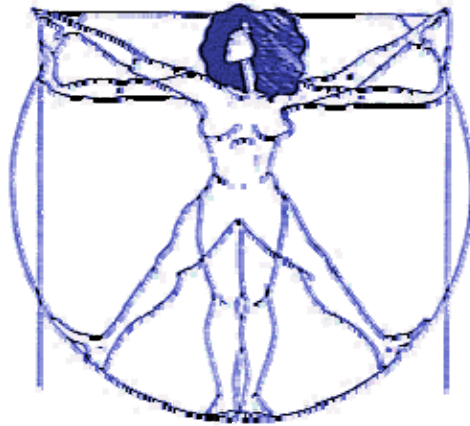


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2004 Articles

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LINDA BUCH - BODY LANGUAGE (tm)- January 5, 2004
BENEFITS OF MARTIAL ARTS

"I am a Tae Kwon Do mom who is sold on martial arts for children. Tae Kwan Do helped them with discipline, emotional stuff, confidence, and discipline. They get a healthy dose of aerobic activities, stretching and breathing techniques as well. Food, and other information about health, are spoken about on a regular basis because the basic tenet of martial arts is equality in mind, body and spirit." Sally the Tae Kwan Do mom

Martial arts classes are a great way for parents get their kids away from the sedentary, visceral violence of computer games and into something which will benefit them far into adulthood. Traditional martial arts has been done a great disservice by many of the action movies, comic books, and video games where gnarly bullies of one stripe beat up on burly bullies of another. Primary to a good martial arts program are lessons in virtue, discipline, respect for yourself and others, not the violent domination of others.

Every day kids hear "make my day" and "bring it on" from supposed adult role models. Kids get excited about martial arts because they want to be Bruce Lee or Xena, Warrior Princess, not because they want to build character. Parental concerns are just the opposite, as well they should be. How do you find a good class which will allow your children to learn the art of self-defense without turning them into playground bullies or your furniture into kindling?

Most reputable studios offer free classes and allow the parents to observe and ask questions. Is the facility safe and clean? Is the director a certified black belt? Are the instructors experienced in working with both children and adults? Are they encouraging and supportive rather than bullying or intimidating? Do the instructors emphasize self-control? Are they available to talk with you and to be part of your child's life even beyond the class setting (such as being interested in the child's grades and inner development)? Sign up for a month or two and see how it goes before making any long-term commitments.

A good studio teaches harmony and the benefits of working together. Participants soon learn that personal accomplishment is as rewarding as competition and, that perseverance and a good attitude are the keys for their advancement. Since boys and girls work together in the same class, culturally ingrained concepts about gender usually disappears. Participants soon learn that ability has more to do with individual focus, not gender. The bonus for girls is the huge boost in self-confidence, making future emotional or physical abuse of them less likely. The specific type of martial arts training does not seem to matter (karate, aikido, judo). What matters is the quality of the teaching.

According to exercise physiologists, martial arts training is good for all ages, sizes, and levels of conditioning. It increases muscle mass, ameliorates stress, strengthens the cardiovascular system, improves stamina, and reduces excess

weight. Parents of kids enrolled in martial arts often remark that their children have become more polite, do better in school, eat healthier, and are more patient and attentive to siblings. Parents who get involved in classes along with their kids frequently experience improved family communication and respect.

Proper martial arts training is a gift to your children that can last a lifetime because true mastery can take that long. This is a journey that may be worthwhile, and one worth taking along with them.

LINDA BUCH - BODY LANGUAGE (tm)- January 12, 2004

WINTER BIKING VS SPRING

"I am having a frustrating problem. I am a 54-year old woman who bicycle-commutes to work every day. I notice that in the summer, my average speed is 14-15 mph. However, once October starts, and the mornings are dark, my average time starts decreasing. Why does my average time fall off during the "dark" months? Is there anything I can do to bring up the speed?" Mariann Storck, Golden

I can theorize two reasons for the rollback on your performance. First, psychologically, humans are just not wired to go speeding into the darkness with the same alacrity as in daylight. With apologies to Dylan Thomas, humans generally do "go gentle into that good night." Fear and trepidation of dark places is one way Mother Nature insures continuation of our species.

According to Randy Wittmer, local owner of Mobile Cyclery who often works with racing teams, "Even with racers, we find lap times 10-25% slower in the dark, even with sophisticated lighting on the bikes." He suggests if you are concerned with the workout issue, purchase a heart rate monitor and gauge your ride by heart rate rather than speed. If speed is more your concern because of commute time, purchase a high quality light.

The second theory is that physiologically we are organisms caught up in a diurnal cycle called *circadian rhythms*. Circadian rhythms are chemical cycles which have been observed in algae, fungi, insects, and in animals as diverse as fish, mice and, (ta da!) *humans*. Factors which affect circadian rhythms include light, environment, and the changing seasons. Human hormone levels are on a 24-hour cycle which regulates both sleep and wakefulness. For many people, the shift between these two states happens according to the amount of seasonal light exposure.

A University of Chicago study from 2001 found that people who exercised in the dark had much larger drops in glucose levels and greater levels of the hormone melatonin, which helps to promote sleep. Daylight showed greater increases in two hormones responsible for energy metabolism: cortisol and thyrotropin. Cortisol is the stress stabilizing hormone which stimulates an increase in blood glucose; thyrotropin is a hormone (secreted from the pituitary gland) which stimulates the thyroid gland. (The thyroid, among other things, regulates the speed of our metabolism.)

This seems to suggest that, even though you are cycling at the same time every morning, the decreased light of autumn and winter reduces the amount of glucose in your system, keeps the cortisol and thyrotropin levels low, and allows

the melatonin to remain elevated. With less physiological support for full throttle metabolism, your bicycling mph slows down.

What to do? You can take a deep breath, keep riding and just chalk it up to the intractable will of Mother Nature. Or, you can keep an eye on new research from George Brainard, Ph.D., Professor of Neurology at Jefferson Medical College. He has found that circadian rhythms are most sensitive to short-wavelength blue light. This particular light wave stops the production of melatonin in the body and restores alertness better than any other light source currently on the market. Prototype light sources for the home are currently in development so watch for new “blue light specials” in the near future.

