organ tissue).

To find your BMR, either make an appointment with a Registered Dietitian, make an appointment with a facility that has a body composition machine called a "Bod Pod," (1-800-4BODPOD to find local vendors) or pick up a scale by Tanita which both weighs you and reads your body fat. (Keep in mind that the "Bod Pod" will be far more accurate than an inexpensive scale.) Since lean mass burns about 35 calories per pound and fat burns only 3 calories per pound, whip out the calculator and figure your daily caloric needs in order to maintain your current weight. As long as you accept this number as a fairly rough estimate, and you keep up with your workouts, you should be on your way to both your weight-loss goals and a healthier diet.

## LINDA BUCH-BODY LANGUAGE-MARCH 17,2002

*"Someone at the gym told me I am wasting my time on the treadmill because I hold onto it while walking. I set the incline between 10 and 15 percent, and the speed between 3.5 mph and 4 mph. I go for 30 minutes. If I let go, I won't last 20 seconds."* Kelcie Wayne, Denver

A bazillion years ago, in the 1960's or '70's, researchers in the field of cardiac health noticed a phenomenon among symphony orchestra conductors Leonard Bernstein, Sarah Caldwell, and Seiji Ozawa. In spite of sometimes sporadic exercise regimens, their cardiovascular systems were in superb condition. Seems there are a lot of health benefits to those orchestra-conducting arm movements! The adding of arm equipment to treadmills and the popularity of power walking soon followed.

Obviously, the legs do most of the work on the treadmill, but getting the arms into the act can increase calories burned by as much as 25%. According to *Running Research News* (November 1991), "Each 1% increase in the elevation requires 4% more energy." At your current 10-15% elevation, you have already bumped your caloric output. However, I would like to suggest that change is both necessary and appropriate in order to stay mentally challenged and physically balanced. Some great ways to spice up your work out and increase the benefits of your exercise are mixing up the inclines and speeds. This will allow you to use your arms when walking on the treadmill which will help you tone your upper body.

According to *Walk Off Weight* newsletter (June 1997), using the arms correctly can boost your caloric burn by as much as 20%. The arms should be bent at a 90 degree angle and swing in an arc from your waist to the bottom of your chest. Keep your hands in a fist and make sure your shoulders are relaxed. Another benefit to knocking your incline down a bit is that it will allow you to experiment with light hand-weights (1#-2#). The occasional use of light hand weights (for experienced exercisers) can make a workout more interesting.

Allison Serrell, a fitness writer for *Health* magazine (May 1999) suggests using what are called "intervals." For example, warm up for five minutes at your usual pace. Speed up the treadmill by .3 mph each minute for 4 minutes. For the next five minutes, alternate between grades of 3% to 6% every other minute. Next, set the treadmill at 10-15% and climb for 4 minutes. Repeat the program and cool down. Try any number of variations on this routine. The change in grades and speed will allow you to get your arms moving and will involve more of your leg muscles in the process. By staying at the higher inclines all of the time, your upper leg muscles are getting most of the attention. By mixing things up, your workout will be more balanced. At some point, these improvements could make it possible for you to walk at the higher inclines without having to hold on.

Many people are getting back into fitness, often after a long lapse. Some find the treadmill convenient but a bit scary. Should someone new to exercise be intimidated into walking sans hands before they feel ready? No. With 61% of Americans now considered medically obese, and with only 14% of Americans engaging in the recommended minimum of 20 minutes of exercise per day, I believe the Denizens of Dogma should be encouraging rather than admonishing.

The boost in cardiac output between holding on to a railing or using the arms can be enough to push the heart rate too high for someone who is out of condition. Be sure to wear a heart rate monitor, or pay close attention to your Perceived Exertion (how you *feel*). After a week or two of consistent workouts, a beginner should experiment with different speeds and elevations.

**Linda Buch-Body Language-March 10, 2002**

### **Is Creatine safe for Young Adults?**

*" My son is a 21 year old college student. He is 5' 11" and weighs 155#. He is very active in sports and has lifted weights for 3 years under the guidance of a fitness trainer. He would like to add some bulk and has looked at supplements such as creatine. We have discouraged this, feeling that perhaps he could achieve this with diet or another approach. He and I are interested in your opinions and suggestions."* Brent Heaviland, Golden

*Citius! Altius! Fortius!* (Swifter! Higher! Stronger!) This is the Olympic motto, dating back to the Ancient Greeks. The search for ergogenic aids for this sort of athletic excellence has not changed much; in fact, even the Ancient Greeks experimented with herbal concoctions to try to get an edge over opponents. There are a lot of supplements on the market hyped largely with anecdotal evidence. Your son must be commended for wanting to know a few facts before diving headlong into the shark-feed frenzy that is often prevalent in some "whadoyabench" weight room cultures. Of all the supplements on the market, creatine monohydrate seems to be the one that actually works and, more importantly, works safely.

Creatine phosphate is a naturally occurring substance in the body. It is found in red meat and fish but is largely depleted from these foods when cooked. Creatine phosphate is essential for the production of ATP (adenosine triphosphate), the fuel every muscle needs in order to contract. When a muscle contracts, the ATP is "burned" and loses one of its phosphate molecules, becoming ADP (adenosine diphosphate). Creatine phosphate donates its phosphate molecule back to the ADP (diphosphate), turning it back into ATP (triphosphate) so that the muscle can continue to work. By loading the body with extra creatine, we are filling our potential stores right to the brim. This allows the muscles to work harder, longer, and recover faster--a real benefit to anyone who is trying to increase muscle size and power.

Creatine is widely used by athletes (it is not a banned substance) who are engaged in anaerobic activities involving strength or short bursts of speed. This supplement has not been found to be particularly useful for athletes in endurance events. Creatine supplementation, according to exercise physiology experts William J. Kramer, Ph.D., and Jeff Volek, MS, RD, of Ball State University in Muncie, IN, "significantly enhances the ability to maintain muscular force and power output during exhaustive bouts of cycling, running, repeated jumping, swimming, kayaking/rowing and weight lifting. Improvements in bench press strength and 40-yard dash times have been documented, as have significant increases in fat-free mass."

When "loaded" into the muscles, and maintained properly on a daily basis, the creatine stores tend to remain high for as long as a month, which means you can cycle on and off

safely and still hang on to the results of your hard work. Be careful of “if a little is good, more is better” type thinking, however. Creatine has a saturation point which means the body can only hold so much. Anything over this amount is excreted in the urine.

Creatine is still being studied for affects over the long term. Some reports of muscle cramping, diarrhea, and nausea have been reported but only in isolated cases. If you want to try this supplement, try to buy from a USA manufacturer who is registered with the FDA . This is a popular product. Beware of “bargains.”

While creatine appears to be safe for a number of populations (it has been used successfully with muscular dystrophy and ALS patients, among others) I feel that youths and teens should concentrate on developing good exercise and eating habits, eschewing ergogenic aids, until they have matured physically and mentally. The introduction of bodybuilding supplements at a young age ties self-esteem to artificially obtained physique, power and strength. I believe that it is healthier for youths and teens to “fill out” naturally first.