Since you sound like you are more like Laura Croft than Laura Ashley, don't give up the bicycle commute. Just cut yourself a break during the “dark months” and keep peddling.

LINDA BUCH - BODY LANGUAGE (tm)- January 26, 2004

Low-Carb Diet Fad

“What is your professional opinion of these low carb diets (South Beach, Atkins, etc.) that are so popular? Also, what’s up with the Kentucky Fried Chicken “low-carb” promotion? Isn’t this an oxymoron?” Lori Goldman, Denver

Most diets/diet books on the market do a good job making the authors’ wallets fat, but with over \$40 BILLION spent annually on books/diet products while 63% of Americans remain overweight, they obviously do little over the long term to slenderize their followers. The “low-carb” fad is the latest diet craze to hit the media. There is no FDA definition of “low-carb” and the FDA has not approved any “low-carb” labels.

It is frustrating to watch the media squeeze all carbohydrates together into one giant corset with little nutritional differentiation. Carrots, bananas, lentils, brown rice, white bread, candy, crackers, and pretzels are all carbohydrates. It makes sense to keep a wary eye on consumption levels of the last four (white bread, candy, crackers, pretzels). They are relatively void of nutrients and fiber, are high in sugar and processed flour, and are what I would call “garbageohydrates.” The first four (carrots through brown rice) are examples of COMPLEX carbohydrates (high in vitamins, minerals and fiber) which means they digest more slowly and nourish us more completely. Why restrict these?

The latest diet tool being co-opted by “low-carb” diet books is the *glycemic index*. This index assigns a number to all carbohydrates based on how they affect the blood sugar levels after consumption. (A spike in blood insulin has been found to cause weight-gain in some humans.) Pure glucose is a “100” while beans/legumes like lentils come in at around “30.” Many of the “white,” and/or highly processed foods--such as bread, potatoes, rice, pasta, instant cereals, and sugar--have high numbers. Low on the index are foods such as whole-grain breads, whole wheat or semolina pasta, old-fashioned slow cooked oatmeal, some fruits, and vegetables. Do not assume that items low on the list are acceptable, however. Carrots and bananas, in spite of their excellent nutritional value and fiber content, are assigned high glycemic numbers. Premium ice cream, because of its high fat content (which slows absorption), gets a low glycemic score of 37!

The word “calorie” is just another word for “energy.” Anytime calorie intake (energy consumed) is cut below calorie expenditure (energy used)--even as little as 10%--weight will be lost. Any calorie-restricting diet will work if it is one that you will do. Rather than investing in diet books and trampolining from one fad to the next, start keeping a food diary. Write EVERYTHING down for one week and then do some personal introspection on the habits and cravings which set you up for trouble or which add nutritionally empty calories to your daily fare.

And, no diet works without exercise so, again, find something you like that you will do--then do it. Moving is what matters, especially at the beginning of a new program after a period of being sedentary. Expend more calories than you consume and weight is lost.

As for the Kentucky Fried Chicken ad--if I can borrow from a Lewis Carroll poem in *Alice in Wonderland*--“JABBERWOCKY!” Their ad was pulled after a few weeks, thanks to the “frumious bandersnatchers” from health watchdog agencies like the Center for Science in the Public Interest. Sorry, but on NO planet in this solar system is fried chicken a health food.

LINDA BUCH - BODY LANGUAGE (tm) - February 2, 2004

Headaches from Calcium and Hormone Replacement?

"I am a 59 year old aerobic and water fitness instructor. I have been taking HRT (hormone replacement therapy) for seven years. I also take calcium supplements. Unless I allow three hours in between the HRT and the calcium, I get a terrible headache. Different calcium products did not make a difference." Ulla Meyer

Americans, especially women, suffer from a severe dietary calcium shortage. According to Liz Applegate, PhD, faculty member in the Nutrition Department at the University of California at Davis, "At least 70% of people don't meet the recommended daily intake of calcium." Since one in every two women and one in eight men suffer from bone fractures caused by osteoporosis, dietary calcium is a serious concern not only for adults, but also for the younger generations.

In addition to reducing osteoporosis, calcium has been found to lower blood pressure, protect against heart disease and colon cancer, prevent kidney stones, increase good HDL cholesterol, and aid weight loss (especially if the calcium source is nonfat or 1%-fat dairy products). Unfortunately, the "Great American Diet" of soda pop and highly processed fast foods has supplanted the healthy, mineral and vitamin rich foods which naturally provide us with this important nutrient.

Since estrogen facilitates the absorption of calcium, and since your physician has prescribed HRT for you, it is probably wise to stay on your prescription. Headaches can be a side effect of HRT, however. Talk with your physician about possibly changing the dose or form of your current medication.

As for other possible reasons for your headaches, I have read some anecdotal evidence, but no scientific studies, suggesting anything from a deficiency in magnesium and potassium, too much magnesium, or as a reaction to a prior deficiency in your body now being met by the supplements. The only credible information from scientific studies was regarding migraine headaches. Some research shows that Alpha Linolenic Acid (one source is Flaxseed oil) and Gamma Linolenic Acid (found in Evening of Primrose oil) can reduce these debilitating attacks by 75% or more. Fish Oil and magnesium were also suggested as were vitamins B2 and B3.

Supplements are defined as something you add to make up for a deficiency. They aren't intended to do the entire job. Start including whole foods in your diet instead of relying just on supplements to fulfill your calcium needs. The following foods are not only high in calcium but are also excellent sources for zillions of other important nutrients: yogurt, sardines, calcium-fortified orange juice and cereals, milk, hard cheeses (like swiss and cheddar), spinach, turnip and collard greens, soybeans, tofu, almonds, broccoli, old-fashioned oatmeal (not instant), navy beans, figs, and canned salmon (with bones).

I am a hearty supporter of Registered Dietitians, especially when there are chronic maladies to overcome. There is always the possibility that your daily fare is out of balance with your active lifestyle or with other factors specific to you. Do you use a lot of artificial sweeteners? Are you getting enough good fats and proteins in your diet? Could you be inadvertently taking too much vitamin A? Do you have a food allergy? Do you need to time your meals differently? There are many other areas to investigate before just assuming it is the calcium supplements. Call the American Dietetic Referral line (1/800/366/1655) to find someone who meets your needs and budget.

LINDA BUCH - BODY LANGUAGE (tm)- February 16, 2004
Anemia/Women Athletes/Specialized Dietitians

"I am a female long distance runner and will be 55 soon. I have been diagnosed with iron-deficiency anemia, even though I have tripled my iron consumption, I feel I need to work with a sports-specialized dietitian." Françoise Carpenter, Lakewood, CO

Low iron is probably the number one nutrient deficiency in female athletes. According to research by Courtenay Schurman, MS, CSCS, "Some sources say that as many as 80% of the female athletes, and 30% of the male athletes, show signs of iron deficiency." Anyone who feels tired all of the time and cannot seem to regain energy in spite of adequate rest, should get a blood test at once to determine if anemia is the reason.

Iron is important because it is required for the formation of hemoglobin, the protein which enables red blood cells to bind and transport oxygen from the lungs to the rest of the tissues in the body. Iron deficiency can occur because of:

***Inadequate diet.** Iron is absorbed in the stomach and upper small intestine from the foods we eat. Since only one mg of iron is absorbed for every 20 mg consumed, a diet that is out of balance can lead to anemia. Primary sources of iron are red meats (including organ meats), poultry (especially the dark meat), fish (especially shellfish like oysters, clams, and mussels), dark green leafy vegetables, dried fruits (like figs and prunes), and legumes. Using an iron skillet when cooking may also help.

***Body changes.** This can occur when adolescents go through a growth spurt, when girls begin menstruating, during pregnancy, and during lactation postpartum. The Centers for Disease Control estimate that one in 10 pre-menopausal women are anemic and recommend blood tests at least every five years.

***Gastrointestinal (GI) problems.** Malabsorption of iron can occur after GI surgery and is easily remedied with supplements. People with malabsorption diseases, such as celiac disease, can develop anemia very easily.

***Loss of blood (hemorrhage).** This, of course, includes bleeding from injury or surgery but is also very common among women if they have chronically heavy menstrual flow.

Female athletes, especially those who are involved in endurance events like marathons or participate in sports where lean physiques are required (rock climbing, gymnastics, ballet), tend to have the most difficulty with anemia. This is primarily due to eating too few calories, avoiding meat, fish, and poultry, and from poorly managing vegetarian diets. While it is always best to get nutrients from whole foods, supplements are often required to make up for dietary shortfalls. Many fine supplements are available over the counter but should not be taken without the recommendation of a medical professional. Iron supplements made for adults can seriously harm children. An iron overdose can be deadly.

As for finding a sports specialized Registered Dietitian, your best bet is to call the toll-free number for the American Dietetic Association (1/800/366/1655) to find someone who meets your needs. There is a new professional organization for Registered Dietitians who have decided to further their education in the field of sports nutrition. Licensed dietitians are invited to enroll with The American Academy of Sports Dietitians & Nutritionists (www.aasdn.org) to participate in their certification program. Whether a dietitian is enrolled with this organization or not, most should be able to help you in your efforts to boost your red blood count and hemoglobin levels.

LINDA BUCH - BODY LANGUAGE (tm)- February 23, 2004

Pros and Cons of CURVES®

"What are the pros and cons of the CURVES® program? I find it hard to believe you can get "fit" in three 30-minute sessions a week. I'm a 62 year old female who has been using walking as my primary exercise and feel the need to do more. Suggestions?" Carroll, Colorado

Like it or not, gender is a factor when it comes to exercise because men and women have different comfort zones when it comes to fitness facilities. While most men can step into a weight room and feel an instant rapport with all things iron, women tend to feel much more alienated. On the flip side, no matter how many T-shirts are sold with "Real Men Do Aerobics" printed on them, these classes are usually dominated by women.

According to Christine L. Wells, author of *WOMEN, SPORT, & PERFORMANCE*, "Because of social restraints, there are fewer opportunities for girls and women to exercise vigorously and regularly than there are for males. Until recently, it has not been socially acceptable for girls and women to really work up a sweat." Research by the Melpomene Institute indicates that when adolescent girls stop participating in sports and other recreational physical activities, their self-esteem drops. Since sports in America has become increasingly geared to the elite athlete, recreational athletes (of both sexes) tend to get shoved aside.

Unfortunately, youthful female inactivity carries over to our adult lives. According to the Centers for Disease Control and Prevention, only one in four women in the USA is physically active. Since a sedentary lifestyle is linked to obesity, heart disease, hypertension, diabetes and so forth, the trend toward female inactivity is a grave health concern.

The needs of women have always tended to be secondary to the fitness industry. The franchising geniuses who developed CURVES® filled this gap with an efficient 30-minute circuit (one time around is 15 minutes--twice around is recommended) which works all of the muscles, including the heart muscle. The machines are hydraulic, which means the harder you push or pull, the greater the resistance. In between each machine is a small aerobic platform where you can walk/jog in place or just dance to the music. Every thirty seconds, participants are cued to change stations and every 15 minutes, everyone checks their heart rate.

Your current walking habit is wonderful but I believe every woman should add at least two days of strength training to her weekly exercise routine. Strength training not only helps keep the bones strong but also keeps your body limber and physically capable. The CURVES® concept is both affordable and a total "no-brainer" when it comes to

using the machines. These facilities, or any of the other independent gyms for women, specialize in making your learning curve with weight training as easy and as safe as possible.

As for whether or not you can “get fit” by doing their program, you will definitely feel a difference in a month of regular visits, especially if strength training is new for you. The CURVES® concept is no frills, is only open at specific hours, and can sometimes get a little crowded. However, you will have fun, meet people with similar goals, and definitely experience physical benefits.

LINDA BUCH - BODY LANGUAGE (tm)- March 8, 2004

"I had a C-Section with my first child and regular deliveries for the two children after that. Do C-Sections present unique problems for mothers and, if so, is there any realistic solution to get the belly down? I don't expect it to be flat but I am tired of always looking like I am seven months pregnant! The trainers I hired in the past structured a routine of pelvic tilt exercises which did little to solve the problem. Rachael S., Denver

REGAINING SHAPE AFTER C-SECTION/PREGNANCY

One of the major postpartum problems for women is losing the weight gained from carrying a baby to term. Regardless of whether or not you delivered via C-section, it is a good idea to begin an exercise program as soon as you are able or permitted to do so. Women who do not exercise run the risk of retaining the excess weight, which often leads to gaining and retaining even more weight with each successive child.