It sounds like your 21 year old son has spent enough time focusing on himself to develop the awareness and maturity necessary to make an appropriate decision relative to his goals, and, to choose wisely.

*(Additional resources for this article included U.S. Pharmacist, 8/01; and [www.webmd.com](http://www.webmd.com))*



## **Linda Buch-Body Language-May 12, 2002**

*"My husband and I are in our early 60's and have resumed exercising regularly. Since mid-January, we have been going to the gym 3 to 4 times a week, doing 20 minutes of aerobics, either upper or lower body machines for @ 20 minutes, and a series of core-strengthening exercises and stretches. When we are finished we feel exhilarated, but within an hour or so we are TIRED! How long does this continue?" Jackie Powell, Denver*

### **RESTORING ENERGY AFTER WORKOUT**

Fitness clubs are being inundated with members over age 50 and apparently the two of you are leading the charge! You both have organized a terrific, well-balanced fitness program for yourselves which will enhance your vitality for many years to come. Exercise is the best antidote for the loss of muscle and bone which often accompanies aging, especially among the sedentary. It also helps maintain flexibility, boosts immune response, improves heart and lung capacity, and reduces the risk for high blood pressure, type 2 diabetes, osteoporosis, and coronary heart disease. Regular exercise has also been found to help keep our mental faculties sharp and clear (which may or may not help you remember where you put the car keys)!

Like it or not, our bodies change as we age. Even the most elite athletes find they must take more time between exercise sessions in order to feel good and to avoid injury. A Danish study, published in 1990 by H. Klitgaard, Ph.D., found that muscle fibers—particularly the “fast twitch” fibers (the ones that can handle quick or explosive moves) become increasingly weaker and even wither away in older adults, particularly among those who do not exercise. Your strength training workouts will reverse this weakness and will restore a lot of muscle mass.

Fatigue at the beginning of a new program is normal, therefore, but should disappear within a couple of weeks. After all, your body has to adjust to your new output levels by expending a lot of energy to rebuild tissue and restore energy stores in the muscle and liver. Continuing exhaustion could mean that you are lifting too heavy or pushing yourselves too hard on the aerobic equipment. As we age, our bodies need more time to recover from the lifting, and from the huffing and puffing. It may be necessary to reduce the weight load, cutting back on the number of sets, and allowing more time between exercises for proper recovery.

Also, you did not mention any sort of “warm-up” prior to starting your exercises, such as light warm-up moves using resistance bands and/or Swiss balls. One of the fitness professionals at your facility can show you some good moves to get your muscles warmed up and your body ready for exercise. Doing some light recovery stretches in between your lifting sets may also help.

The last aspect for your consideration is nutrition. Nutritional needs don't really change that much as we age *for those who exercise*. It had been previously assumed that caloric intake had to decrease to allow for slower metabolisms. However, recent studies have shown that active seniors can and should keep their caloric intake at the levels recommended for men and women aged 25-50. In order to maintain and restore adequate glycogen stores (the body's preferred food), be sure your calories are at least 60% complex carbohydrates (fruits, vegetables, grains, beans). High quality protein (about 1 gram per kg of body weight for seniors) is also important and keeping your saturated fat intake low (10% or less of your fat calories) goes without saying.

The last key for restoring energy is to be sure your water intake is adequate. As we get older our ability to sense thirst declines. As exercisers, this ability is crucial! According to Jenna A. Bell-Wilson, MS, RD, LD (*IDEA Personal Trainer*, April 2002), "The effects of dehydration during exercise can include an increase in core body temperature, elevated heart rate, decreased blood volume, and diminished physical performance."

So, be sure to eat, drink and be merry! Considering your activity levels, I suspect the two of you will be doing that for a long time to come.

**Linda Buch--Body Language--May 19, 2002**  
**Reorganize and Reassess to Cope with Weight Frustration**

*"I'm doing everything right and can't lose weight-help! I am 37, 5'5", about 15# overweight and at wit's end. I'm at the point where i am just trying to eat as little as possible. i don't believe the whole "you can't lose weight by not eating because your metabolism slows;" anorexics lose weight by not eating. I don't eat fast food and do ashtanga (heat) yoga 3-5 times a week. I eat fruit, veggies and protein. I count carbs and try not to eat more than 100 grams per day (a Doctor told me i ate too many so i really cut back-lost weight initially but gained it back). My thyroid is fine, i don't eat late at night, rarely drink alcohol (i drink water). I lift weights and now walk on treadmill at 4 MPH for an hour 3-5 times a week. my clothes are sooo tight and i just get more and more depressed. i wake up every morning feeling bad and obsess over my weight all day, every day." MZ, Denver*

Holy frustration, Batman! I ran out of red flags after you mentioned "counting carbs" so what we are going to do, MZ, is start from scratch. Your first task is to throw out all of your diet books, pack up all the clothes that do not fit properly, and lock your bathroom scale in the basement. We are going to reorganize your diet and exercise habits and, hopefully, your priorities.

Your second assignment is to contact the Colorado Dietetic Association (1-866/790/2200) for a referral, specifically asking for a registered dietitian who specializes in women who exercise. Your dietitian will do a body composition assessment to determine what percentage of your total weight is body fat. The lean mass-to-body fat ratio is infinitely more important than your weight as it appears on a bathroom scale. A woman your age and height would be healthy at about 25% body fat. Your total weight at this percentage is immaterial. A registered dietitian can design a healthy diet to suit your lifestyle and metabolism.

Like it or not, millions of years of evolution, where humans have had to deal with feast and famine, have taught our systems to hold onto fat (which, at 9 calories per gram, is like gold to Ft. Knox) when calories are reduced and to store fat when food is plentiful. Anorexics don't "lose weight," MZ, they starve themselves by refusing to give their bodies the calories necessary even for organ function. This forces the body to feed off itself--creating a cascade effect where organs cease to function and electrolytes go severely out of balance--often causing death. I am going to guess that you are not eating the recommended 1,700-2,000 calories per day. Since you were unfortunately talked into the "low carb" lunacy, rife among the "lose weight fast" charlatans, you are depriving your body of its preferred fuel: *carbohydrates*, specifically fruits, vegetables, grains, and beans. 60% of your caloric intake should come from these nutritionally dense sources, with 25% from fat and 15% from protein. Working with a dietitian will help you get your systems back on track and help your body release the brakes put on your fat stores

due to inadequate caloric intake and out-of-balance food choices. A great book to buttress your reeducation is *Nancy Clark's Sports Nutrition Guidebook* (Human Kinetics).

Your third task is to obtain a heart rate monitor. Walking on a treadmill is fine but you may not be pushing yourself to appropriate fitness achievement levels. A working heart rate of up to about 150-155 beats per minute (BPM) for 20+ minutes (excluding warm-up and cool down) is probably what you need to strive toward. A fitness professional at your gym could help ascertain what is best for you. This sort of assistance should be free with your membership.