Most of the physical changes from a normal delivery are reversed in about six weeks and many women are able to get back into an exercise program within four to six weeks. After a C-section, you may need to hold off for as many as eight weeks. Since improved blood circulation from gentle activity can promote faster healing, the Department of Physical Rehabilitation Services at the Ohio State University Medical Center (request their program by E-mail: health-info@osu.edu or call: 614/293/3707) has organized a post-Cesarian exercise program which begins with gentle diaphragmatic breathing and ends, over the course of 10 or more days, with a variety of simple abdominal exercises. Denver, CO physician, Lynn Rooney, MD, reminds women who have had C-section deliveries, "Be sure to have a couple of post-operative checkups before getting back into exercise to be sure you are healed."

A 25-30 pound weight-gain during pregnancy is normal. After delivery, most women lose about 20 of those pounds. After the weight of the baby, the placenta, and fluids are subtracted, what is left is the extra body fat Mother Nature packs on to facilitate breastfeeding. If you are able to do so, breastfeeding alone requires about 500 calories per day and is a good way to shed extra pounds.

As for getting rid of the "pouch" and the extra weight, abdominal exercises are important but performing zillions of crunches will not do the job alone. "Spot reducing" is a myth that is shamelessly peddled by exercise charlatans with a product to sell. Since the human body is one giant calculator which ruthlessly tracks energy consumed (calories) against energy expended, the only rule for change is to expend more energy than you consume. By making healthy food choices and doing some form of exercise everyday, you will eventually be rewarded with weight loss.

Of course, when there are small children and babies underfoot, getting back into an exercise program can be very daunting; therefore, keep your eye on a distant prize that is at least a year down the road and set realistic goals along the way. Find activities which are fun for you and your family to do together (walking, hiking, swimming, dancing) which will not only benefit you but will also instill the activity habit in your children.

Post-pregnancy weight loss is no easy task. But if you are tired of feeling self-conscious about your appearance, find a program you will do and just take it one day at a time. "Curves®" (and other fitness facilities which cater to women) is a non-intimidating place to begin an exercise program. "Colorado Weigh" (303/892-0128) is an excellent organization to help you get your food priorities in order.

(Thanks also to OB/GYN Reid Goodman, MD for generously perusing this article.)

LINDA BUCH - BODY LANGUAGE (tm)- March 15, 2004

CELIAC DISEASE

"Thank you for mentioning the relationship of celiac disease and osteoporosis in your column. Recent research show the incidence rate is not the rare disease the medical community thinks it is. I hope you can address this issue again in a future column." Robert G. Dickinson and Mary Anderies, Colorado

Celiac Disease (CD) (also known as celiac sprue, nontropical sprue, and gluten-sensitive enteropathy) is a genetically inherited autoimmune disorder. People with CD cannot tolerate a protein-- found in wheat, rye, barley and oats--called *gluten*. When gluten is ingested by someone with CD, the person's antibodies attack the villi of the small intestine (tiny "fingers" on the lining of the small intestine) and destroys them. Without these villi, the absorption of nutrients is severely compromised and, regardless of the mass quantities of food consumed, causes malnourishment. This in turn causes many other physical problems such as anemia, osteoporosis, certain gastrointestinal cancers, seizures, joint pain, miscarriages, malformed fetuses, infertility, memory loss, mood swings, and (if it remains undiagnosed in children) stunted growth or failure to thrive in infants.

This is obviously not a disease to be trifled with. Unfortunately, many physicians are still taught that this disease is so uncommon they probably will never, or will rarely, see it in any of their patients. The latest information finds, however, that CD affects as many as **one in 133 people**. Unfortunately, it is still assumed by many that the primary symptoms are diarrhea and weight loss. Not so, according to Robert D. Zipsler, M.D. and clinical professor of medicine at Harbor-UCLA Medical Center. In his survey of 1000 people in a CD support group 50% reported diarrhea; only 32% were underweight. The symptoms he found most common in this particular group were fatigue, abdominal pain, and gas.

When patients complain of these symptoms, the usual diagnosis is irritable bowel syndrome, depression, fibromyalgia, anxiety, Crohn's disease, colitis, diverticulosis, and chronic fatigue syndrome. It is not uncommon for patients to go a whole year (and for one person in five, as long as ten years) before being correctly diagnosed.

Yikes! What to do? First of all, *never assume*. Just because you have been diagnosed with one of the diseases or afflictions mentioned above does not mean you will suddenly be healed by going on a gluten-free diet. If you suspect you have CD (particularly if someone in your family has it) *do not* go on a gluten-free diet until you rule out or confirm CD through a celiac-antibody blood test from your health care provider. If you are diagnosed with CD, your next challenge is a major diet overhaul.

Once you begin a diet free of the protein, gluten (which means avoiding all foods with wheat (including spelt, triticale, and kamut), rye, barley and oats, your symptoms will stop. The small intestine will begin to heal and may even become completely healed in anywhere from six months to two years, depending on the severity of the damage. This means a lot of time reading labels at the grocery store until you get your food stores in order! Fortunately, there are plenty of products out there made with other types of flour (corn, rice, soy, potato, buckwheat, etc.) so you will not go hungry, you will just have to be vigilant.

For more information, go to www.celiac.org; www.celiac.com; or, contact the National Digestive Diseases Information Clearinghouse, 1/800/891-5389. In Colorado, contact Bill Eyl, Director of Region 6, Celiac Sprue Assn., billey1@earthlink.net.

(Thanks to Edward L. Marino, PA-C, of the Colorado Center for Digestive Disorders for his assistance.)

Sports Supplements for Young People

"Are supplements like creatine safe for teens? What are the side effects?" Andrea Vaughn, Evergreen, CO

Teens are an easy target for supplement manufacturers. What better target for "amazing new discoveries," "miracle fat-melting herbs," or "muscle building miracle" ads than an age group that is totally freaked out about their changing bodies? Attention parents, coaches, teachers, clergy and other influential adults in teens' lives: SPORT SUPPLEMENTS ARE NOT REGULATED BY THE FDA, so pay attention when questions arise on the use of these items. Most are a waste of money, some are illegal, and others are untested for usage by teenagers.