Yoga and strength training are both worthy endeavors and should be continued if you enjoy them. Exercise is a tool, not a weapon. If you do not really enjoy them, keep trying new things until you find an activity you just plain *love*. You are fortunate to be living in Colorado because just about every organization helping people afflicted with a disease or disability sponsors races, walks and bike rides almost every weekend to raise money and awareness. Training for and participating in more altruistic endeavors might make exercise more fun. You would be doing good for others, be outside, and add some depth and breadth to your personal goals.

Your fourth task is to get a referral to a therapist who can help you with body image and possibly treat you for depression. It is not wrong to want to improve your health and to lose body fat that could endanger your well-being. Allowing a number on a scale to suck the joy out of your life, however, is a torment best dealt with through professional counseling. You are not alone in this self-flagellation. Author and fitness professional Deborah Low writes in *The Quest for Peace, Love and a 24" Waist* (Bonneville Books), "The weight struggle is very real when we praise the scale as our personal deity, yet scales merely measure objects, not human worth." Your ultimate goal, says Low, "must be to make peace with your body, and reverse your negative self-image." You are worth far more than the number on the scale, MZ! Good luck and I hope you can find the fun and the joy. You deserve it.

**Linda Buch-Body Language-March 24, 2002**

*"Do facial exercises really work to alleviate and/or prevent wrinkles?"*

Marianne K., Denver CO

Christopher Marlowe wrote that Helen of Troy's face, "launch'd a thousand ships" (*Doctor Faustus*). Indeed, the desire for facial pulchritude not only spans eons of history, but is also unlimited in scope regardless of age, gender, or race. But, Shakespeare really nailed the essence of facial relevance when he observed, "There's no art to find the mind's construction in the face" (*Macbeth* I. iv). Indeed, after a lifetime of joy, sorrow, tension, stress, pain, and pleasure, our faces often tell the world way more than we want it to know!

We all have features that we either dislike from the beginning, or features that have become less agreeable over time, like bags under the eyes, double chins, sagging skin around the cheeks, wrinkles around the mouth, and so forth. There are many factors involved in the aging of facial skin: environment, complexion, a smoking habit, weight gain/loss, skin type and menopause just to name a few. I found pages and pages of "solutions" to these problems all over the Internet--everything from Chinese herbal wraps, chin straps, and face-muscle flexing equipment, to lotions, potions, and massaging techniques. I have no idea if any of these work but I do know that our faces have a few hundred muscles (plastered every which way over our skulls) that allow us to speak, chew, laugh, frown, smile, sleep, and scream. It would stand to reason that there would be exercises designed to help keep our faces from falling into the soup as we age.

George Foreman, whose face has experienced some serious pummeling during his boxing career, answered a similar question in his column in the USA Magazine insert in the Sunday Denver Post a few years ago. He advised a woman complaining about her double chin to do what he referred to as his "time-tested neck workout." Here it is verbatim:

"1. Lie on your back with your shoulders lifted slightly off the floor. 2. Rotate your head to the left; repeat to the right. 3. With shoulders slightly arched, reach as far back with your neck as you can, then tilt chin forward toward chest. 4. Start with small sets (four times to the left, then four times to the right). Eventually build up to 10 reps."

Michael Meyer, at [www.ageless.co.za](http://www.ageless.co.za), listed a number of exercises (involving various positions of the eyes, nostrils, eyebrows, and lips) designed to help make the face look younger. His company, working in concert with Sallamander Concepts, recommended a book, Facercise: The dynamic Muscle-Toning Program for Renewed Vitality and a More Youthful Appearance, by Carole Maggio. I cannot personally vouch for the effectiveness of any exercises listed on the website or in the book but they were professional enough to state that there are no guarantees on their effectiveness. Others have not been as forthright.

A St. Petersburg Times newspaper article by Deborah O'Neil (August 6, 2000) did an exposé on a battery-powered face mask called "Rejuvenique." Inventor George E. Springer (who claimed to be a licensed chiropractor in Florida) registered it with the US Patent & Trademark Office in 1995. According to the article, "Linda Evans became the paid spokeswoman for the mask, which has been claimed to tone skin and reduce fine lines and wrinkles by transmitting mild electric shocks to facial muscles." Many claims were made about the mask's effectiveness, including one stating that clinical trials conducted "show 80 percent of participants experienced a reduction in the appearance of lines and a more radiant complexion." These claims spurred an FDA investigation.

Dr. Debra Jaliman, a spokeswoman for the American Academy of Dermatology, encourages the FDA to pull the "Rejuvenique" off the market. "People are always exercising muscles," says Dr. Jaliman, "but facial muscles are totally different. The more expressive your face, the more you move those muscles, the more lines you're going to have in your face."

Most doctors say that the best beauty product you can buy for your face is sunscreen. I might also suggest yoga for stress-relief, exercise for good circulation (this *is* a fitness column!), and plenty of gut-busting laughter for overall rejuvenation.

## **Linda Buch-Body Language-May 26, 2002**

*"One aspect of weight loss that needs covering is the cost. How many dollars an hour does a physical trainer cost? What is the cost of Power Bars (or equivalent) and do you recommend them? Most of all, why the big emphasis on taking 2 hours to prepare expensive special meals which are consumed in less than 15 minutes--isn't there a more cost-efficient and time-efficient way for us to eat proper food?" Bob Askey, Longmont, CO*

### **HEALTHY EATING ON A BUDGET**

One of my clients has this sign by her front door: "Martha Stewart Does *Not* Live Here." Short of having the ubiquitous "Martha" do all of our food preparations, healthy cooking can be both a struggle and a challenge for busy, weight-conscious adults. Since the bulk of your concerns seem to be with food cost and preparation, let's start there.

The first rule is: ALWAYS MAKE A LIST AND STICK TO THE LIST. Your list should include certain staples which will ensure that, regardless of time constraints, you can always toss together a healthy meal. Before heading to the store, take stock of what you have in the cupboards...including the stuff jammed way in the back that hasn't seen daylight since the Carter administration. Once you have assessed your soup, canned food, dried bean, rice, and pasta situation, check your herbs and spices. If you keep a variety of spices on hand, you can turn any meal into a United Nations smorgasbord. After taking inventory, create a menu for the week. At first, it may be time-consuming to ensure proper nutritional balance has been taken into account. Experience and a few good books (like those by Jane Brody and Nancy Clark, and magazines like "Cooking Light") contain good information about nutrition along with many recipes that are easy to prepare.

The second rule of food gathering is: NEVER SHOP WHEN HUNGRY. Obey this rule and you will have greater resolve when you pass the snack cake display. Hungry shoppers have far less resolve when Ding Dongs are on sale. When shopping in the large supermarkets, *stick to the perimeter of the store*. Most of the fresh produce, dairy products, meat, fish, and bread are located around the edges while the highly processed prepackaged junk foods are located in the aisles. Except for your purchases of soups, grains, and canned fruits and vegetables, try to avoid the centers of the aisles. Other great items to keep in stock are frozen fruits and vegetables. When you hit the frozen food area, be aware that pizzas and ice cream have been known to leap into shopping carts entirely on their own power.