It is easy to become enamored of sport drinks, bars, powders, pills, gels and the like. Everyone wants to be leaner/more muscular/faster/stronger. We also want the easiest/fastest/most effortless path to perfection. *Adults* are guilty of entertaining these promises and, deep down, we KNOW those ads are "bull." Add teenage desperation to the marketing mix and the gullibility factor is quadrupled.

Here is the reality check on sport supplements:

***Anabolic Steroids.** These are man-made hormones which are both unsafe and illegal. By adding more male hormones to a body already replete with them, physical damage will occur. Besides causing severe acne, heart and kidney disease, liver failure, and bone damage, steroids can be addictive and actually slow down normal teen growth patterns. In fact, since the artificial hormones stop the production of the natural ones, the primary side effects on males are shrunken testicles and the growth of breasts. So much for machismo....

***Creatine.** This supplement is possibly the most controversial because, while it is easily obtained over-the-counter, the long term effects on teens are not conclusive. Most physicians and sports medicine specialists do not recommend its use by people under the age of 18 except under medical supervision. Even when supervised, a full dose is not recommended. Ray Sahelian, MD (www.pharma-help.com) suggests, "If your personal physician and parents approve your use of creatine, it should only be taken for a brief period of time, such as a couple of months for a particular sports season, and then you should be off the rest of the year. Daily dosage is best kept to 3 grams, with two days off per week."

Pete Wilson, Ph.D., of the Department of Medicine/Endocrinology at the Denver, VA Medical Center/UCHSC reminded me that, "Creatine supplementation (and clearance)

is frequently accompanied by potassium depletion." This depletion causes muscle cramping as well as abnormal heart rhythms.

Shakes, pills and potions. The Great Myth in the world of athletics is that protein shakes, bars, gels, and amino acid pills are essential for building a good, strong physique. All the essential amino acids needed for a healthy body are in meat, poultry, and fish. (Vegetarians must be diligent about consuming complete proteins by eating grains, beans and legumes.) Since most protein supplements contain no more than that found in a glass of milk, and are more costly calorie-for-calorie than regular food, you should not be suckered into believing the marketing hype.

The best way for young athletes to improve performance is to get enough sleep, eat healthy foods frequently (do not skip breakfast or lunch!), and avoid drinking, drugging, and smoking. If you are still not convinced, or feel there is something physiological holding you back, discuss this with your parents/guardians, and coaches to see about getting a complete physical and an appointment with a Registered Dietitian.

LINDA BUCH - BODY LANGUAGE (tm)- March 29, 2004

Flabby Skin

"I am a 52-year old woman who has exercised most of her life. My problem is that the skin around my core area, and behind the arms, seems flabby. I am 5'5", weigh 124#. Last August my body fat was measured by calipers at 32.8%. I do strength training 2 x's a week and cardiovascular for at least 20 minutes 3 x's a week. I eat very healthfully. Is there anything that can be done without surgery?" Liz, Colorado

Bette Midler once referred to the flabby skin behind the arms as, "The part that keeps waving long after you've stopped waving good-bye." What most people do not realize is that, generally, skin does not sag without fat under it to make it do so. At 32.8% body fat, with a total weight of 124#, you are carrying 41# of fat. Someone of your age, height and build should be at about 29%, or about 36# of fat. It is this extra five pounds of fat that is causing the problem.

The danger area is the extra fat around the core area, which puts you in the "shaped like an apple" category. According to the *University of California, Berkeley Wellness Letter* (Vol. 20, #6), fat around the abdomen is stored deep inside the body and is more likely to be found around the organs. The fat in this area is different from the fat found around the thighs and butt in that this fat dumps more fatty acids into the blood stream. This tends to increase the LDL (or "bad") cholesterol as well as the triglycerides.

You did not mention how recently you have had a complete physical but if it has been a while, make the appointment with your physician. Be sure to get a complete blood work-up and ask your health care provider about a bone density test to check for osteoporosis.

Another way to evaluate your health risk is to check your waist-to-hip ratio, which involves taking two measurements. First, measure your waist over the navel; second, measure your hips at the largest point over the butt. Divide the waist number by the hip number. A number greater than .8 (for women) indicates an increased risk for cardiovascular disease. For men, the number is 1.0.

There is no way to "spot reduce" any area in spite of the millions of commercials which will try to convince you otherwise. Since the body adapts to repetitive workouts, change or reevaluate your routine. Building more muscle will help with the flabby areas so you should add another day or two to your strength training schedule. Also, if you aren't already doing so, don't be afraid to lift heavier weights. You will not turn into "Arnold" and your bones will love you for it. During your "cardio" work, you do not have to increase your time unless you choose to do so, but you should increase your intensity. Be sure to add some hills and sprints to your routine so that your routine is not too...routine.

LINDA BUCH - BODY LANGUAGE (tm)- June 7, 2004

Gallbladder Surgery and Weight Gain

"After you have your gallbladder removed, and you have no storage for bile, does this make you gain weight because the bile is not there to burn up the fat? It seems I have been gaining weight after my surgery which was not a problem before." Jackie, Denver, CO

The gallbladder is a small pear-shaped organ that sits between the lobes of the liver. Its job is to store bile, a digestive fluid secreted by the liver which neutralizes acids and emulsifies fats, allowing fat-soluble vitamins in fatty foods (vitamins A, D, E, and K) to be more easily absorbed in the small intestine.

While gallbladder disease is sometimes hereditary, other common factors are being overweight, female, fair-skinned, over forty, having had multiple pregnancies, and diabetes. Among symptoms of gallbladder problems are severe pain in the upper abdomen (often after a large, fatty meal), nausea or vomiting, fatty food intolerance, indigestion, belching and bloating, and low grade fever. Note: Some of these symptoms could also signal other problems, such as a peptic ulcer, so always get a medical evaluation.

Sometimes the gallbladder stones pass on their own. However, if the bile duct becomes blocked and inflamed (a condition known as cholecystitis) the bile from the liver can back up and, if left untreated, cause serious infections and diseases in the liver and pancreas as well as the gallbladder. If this occurs, surgery may be required to either remove the stones or the entire gallbladder.

If the gallbladder is removed, the bile is delivered directly to the upper part of the small intestine by the liver. The only change is that there is no storage area for the bile; therefore, the notion that "there is no bile there to burn up the fat" is incorrect. It is assumed that one of the functions of the gallbladder is to *concentrate* the bile by removing water from it. If this is indeed the case, the bile is now less concentrated and becomes less efficient at digesting fat. Some medical professionals believe this could be the cause of weight gain around the abdomen. If this is true, a diet of whole foods low in saturated fat and regular exercise are the likely remedies.

Regardless, when it comes to gallbladder disease, many red flags seem to flap noisily over dietary choices. Most naturopaths believe the Great American Diet of refined carbohydrates and fatty foods is the cause of gallbladder problems. Ronald Hoffman, M.D., of the Hoffman Center in NYC, believes this as well. He points to a study done by the University Hospital of Riyadh, Saudi Arabia, which found that incidence of gallbladder disease went up 600% when some members of their society shifted from being nomadic and eating traditional foods to being sedentary and eating more "Western-style" sugary, fatty and processed foods. If you have gallbladder problems,

Dr. Hoffman recommends avoiding trigger foods like eggs, pork, onions, poultry, milk, coffee, oranges, corn, beans, and nuts.

(Thanks to Nigel Pashley, M.D. and Helen Pashley, RN, MA, CNOR for their assistance with this article.)

LINDA BUCH - BODY LANGUAGE (tm)- April 12, 2004

Getting the Right Balance between Exercise and Diet

"I am 41 years old, weigh 112#, and am 5' tall. My body fat is 28%. I do 'cardio' 2-3 times a week, lift weights once a week for 1-1/2 hours, and hike/snowshoe once a week for 1-3 hours. What is the healthy weight and % body fat for someone my age? Am I working out enough? How much food should I eat so my body is satisfied? I am eating about 1750 kcal/day and feel hungry frequently. Mei Li, Colorado

The easiest way to figure out if your energy consumption (calories in) is properly balanced with energy expended (calories burned) is to calculate your Basal Metabolic Rate (BMR). The *Harris Benedict Equation* is the one I used to see if you are consuming enough for your output:

[Note: This is just an estimate because this formula cannot take into account your lean body mass. Those with more lean mass (more muscle) will need more calories; over-fat individuals (less muscle) will need fewer. This equation will, therefore, underestimate the calories for a leaner person and overestimate for the very fat person.]

***First**, use this formula to determine your BMR:

WOMEN: $BMR = 655 + (4.35 \times \text{weight in pounds}) + (4.7 \times \text{Height in inches}) - (4.7 \times \text{age in years})$

MEN: $BMR = 66 + (6.23 \times \text{weight in pounds}) + 12.7 \times \text{height in inches} - (6.8 \times \text{age in years})$

***Second**, to determine your total daily calorie needs, multiply your BMR by the appropriate activity factor:

1. Sedentary

(little or no exercise): $BMR \times 1.2$

2. Lightly active

(light exercise 1-3 days/week): $BMR \times 1.375$

3. Moderately active

(moderate exercise 3-5 days/week): $BMR \times 1.55$

4. Very active

(hard exercise 6-7 days/week): $BMR \times 1.725$

5. Extra active

(very hard exercise/physical job/ intense training): $BMR \times 1.9$

By plugging your information into these equations (I put your activity level somewhere between #3 and #4), it looks like you are coming up about 250 calories short for your body, age, sex and activity level. Starving your body in this way will actually slow down your metabolism and, therefore, preserve body fat rather than utilize it. Since someone your age should be closer to 25% body fat, I urge you to eat more, not less.

The only change I would recommend is adding at least one more day of strength training--lifting for 45 minutes twice instead of once for 1-1/2 hours. This will allow you to spend more time on different parts of the body which may help you build more metabolically active muscle.

If you haven't had a complete physical in a while, be sure to schedule one with your health care provider as soon as possible. Your physical should include complete blood work (including thyroid) and a bone density test.

LINDA BUCH - BODY LANGUAGE (tm)- May 03, 2004

Kids, Cola, and Calcium

“Does drinking colas deplete calcium? My sister in her mid-50’s drinks colas constantly and is now on Fosamax for bone loss. I also see many elementary school children carrying canned sodas to school in their lunch sacks instead of buying milk.” Carol, Colorado

The “Pepsi® Generation ” has gotten pudgy. And so has their progeny. In the past 20 years obesity (defined as being 30% over ideal body weight) in adults has ballooned from 15% in 1980 to 31% today. In children the statistics are even more alarming: for ages 6-11 the rate has DOUBLED in the last 20 years and it is estimated that 80% of these children will be obese adults. For young people between age 12-19, the obesity rate has TRIPLED.

This cascading corpulence is mainly due to increasing food portions and sedentary lifestyles. Soft drink consumption is part of this problem because, on average, frequent soda-drinkers consume an average of 200 excess calories in a day than non-soda drinkers. A team of Harvard researchers reported in *The Lancet*, a British medical journal, that “12-year-olds who drank sodas regularly were more likely to be overweight than those who didn’t.” While the intake of sodas has tripled, milk consumption has dropped by 40%. When sugary soda supplants real food like milk, the problems aren’t just fat bodies, but also more Type II diabetes, hypertension, heart disease, kidney stones, osteoporosis, and an unhealthy drop in consumption of vitamins, minerals, and other nutrients.

Because soda has replaced milk and other nutritional beverages to such a horrifying extent, osteoporosis is now considered to be a *pediatric disease*! Boys and girls ages 9-18 need 1,300 mgs of calcium EVERY DAY or face health problems later. Recent studies have found that teens who drink sodas frequently are far more likely to fall short of this requirement and suffer bone fractures than teens who only drink sodas occasionally. Girls, for example, build 92% of their bone mass by age 18. If they do not get enough calcium by age 18 there is no catching up at age 19.