Your preparation time at home can be further reduced by cooking certain items in advance, such as chicken breasts and brown rice. Stored properly, these items can keep for 4-5 days until you need them for a stir-fry recipe or a crock pot stew.

As for “meal replacement” bars, Bonnie Liebman, Director of Nutrition for the Center for Science in the Public Interest (publisher of the Nutrition Action Health Letter) reminds us that only whole foods (which can come from canned and frozen sources as well as fresh) contain the necessary phytochemicals and other nutritional nuances required for optimum health. No two to three ounce bar can accomplish that feat. I suggest that you use good sense with anything that claims to “replace” actual food. Keep them around for “emergency use only” to keep the hunger, and the junk food, at bay.

Personal training fees will vary. In Denver, fees range from \$40.00 to \$80.00 per session, often depending on whether you are using trainers who are employees of a specific gym or whether you hire an independent trainer. Fees can also be indicative of the person’s experience, education, and areas of specialization.

If you have doubts about your ability to organize your food choices, a few sessions with a Registered Dietitian would be a prudent investment. Keep a food diary for a week or two before your first appointment to facilitate the discussion. Most dietitians are experts at food/time management and can be very helpful when organizing your menus. By the way, eating more slowly can be a helpful habit for weight-loss. Try to stretch your dining to 25 minutes!



**Linda Buch-Body Language-April 28, 2002**

*"I have been on a fitness program for about 3-weeks now, eating low fat/carb food with cardio and weight training 3-times a week including cycling class. I am seeing results, have more energy and lost 5#. My main concern is that my butt seems to be getting bigger as I exercise. My trainer tells me the exercises he's having me do are to tone the glutes, but it's not really working. Do you know anything that will help decrease butt and upper thigh size? Also, how can I tighten the skin around my knees to make them look bonier?"*

Connie H., Lexington KY

**BODY SCULPTING ALWAYS A CHALLENGE**

One of the frustrating aspects of body transformation is the interminable time it takes to make the changes we want. Weight seems to pack onto the hips just by *looking* at chocolate! The fact that you have lost 5#, see results, and have more energy sounds like quite a lot in only three weeks time.

Your genetics may favor the pear shape (where the body fat tends to accumulate more at the hips and thighs), rather than the apple shape (which favors fat accumulation around the stomach and lower back). Regardless of your genetics, the only way you can reduce the fat from any particular place is by reducing your *total* body fat. In spite of the billions of dollars spent by the exercise equipment industry to convince you otherwise, there is no such thing as spot reducing.

A key phrase in your question is "my butt *seems* to be bigger." Remember that appearances can be deceiving. Keep in mind that exercise-starved muscle will respond very quickly. It is likely your gluteus muscles are developing faster than the fat is departing. As you continue with your exercise and diet program, you will begin to see the changes you are looking for. Since you are already working with a trainer, I will assume that you are doing a variety of exercises for the whole body. As long as your weight load is moderate and your repetitions are in the 12-15 range per set, you will see improved strength and shapeliness rather than increased size.

There are a couple of things I would recommend in order to round out, and perhaps speed up, your overall progress. The first aspect of your program to examine is diet. It is always a good idea to control your fat intake, keeping your fat calories at about 25% of your total for the day. Be sure that most of these calories come from unsaturated and monounsaturated sources like grains, nuts, vegetables, and fish. I also strongly advise you to avoid any diet that restricts your carbohydrate intake. Too many people are under the impression that carbohydrates are bread, potatoes and pasta, period. Carbohydrates are also fruits, vegetables, grains, and beans. These are high-fiber, highly nutritious foods that are absolutely essential for continuous energy and good health. High protein diets are not only unsustainable but also hard on the kidneys.

The Law of Thermodynamics is immutable: if calories ingested are fewer than the calories expended, weight will be lost. Eat more calories than you expend, weight is gained. A diet from a variety of sources will be easier to sustain and healthier for you in the long run. To determine the number of calories you personally need for weight loss, and to be sure your diet is nutritionally balanced, I recommend a visit or two with a registered dietitian.

Another area you may wish to examine is the frequency of your cardiovascular exercising. Try to accumulate 30 to 45 minutes of cardiovascular exercise five to six days of the week. Since the hips and butt area are a concern, be sure to do a variety of things such as kickboxing, rollerblading, and swimming.

I know it is hard to be virtuously patient, Connie! But keep at it and this time next year, you just might be surprised at how your body has changed.

## LINDA BUCH - BODY LANGUAGE - NOVEMBER 10, 2002

*"I work out 2-3x/week, doing cardio on the eliptocycle and weights with machines. My comfortable heart rate has increased from 110 to 135. How should I monitor my heart rate as I become more fit in order to increase my fitness? Should my target go up? Should I keep it at that rate for a longer time or try to increase my target? I do not clearly understand the physiology of this. Any suggestions?" Irma, Colorado*

According to the MERCK MANUAL OF MEDICAL INFORMATION, "fitness" is defined as, "The capacity to perform physical activities." The CONCISE OXFORD DICTIONARY defines it as, "A state of good health, especially because of regular exercise." Your improvements in aerobic capacity are laudatory and certainly seem to fit with these two definitions. It is also terrific that you are more concerned with *fitness* than with *weight*! Two to three days per week is OK if you are happy with your current capabilities. However, if you are wanting more, you need to add another day or two to your current schedule.

A recent study conducted by Harvard researchers found that men (we can only hope that, one dazzling day in the near future, women will be included in such research) who exercised once or twice a week had 36% reduced risk of heart attack while men who exercised five or more times per week had a reduction of 46%. For pure health reasons, doing more is certainly worth considering. As for target heart rates, it is easy to get bogged down in little numbers which can distract from the larger, more important picture.

The human body loves change and challenge. The muscles, including the heart muscle, respond to increased work loads by becoming stronger and more efficient in the way they utilize fuel (fats, glucose, and oxygen).

The heart responds to increased training by becoming larger, which allows the heart to pump more blood with each beat. When oxygenated blood leaves the left ventricle of the heart, the cells in your body receive the energy they need to keep you moving. As your heart becomes trained through exercise, it becomes more efficient at pumping greater quantities of oxygenated blood, called stroke volume. Since the improvement in stroke volume carries over to rest as well, your heart will beat more efficiently even when you are not exercising. (Compare your current resting pulse rate to what it was before you started exercising and I will bet that number has dropped.) In short, you have replaced your small engine with one that is more powerful and efficient.

As for your actual beats per minute during exercise, what is good for you is specific to you and you alone. Age, health, and level of fitness are some of the determining factors. The standard "220 minus your age" formula has been used for decades to determine a persons maximum heart rate during an all-out "can-I-call-you-back-I-am-trying-to-out-run a cheetah" mode. Hirofumi Tanaka, PhD, researcher at the University of Colorado,

has proposed a new formula of 208 minus 70% of your age. According to Dr. Tanaka, the first formula tends to “overestimate maximum heart rates for younger adults and underestimate it in older adults.” He also acknowledges that his new formula could be off by 10 beats either way as well.