Calcium is important for all humans because it is needed for muscle contractions (including the heart), blood-clotting, nerve transmissions, enzyme function, and many metabolic functions. If the body does not get enough calcium from the diet, it takes it from the teeth and bones. This is where frequent soda consumption gets hazardous. First, some research suggests that the caffeine in sodas may increase calcium loss; second, according to the National Osteoporosis Foundation the phosphates in soda may weaken bones and interfere with calcium absorption; and, third, sodas are very high in sugar which erodes tooth enamel.

Since adult women over age 50 need almost as much calcium as teenaged girls (1,200 mg/day), cutting soft drink consumption down to about 12-20 ounces a day makes good bone sense. No drug can take the place of sensible nutrition or regular exercise.

LINDA BUCH - BODY LANGUAGE (tm)- May 17, 2004
Supplements VS., Fortified

"I am a bit confused by the distinction between 'supplements' and 'fortified.' What is the difference between calcium-fortified orange juice and non-fortified OJ used to swallow a calcium supplement? Darvel J. Silda, Loveland, CO

Wonder Bread® ads in the 1950's told us their product would "help kids grow in 12 different ways." We never saw the actual list of those 12 particular bread attributes, but the great world of "enriched" and "fortified" foods had certainly arrived. When whole grains are refined to the point of being no more nutritious than library paste, "enrichment" becomes necessary. Enriched foods are often mistaken for being better than the original grain but, in truth, they are the original nutrients that were demolished during processing and had to be added back in. "Fortified," on the other hand, means the product will have more vitamins and minerals in them after they are refined than before.

Fortification of food began in the 1920's when vitamin D was added to milk to combat rickets. In subsequent decades, salt was fortified with iodine to stave off goiters, and flour was fortified with specific B vitamins and iron to prevent beriberi, pellagra and anemia. In the 1980's, with calcium intake levels a serious public health concern, this mineral was added to foods like orange juice. By fortifying foods, the food industry helps a larger population (often unaware of nutritional deficiencies) with a better chance at protection from preventable diseases.

As for supplements, the American Dietetic Association, along with other organizations like American Heart and Cancer Associations, all agree that getting nutrients from real food in a well-balanced diet is always preferable to taking pills; however, most medical experts agree that everyone benefits from a daily multivitamin.

The Mayo Clinic suggests additional supplementation may be appropriate if:

***You are age 65 or older.** As we get older, our bodies have a harder time absorbing vitamins B-6, B-12, and D. Also, a multivitamin may improve immune function.

***You are post-menopausal.** Calcium and vitamin D can protect against osteoporosis, which becomes increasingly more common in women after menopause.

***You don't eat well.** If you are a slave to fast food and have a processed-food palette, taking a multivitamin is recommended.

***You are on a very "lo-cal" diet.** 1,000 calories/day is generally inadequate for proper nutritional balance.

***You are a smoker.** Tobacco decreases the absorption of many vitamins and minerals, but no pill can make up for the general health disaster caused by smoking.

***You indulge in excessive alcohol consumption.** Long-term excessive alcohol consumption can impair the absorption of some B-vitamins, vitamins A and D, and trace minerals such as zinc, selenium, magnesium, and phosphorus.

***You are pregnant or trying to become pregnant.** Folic acid, calcium and iron are essential. See your physician for guidance.

***You eat a restricted diet.** You would benefit from a supplement if you have food allergies and food intolerances. Certain vegetarians may also benefit from supplementation.

***Your body can't absorb nutrients properly.** Digestive tract diseases, or surgery because of these diseases, may warrant vitamin and mineral supplementation.

LINDA BUCH - BODY LANGUAGE (tm)- May 24, 2004
Glycemic Index vs. Glycemic Load

"Please clarify the difference between GLYCEMIC INDEX and GLYCEMIC LOAD when it comes to diet." John K., Colorado

It's the great carrot conundrum. Most rational people know carrots are perfectly healthy to eat. Yet, there they are on the *Glycemic Index* at 95, only a few points away from a donut at 109! How is it that carrots--rife with fiber, antioxidants, vitamins, and carotenes--have become so egregiously banished to the gulag of nutritional gastronomy?

The *glycemic index* (GI) was developed in 1981 by Dr. David Jenkins and the researchers at the University of Toronto to try to help Type 1 diabetics manage the blood sugar in their diet. Jenkins, et al, decided to systematically test different carbohydrates to assess their individual impact on blood sugar levels.

In order to figure out how the body reacts to foods containing carbohydrate, test subjects were first fed 50 grams of pure glucose as a control. They were then fed 50 grams of carbohydrate from a whole host of other foods to compare the blood glucose levels. Here's where the problem began: since one medium carrot, for example, has only about four grams of carbohydrate, the subjects had to eat at least a pound of carrots in order to consume the required 50 grams!

The American Institute for Cancer Research advised caution for using the glycemic index; and, since it is the total amount of carbohydrate that has the greatest affect on blood sugars, and because the GI varies greatly between individuals, the American Diabetes Association did not endorse the index as a way to manage blood sugar. This fact was ignored by book mongers who immediately saw an opportunity use the index to make \$millions\$. Along came *Sugar Busters*, *The Zone*, *Atkins Diet Revolution*, *South Beach*, ad nauseam, all of which disregard common sense about the nutritional superiority of bananas to bacon, preaching the virtues of something they call "low-carb."

While the glycemic *INDEX* compares the blood glucose response to the same amount of carbohydrate, the glycemic *LOAD* (GL) differentiates by comparing how much sugar is actually in a servings. The *glycemic load* is calculated by multiplying the food's glycemic index by the amount of carbohydrate (in grams) the food actually contains, then dividing that by 100. Therefore, the carrot, with a glycemic index of 95, times a carbohydrate content of four grams, divided by 100--would be a glycemic load of 3.8. A score of 10 or less is low; 11 through 19 is medium; and 20 or more is high.

Foods such as carrots, watermelon, pineapple, air-popped popcorn, beans, and other foods with a high water or air content will *not* send blood sugar rocketing or cause your waistline to suddenly rival the earth's circumference. The rules for proper nutrition for most people are very simple: eat a variety of fruits, vegetables, grains and beans; eat whole foods rather than refined foods; keep your portions under control; and, exercise regularly. Now, go eat your carrots!