Another method for gauging exercise intensity is the Rate of Perceived Exertion scale created by Gunner Borg, PhD. The Borg scale qualifies “six” as no exertion and “20” as maximal. Somewhere between these numbers is where you will feel your appropriate exertion level.

As long as you are in good health, don’t be afraid to challenge yourself by experimenting with different levels of intensity. As fine as heart monitors are for determining exertion levels, listening to your own body is always best.

Home Workouts for the Holidays

Like it or not, ready or not, here come The Holidays. Our good intentions for abstemious eating and consistent exercising during the previous ten months usually end up at the bottom of the "To Do" list. The best way to survive is to immediately forgive yourself for falling off your otherwise sensible program and just get out there and enjoy the madness. There is a way, however, to keep the crushing post-holiday guilt-fest from becoming too all consuming: do a little bit for yourself every day that you can, even if you cannot get to the gym on a regular schedule.

You don't need a bunch of equipment and hours of time to remind your muscles that you haven't forgotten about them. Just buy a copy of THE COMMERCIAL BREAK WORKOUT, by Linda J. Buch and Seth Anne Snider-Copley, from the Tattered Cover or Amazon.com and take a gander at all of the exercises and stretches you can do in front of the TV in the comfort of your own living room.

Way back in the last millennium, the Surgeon General determined that inactivity was so detrimental to good health that it was akin to smoking a pack of cigarettes a day! So, for those who are contemplating a change in habits for the New Year, start now by performing some simple muscle and heart strengthening exercises during the holidays so that your good intentioned resolution seems less daunting.

For those who are already into an exercise groove, the suggestions in our book will keep you from falling completely off the sleigh, and will take the edge off the stress often felt when regular routines are interrupted. You can perform dozens of strength-building and metabolism boosting routines while watching TV, waiting for computer downloads, for water to boil, or laundry to dry. Take a two-minute break from gift wrapping, cleaning, cooking, and decorating and do something good for your body by taking a short fitness break.

The best exercises are the ones that you will do. We believe that, if they are easy enough to understand and perform without a lot of hassle, you will be able to sneak in a quick workout without having to spend a lot of time organizing for the task. Here are some exercises you can do any time and just about anywhere:

**PUSHUPS:** These are great for muscles in the chest, back shoulders and even the arms. Many people shy away from doing them because visions of "G.I. Joe" and "G.I. Jane" create a paralysis of confidence. Not to worry! Pushups can be performed against a wall, on all fours, on your knees, with your knees on a chair or, yes, even like "G.I. Joe/Jane." **[page 48: "All-Fours Pushup]**

LUNGES and SQUATS: Both of these exercises are great for the muscles in the legs (quadriceps, hamstrings, and gluteus, to name a few). The easiest squat exercise to perform is simply to stand up and sit down from your chair. An easy lunge is performed with one leg in front of the other. Variations abound. Buy the book and see for yourself! **[page 75: Lunges]**

CRUNCHES: These are staples for everyone who wants their abdominal muscles to be and feel strong and tight. While there is no such thing as spot reducing (drat!), strong abdominal muscles are essential for a strong back and can be performed quickly during a short break of 30 to 60 seconds. **[page 100: Crunches]**

THE HEART AND LUNGS: No time to run a marathon? Having trouble even scheduling a quick spin around the block? Try marching in place or even dancing to the car and food commercials. Little bits of activity can add up in a day. Don't pass up any opportunities to huff and puff a little. **[page 122: Marching in Place]**

*[NOTE: I do not think detailed explanations of how to execute the exercises shown is necessary. I chose samples for your consideration based on clear drawings and easy implementation] I*

## **Linda Buch - Body Language - November 24, 2002**

*"I've done a Pilates workout twice a week for the past six months. Can Pilates or other forms of resistance exercise take the place of strength training with free weights or machines? How can you balance Pilates with weight training? It feels like I'm using a lot of the same muscles, and I'm concerned about overuse if I try to do both." ET, Denver*

### **DIFFERENT FORMS OF RESISTANCE TRAINING**

For those of you have been off the planet visiting distant galaxies for the past 10 years, "Pilates" is an exercise system where moves are performed on equipment ("reformer") fitted with springs and pulleys. The eponymous "Pilates" was brought to this country in the 1930's by Josef Pilates, a German-born gymnast who worked in a British internment camp in World War I. He distilled holistic exercise methods of early physical culture scientists (notably Russian, Eugene Sandow) prominent in the early 1900's, organizing exercises with weights and pulleys, to help wounded soldiers become rehabilitated while on their backs in hospital. In the 1930's, Josef Pilates utilized this experience in America by opening a studio to help dancers become stronger, less prone to injury, and more supple. The Pilates exercise regimen evolved from an esoteric prescription for ballet dancers, to a Hollywood-esque craze, to a mainstream discipline for people who want to work on flexibility, core strength, and posture. It is now being taught not only on the aforementioned reformers, but also on mats, balls, and in swimming pools.

As a cross-training option, I like Pilates and have recommended it to friends and clients. Many of them have credited Pilates with helping them recover from injury, improve posture, and generally feel better. A properly conducted class taught by a well-trained professional can leave you feeling energized and more flexible. Pilates has its limitations, however. While anecdotal evidence abounds, there really isn't much scientifically researched evidence proving Pilates is *superior* to heavier resistance exercise for correcting muscle imbalances, improving posture, or strengthening the core. According to author, sports scientist and biomechanist, Dr. Mel Siff, "Suitably individualized Pilates and progressive weight training programs both can be used to 'correct imbalances' and improve postural alignment, which actually have a lot more to do with motor education than what means is used to achieve those ends." Also, there is no evidence Pilates builds enough muscle to completely replace the muscle-building benefits of a periodized strength training program. (A "periodized" program is one where the weight, number of sets and repetitions performed will systematically cycle over a period of weeks, alternating in intensity [the amount of weight] and volume [the number of repetitions per set] [Fleck 1999]).

It is a myth that strength training builds bulky, inflexible muscles, or, that this activity improperly stresses the joints and the back. A good strength training program will include exercises for all the muscles in the body, and will, of course by the very nature

of lifting, activate and help stabilize the core. Additionally, strength training can be performed in a variety of planes, with varying intensity, power, and speed, all of which are essential for strong muscles.

Another big plus from lifting weights is its positive effect on the bones. NASA research on astronauts found, "Exercises that best enhanced bone mineral density were high-load or weight-bearing exercises and those that increased muscle strength." Simply put, exercises using your own body weight (like push ups), walking and jogging, and weight training are listed as bone-builders. There is no evidence that Pilates provides enough stress on the muscles and joints to facilitate an increase in bone mineral density.

While Pilates does not own the patent on spinal stability, strength or power, it does work well *with* strength training. Since you are already enjoying Pilates twice a week, I recommend adding a couple of strength training sessions to your current program. This sort of variety is good for the whole body and will enhance your muscles without overtraining them.



## LINDA BUCH - BODY LANGUAGE - OCTOBER 13, 2002

*"I am planning on doing a triathlon (my first) in August, 2003. I wanted to make sure I was in shape for this. I started running a year ago, and I now run four times a week (4 miles three times a week, and 6 miles once a week). I do kick boxing twice a week as well. I am 5'5" and 145# (down from 178 a year ago). Do you have any training suggestions or a good training schedule for a first-time triathlete?" Katie Ruggle*

### TRAINING FOR A TRIATHLON

Those who participate in triathlons are uber-athletes performing in three different venues (swimming, bicycling, and running) all on the same day, usually in the blistering heat of summer. Successful triathletes have amazing cardiovascular systems and seemingly preternatural endurance capabilities. My sweatband goes off to both your goal to complete a triathlon and to your achievements thus far!

This is the perfect time to get your training organized for an August triathlon. Your first step should be to get a good log book so you can track your workouts and stay focused on the many tasks ahead. You can find information on log books (as well as tons of other useful information) in *Triathlon Magazine*, or by reading one of the books written to help people new to the sport, such as *THE COMPLETE BOOK OF TRIATHLONS*, by Sally Edwards. You should also check the web site, "[www.teamintraining.org](http://www.teamintraining.org)" (sponsored by the Leukemia & Lymphoma Society) which helps thousands of people like you train for events while simultaneously raising money for a good cause.

You did not say if you were training for the "Danskin Women's Triathlon," "The Peak" or the "5380." Regardless, you have a lot of work ahead of you. The first thing you need to do is have an experienced fitness professional check your form in swimming, bicycling and running. Technique is very important. You will want to correct any technical errors now in order to both prevent injury and to help your body operate at peak efficiency.

According to Matt Fitzgerald, an experienced triathlete and contributing writer for *Triathlete Magazine*, there are three phases of training for each of the three events: base, build, and peak. In general, the "base" phase is heavy on volume "to improve aerobic fitness at low-to-moderate intensity" which will build endurance. During the "build" phase, you work on "intensity over volume" by pushing your pace with drills of varying speeds and distances. For the "peak" phase you exceed the distances required for the triathlon, training at a fast pace in order to "improve speed as well as the ability to handle the pain of muscle fatigue." The length of each phase will last anywhere from four to 12 weeks, depending on your level of fitness for each event.

For your swimming, join a swim group which can give you access to coaching, a pool, and the experience of swimming in a group. Since swimming is only about 20% of the days event, your swim training should be organized accordingly.

Your bike training should include hills, sprints, long, endurance, and group riding. Joining a bike club, particularly one that tends toward hard riding, would be of great value. Check out *www.bicycle-rides.com* to find a compatible group. Riding in a group will also give you valuable experience for race day.

For your running, along with the different training regimens of the base, build and peak phases, you will also need to train on transitions (called “bricks”) where you ride, and then immediately follow with a run.

Excellent nutrition and plenty of rest are essential. Triathletes are often on the edge of over-training, so listen to your body. Schedule some time with a registered dietitian, a triathlon-savvy personal trainer, and/or some experienced triathletes to get reliable information. The kick boxing you are currently enjoying is good for flexibility and provides necessary cross-training. Some weightlifting during the winter months will also be beneficial for your overall strength, endurance, and power. Good luck!

## LINDA BUCH - BODY LANGUAGE - OCTOBER 20, 2002

*"I have been walking for the past three weeks but my shins have hurt so badly. I have tried new shoes, socks, etc. What else do I need to try?"*

Julie Y.

### Remedy for Aching Shins

The Greek philosopher, Epicurus, defined pleasure as "the state wherein the body is free from pain and the mind from anxiety." Apparently your walking program has created an unfortunate reversal, both physically and mentally, of what probably started out as a pleasurable venture. It sounds like you are suffering from one of two possible pathologies: shin splints or a stress fracture. Fortunately, neither of these is terminal, although the recovery from either of them may seem interminable.

According to Jeff Oliphant, head athletic trainer for the University of Wisconsin, stress fractures and shin splints have similar root causes. Both can be brought on by continuously using unforgiving surfaces (like cement), by excessively pronating the feet (walking on the inside of the foot), by starting out too hard at the beginning of a new program, or by suddenly increasing the intensity of the program. Stress fractures, however, can also be caused by foot abnormalities, such as rigid/high/flat arches or by being overweight.

Shin splints (defined by the American Runners and Fitness Association as "leg pain resulting from very small tears the leg muscles at their point of attachment to the shin") can also be traced to muscle imbalances (hamstring and butt muscles may be too tight), improper shoes, or improper technique (walking on the balls of the feet).

The pain for both of these syndromes feels similar at the beginning but, as the condition worsens, the difference becomes obvious. The pain from shin splints (medial tibial stress syndrome) seems to be everywhere along the shins; the pain from a stress fracture will probably be more specific to a certain area. The very first thing you should do is get your condition properly diagnosed. If your physician suspects a stress fracture, a simple x-ray may confirm this, with a bone scan as a higher-tech backup plan if the x-ray is not productive.

If the diagnosis is stress fracture, your primary option is rest with complete immobilization of the affected area with either a leg brace and/or crutches. Recovery could take as long as six to eight weeks. You would probably be permitted to swim or bike, but walking or running would be off the menu for the duration. You will eventually be able to return to walking, but only at a very gradual pace.

Treatment for shin splints is not as complex but it is equally frustrating to people who do not like to sit still. REST is the number one recommendation, with ice and aspirin (or other anti-inflammatory) immediately following any activity which produces pain. I would also recommend a visit with a physical therapist to determine if you have any of the aforementioned muscle imbalances or foot/ gait abnormalities. A therapist can also teach you some great flexibility, strengthening, and stretching exercises to help you get you back into your walking program. In the meantime, don't forget to mix up your exercise program with some cross training. Try swimming, bicycling, yoga, rollerblading or other activities with less impact.

## LINDA BUCH - BODY LANGUAGE - OCTOBER 27, 2002

*"I am a 60-year-old who would like to start doing weight exercises. I cannot find anywhere where they tell me how to get started and what weights to use and what goals to set as to weights I should eventually be using. Can you help me?" Ray Kier, Vernal, UT and Mesa, AZ*

It is too bad that so many Americans feel they must sit out some of the best years of their lives by attaching themselves to their recliners like 'fridge magnets. The notion that aging means "time to sit down and take it easy" is antediluvian at best. After all, what you don't use, you WILL lose.

Weight training not only strengthens muscles, it also increases bone density, lowers blood cholesterol, and strengthens ligaments and tendons, which helps ease the pressure on joints. Prior to 1989, it was thought those with high blood pressure, arthritis, or heart disease should avoid weight training. That year, researchers from Tufts and Harvard conducted a landmark study on the effects of strength training on men and women over the age of 80. They recorded remarkable improvements in strength, gait, mood, and general wellness in a period of just six weeks. What is more, there were no adverse effects on blood pressure, arthritic joints, or the heart.

Before beginning any exercise program, be sure to get a thorough checkup from your physician. Once you have the green light, your next step is to find a professional who can not only help you organize a good, overall lifting program but also teach you the correct form for the exercises. IDEA, Inc. offers a trainer locator service at [www.ideafit.com](http://www.ideafit.com), or, by calling 1-800-999-4332. Other resources for supervised learning include YMCAs, YWCAs, community centers, colleges, continuing education programs, and health clubs.

If it is too difficult to find someone to help you in person, books and videos are your next best option. I strongly recommend discarding any old books you may have lying around from past decades because many of the exercises from the 50's and 60's are no longer considered safe or even effective. Restock your library with "Weight Training for Dummies," by Suzanne Schlosberg and Liz Neporent, and "Strength Training Past 50," by Wayne Westcott, Ph.D. The "For Dummies" publishers also have a video available titled "Shaping Up With Weights for Dummies." Another video which looks interesting is "Fitnessology-Exercise and Weight Training, The Basics." All of these will require the purchase of some hand weights. If you do not want to buy any equipment, check out "The Commercial Break Workout," co-authored by yours truly, for strength exercises you can do at home using just your own body weight and your furniture. Books and videos can be ordered from bookstores, through [www.Amazon.com](http://www.Amazon.com), or [www.seniorjournal.com](http://www.seniorjournal.com)

If you have Internet access, you can contact [www.fitnessdesigns.net](http://www.fitnessdesigns.net), an online coaching service, which promises to help senior exercisers gain information, develop an action plan, and stay motivated.

The American Senior Fitness Association (1-800-243-1478 or [www.seniorfitness.net](http://www.seniorfitness.net)) publishes Mature Fitness Magazine and offers a wealth of other information as well. Government resources include the National Institute on Aging (1-800-222-2225, [www.nia.nih.gov](http://www.nia.nih.gov)), and the U.S. Department of Health and Human Services Administration on Aging (1-800-677-1116, [www.aoa.gov](http://www.aoa.gov)). And, don't forget the AARP (1-800-424-3410, or [www.aarp.org](http://www.aarp.org)).

Sounds like you have the will, Ray! I hope these suggestions help you find the way.

## LINDA BUCH-BODY LANGUAGE-October 6, 2002

*"I am 78 years old and had a hip replacement 3 years ago. The hip has dislocated twice and my surgeon has promised that if it happens again, he will have to operate again. I also have a torn rotator cuff that is fairly painful if I push it too much. I have tried walking my dog but after a block or two I am in so much pain I cannot continue. I need to lose about 5# but everything I try I find impossible to continue. I would like a real chance to exercise without endangering my hip. I certainly do not want any further surgery!" Lucille Weiss*

### WATER FITNESS CAN BENEFIT HIP-REPLACEMENT RECOVERY

It is good to hear that you do not want to tolerate any suggestion of inactivity, Lucille! There are quite a few avenues for you to explore in order to help you to stay active safely. Before heading off into any exercise program, especially with a dangerous disability such as yours, I highly recommend a visit with a physical therapist. An experienced physical therapist should be able to pinpoint which muscles in the shoulder, hip, butt, and/or leg areas that are weak or non-responsive to your basic lifestyle activities. The therapist can then recommend some simple movements you can do on your own to strengthen the muscles that aren't cooperating.

The next thing to do is find a facility in your area with a swimming pool. Most community pools offer water fitness programs at many ability levels and just may be able to recommend a class ideally suited for you. Water has tremendous healing properties, providing three very important aspects: buoyancy, resistance, and compression. Water is about 800 times more dense than air which can decrease gravitational forces by as much as 90%, depending on how deep you go. Because water is denser than air, it creates resistance in all directions. The great thing about this property is the harder you push or pull the more resistance you will feel. This allows you to participate at *precisely* the intensity you desire every moment of your workout. Because of atmospheric pressure, water provides approximately 14 pounds per square inch of compression (This varies according to how deep you go in the water.) Gentle water compression relieves swelling and can increase blood flow in the limbs.

Another way to increase muscle strength while remaining seated is with resistance bands. Resistance bands are rubber tubes with handles which come in varying degrees of difficulty, from very light to heavy. These can be attached to a secure object in the home, allowing you to pull and push from a seated position. This way you can build muscle without the risk of falling. Muscle loss, called sarcopenia, can bring on frailty which can domino into increased risk of further disability. High intensity resistance training can keep this condition at bay.

It is not necessary to go out and buy equipment, however. You can keep your muscles sound by lifting cans of soup, bags of dried beans, or boxes of pancake mix. The

important thing is to find a way to keep your muscles viable so you can stay active and independent.



**LINDA BUCH-BODY LANGUAGE-September 1, 2002**

**TRIMMING THE TUMMY**

*"I want to trim my tummy area. My unique problem is that I am not overweight (I am 5'5" and weight 122 #'s.) I am happy with my weight and overall body tone, except I have a tummy. That is where I carry weight. This makes it difficult when buying shorts and pants because in order to get them to fit my waist, they are very baggy everywhere else. I do regular ab exercises and walk 30 minutes most days. I have heard that you cannot spot trim and that to trim your abs you have to lose weight as well. Can you help me with this dilemma? Do others have this problem?"*

Concerned in Colorado Springs

"How do I get rid of *this*?" is probably the question most frequently asked of fitness professionals. Sometimes it seems that no matter how hard you work and diet, pockets of fat remain in certain spots just to drive you *crazy*. The truly maddening part of all this is that we seem to be designed this way!

Fat cells contain fatty acids, which got into the cell in the first place from eating. Eat too many calories, the fat cells fill up; cut back on the calories and bump up the exercise, the fat cells empty out. On the surface of each fat cell is either a high distribution of alpha or beta receptors. The alpha receptors slow down fat utilization; beta receptors speed it up. These receptors are genetically determined, usually by sex. Surprise, surprise. Women tend to have more alpha receptors on the lower body, back and legs; men on the midsection and chest area. According to an article printed in the *Journal of Applied Physiology* (January, 2000), the distribution of alpha and beta receptors on each fat cell explains why certain parts of your body lose fat faster than others. Beta receptors allow fat to move out more easily than alpha receptors.

Log on to *www.Google.com* under the subject of "tummy fat" and you will be presented with a plethora of questionable options for dealing with your particular area of concern. There are the usual abdominal exercise machines, with and without "magic" electrodes designed to buzz the fat away; advice on liposuction/tummy tuck procedures; herbs and elixirs; and my personal favorite, a tummy flattening gel which "forces fat into the bloodstream." They advise exercise and a reduction in calories along with the gel "so that the fat isn't redeposited." Sounds like bullfeathers to me...

It is easy to be persuaded to go the herbal supplement route. Ephedra is the most common ingredient in the so-called "metabolism boosters" that are rife these days. Some people taking these products have had serious side-effects including hemorrhage, hypertension, cardiac arrest and death. The FDA has, therefore, red-flagged this substance as potentially dangerous. As for other supplements (carnatine, chromium picolinate, DHEA, pyruvate, amino acid/protein supplements, yohimbe, etc.), do appropriate due diligence before buying into the "miracle" of money disappearing from your wallet in order to "magically" lose the tummy fat.

In her book, *Fight Fat After Forty*, Pamela Peeke, MD, recommends weight lifting as a way to pummel the “pooch.” This suggestion is supported by subsequent studies at the University of Alabama. Doing cardiovascular exercise and crunches is good but nothing builds and maintains muscle mass like good old strength training, which seems to be missing from your current exercise routine. There is no such thing as spot reducing so no amount of crunches in any of their many extrapolations or incarnations will ever get rid of belly fat. Increasing your total muscle mass, maintaining a sensible caloric intake, and continuing your walking should get you started toward your objective. Remember, muscle is more metabolically active than fat and just might solve your sartorial dilemma.

## **Linda Buch - BODY LANGUAGE - September 29, 2002**

*"I need to know where to go to get my body fat measured. At the gym I use they only measure you for changes. I have a poor self image because I have these last few pounds that won't go away, and I don't know if I've built up my muscle too much, my diet is way off, not enough cardio or what the problem is. But I need help. I don't want to try pills, 'metabolizers,' 'fat burners'... I just want to know how hard I should be working to get rid of my extra baggage."*  
*"In Between Sizes"*

### **BODY FAT AND BODY IMAGE**

You are on the right track wanting to know your body composition because "weight" all by itself is about as relevant as your "sun sign," it is only a part of the larger puzzle. If you are concerned with privacy, you will want to do this in your own home (without other gym members swirling about).

My two favorite measuring devices are the Tanita® bathroom scale and the Accu-measure® body fat calipers. The advantages of the calipers are that they are inexpensive (under \$20), easy to use (you only measure one spot above the hip), and reasonably accurate (within @ 3%). The advantage of the Tanita scale is that it acts as both a body weight and body fat calculator. As long as you use it at about the same time and under the same (well-hydrated) conditions, you will get an amazingly accurate read. All you need is about \$70 and a bathroom floor. If you are anywhere near Glenwood Springs, the Glenwood Medical Associates have a DEXA, a high-tech machine that measures body fat [including the all-important girth measurement], as well as bone density. Call Jeanne Golay (970/379/5581) for more information.

Once you know how many of your pounds are fat, you can easily calculate your BMR (Basil Metabolic Rate). It takes 3 calories to maintain a pound of fat and about 35 calories to maintain a pound of muscle. Do the math on your own numbers and you will have a rough estimate of the calories needed to stay where you are.

As for your "poor self image," good health and fitness trump "skinny" every time. Unless you are lifting weights every day at an intensity level equal to that of body builders, power lifters, or other athletes who strain for strength and muscularity, it is unlikely that you are putting on "too much muscle." Muscle is, after all, the stuff that boosts your metabolic rate. Muscle is living tissue which contains the "engines" (mitochondria) necessary to burn calories. As for your cardio program, if you are engaging in 30 minutes or more of good old fashioned huffing and puffing most days of the week, you are probably doing just fine in that department as well. That leaves food...

Most people forget that the body is a callous accountant, ruthlessly measuring every calorie consumed against every one expended. Keeping a food diary for a week or two may reveal some startling facts about your caloric intake. Most of us underestimate by as many as 500 calories a day, which can equate to a pound of body weight per week! In order to properly calculate your food portions, buy a food scale, a nutrition/calorie reference book, and some measuring implements.

To make this process pleasurable rather than punitive, respect yourself for the efforts you are already making toward good health, take pleasure in the food you eat, and partake in body movement activities you truly enjoy.

## LINDA BUCH-BODY LANGUAGE-September 8, 2002

*"Could you give me some advice regarding "medicine balls"? I am 6' tall, 59 years old, 180#. I lift weights (a periodized program), ride my bike and walk my dogs 4 miles a day. Given this information, can you advise me? Should I use medicine balls that are progressively heavier?*

Gary Goins

### MEDICINE BALLS ADD VARIETY TO A WORKOUT

"Medicine Balls" have been around since bare-knuckle boxing. The ones I remember from childhood visits to the YMCA were cumbersome, leathery, and (somewhat) spherical, often with cotton batting peeking from the heavily stitched seams. While some of these relics may still inhabit the fetid corners of a "Rocky" movie set somewhere, the ones found in gyms today are downright glamorous. Most are made of easy-grip rubbery materials and are either filled with gel (and don't bounce) or air (which do bounce). Some are even fitted with a cord through the middle for core exercises where the ball is swung; others are designed with a handle to make gripping easier for special populations.

The many benefits of sports training with medicine balls, known and employed by college coaches for decades, are finally becoming mainstream. According to Ryan Lee, MS, and exercise physiologist at the Blythedale Children's Hospital in New York,

"Medicine balls:

- \*can be used to mimic sports movements,
- \*can be used to effectively train the aerobic/anaerobic energy systems,
- \*are completely portable,
- \*are relatively inexpensive,
- \*add variety and fun to workouts."

Since you are a weightlifter, you can improve your lifting by integrating a medicine ball into your workouts. For example, a bench press requires an explosive push in order to get the barbell away from your chest. Push too hard and too fast and elbow injury is a potential problem. How can you improve this phase of the exercise without injury? Do standing chest passes. This will allow you to explosively push the weight away from you, releasing it safely as you improve your upper body power.

Medicine balls are amazingly versatile. Hold one while squatting or lunging for a change from dumbbells and barbells. Now perform these same exercises while holding the ball overhead with both hands...or with one hand. You now have a whole new leg routine. Work your abdominal muscles by tossing the ball side-to-side with a partner; toss it between you as you simultaneously perform crunches on a Fitball®. Exercise the arms and shoulders with overhead passes using two arms, then with one arm. Your imagination is the only limitation here. Watch the movements made by the athletes in the sports you enjoy (rotation, twisting, lunging, throwing, squatting or any

combination of these moves) and imitate them with the medicine ball to add some variety and fun to your next workout.

As for what weight to use, I suggest you try any new exercise with a light weight first (2-4#) and then progress to more weighted balls (6-8# or heavier) as you become comfortable and proficient. If heavier balls are not available in your facility, you can increase the difficulty of the exercises by increasing the distance between yourself and a workout partner, or by throwing harder and faster.

A good resource for learning more about exercising with medicine balls (and stability balls) is *STRENGTH BALL TRAINING* by Lorne Goldenberg and Peter Twist (Human Kinetics, 2002), and there are numerous sites on the Internet.

*[Medicine Ball Training," by Ryan Lee, MS (IDEA Personal Trainer, June 1999) was the primary resource for this article.]*