(Resources for this article include Bonnie Jortberg, Ph.D., Dr. Gabe Mirkin, The Linus Pauling Institute, Vanderbilt University, and the Glycemic Research Institute)

LINDA BUCH - BODY LANGUAGE (tm)- May 31, 2004

Dangers of Anemia

"Anemia is a very dangerous condition and can indicate a multitude of problems. Could you please elaborate on this in greater detail?" Ed, Longmont, CO

Those of us who grew up in the 1960's remember ads for Geritol®, a remedy for so-called "iron poor blood." Women, often portrayed as being so tired they could barely don their pearls and high heels to do the weekly floor waxing, were frequent targets for these ads. Geritol® was supposed to fix all that, ensuring not only that the floors got waxed but also that dinner was on the table in a timely fashion.

According to the Centers for Disease Control and Prevention (CDC) iron deficiency can be a problem for adolescent girls and women of child bearing age, with about 10% of the American female population affected. Insufficient dietary iron (found in foods like meat, green leafy vegetables, and raisins) can lead to something called "iron deficiency anemia." This is most certainly the most common form of anemia but it is not the only cause.

First, a quick trip back to high school in the "Way-Back Machine" for a physiology review. Iron is needed in order for the bone marrow to make hemoglobin, a protein which carries iron. Red blood cells (RBC) carry the hemoglobin which attaches to oxygen from the lungs. As the RBC circulate through the body, oxygen is carried to tissues and organs. The life span of a RBC is about four months. Anemia occurs if RBC production is inadequate, or if cells are destroyed early. As a result, the blood will have inadequate hemoglobin and, therefore, the body will not receive the necessary amount of oxygen. Early symptoms are feeling tired and looking pale. More severe symptoms include irregular or increased heart beat, vertigo, headache, irritability and insomnia.

Many people make the mistake of assuming all they need is to increase their iron-rich foods or just take an iron supplement. In many cases, this may indeed ameliorate the situation; however, for some people anemia is not an innocuous condition easily solved by increasing dietary meat and green leafy vegetables. In fact, for some, anemia can be deadly. The following situations can cause anemia and must be treated and diagnosed by a medical professional:

***Anemia caused by a malignancy** (often in the colon) *or because of gastritis* due to excessive ingestion of nonsteroidal anti-inflammatory drugs (NSAID) like Motrin®. Chronic internal bleeding in the gastrointestinal tract is extremely serious. Anemia is a warning sign.

***Pernicious anemia** is caused by inadequate absorption of vitamin B-12. If the body lacks a protein known as "intrinsic factor" which promotes absorption, pernicious anemia is the result and can only be resolved by taking B-12 shots.

****Other diseases*** such as autoimmune disease, an enlarged spleen, aneurysm, high blood pressure, lupus, Crohn's disease, and celiac disease, can all create anemia.

(Thanks to Edward L. Marino, PA-C , Colorado Center for Digestive Disorders, for his generous assistance with this article.)

LINDA BUCH - BODY LANGUAGE (tm)- June 14, 2004

Morton's Neuroma

"I have recently been diagnosed with a very painful "Morton's neuroma" on my left foot. This same foot had bunion surgery two years ago, and already one doctor suggested another surgery to cut the nerve. Other than surgery, what options are there to help relieve the pain while allowing me to also exercise?" C. Jaspar, Englewood, CO

"Sex in the City" character, Carrie Bradshaw, had a thing for shoes, particularly the high-heeled, pointy-toed variety. I hope she also had a good podiatrist. One of the many painful foot disorders caused by high-heeled shoes with tight toe boxes is Morton's neuroma, a painful swelling or benign tumor which occurs at the nerve bundle beneath the ball of the foot between the third and fourth toes.

Morton's neuroma can also be caused by other biomechanical foot problems such as pronating (rolling in) the foot when walking, having a flat foot with a low arch (which also causes the foot to roll in) and bunions. Unfortunately, since you were already dealing with a bunion, your odds of acquiring Morton's neuroma were very high. Other factors leading to this kind of foot pain are rheumatoid arthritis, gout, and trauma from repetitive activities like jogging, jumping rope, or other activities where feet tend to pound the ground.

The most conservative treatment is to have your podiatrist try arch supports and other custom-fitted orthotics for inside your brand new *sensible* shoes with wide toe boxes (high-heeled shoes, regardless of how fabulous, must, alas, be a thing of the past). Your doctor could also inject the area with a corticosteroid to reduce the painful inflammation. If you are living under a really lucky star, these treatments will work. Unfortunately for the majority of sufferers, it either only works for a while or does not work at all.

Sadly, your only other options do involve surgery. The two most common choices are to remove the neuroma either through the top (dorsal) or through the bottom (plantar) of the foot. If you do opt for surgery, be comforted in knowing that, afterwards, most people only experience a little numbness between the third and fourth toes, which is far better than constant pain when walking. Also, since many surgery patients need a couple of months for complete recovery, there is plenty of time to shop for proper shoes for the activities you want to enjoy!

In the meantime, there are plenty of exercise options which do not stress the feet. Water exercise is the best choice, with classes such as deep water aerobics at the top of the list. If you cannot fit a class into your schedule, order a water exercise tool called "Winged Water Walkers" (www.wingedwaterwalkers.com). This ingenious device allows you to exercise in water as if you are on a stairclimber! They are fun to use and provide a

terrific workout. Other suggestions, depending on the severity of your situation, are bicycling and rollerblading.

I would also suggest asking your physician to recommend a good kinesiologist or biomechanical expert to evaluate how you walk. This could go a long way in preventing a painful recurrence.

LINDA BUCH - BODY LANGUAGE (tm)- June 21, 2004
MEASURING BODY FAT

"I am confused by the body fat scales. Are they accurate? Which one, if any, is most accurate?"
Patti Valasek, Colorado

Most fitness and medical professionals *cringe* at the cavalier use of the term, "weight loss." After all, the only part of the human body we sometimes need to lose is fat, not muscle or bone. It, therefore, behooves us to understand how our bodies are put together so we can get a realistic picture of what needs to stay and what needs to go. The conundrum is how to properly calculate our body fat in the first place. Devices and formulas abound all with their own plaudits and problems.

The two scientifically validated "Gold Standards" for calculating body mass are hydrostatic (underwater) weighing and the DEXA (Dual-Energy X-ray Absorptiometry). The underwater weigh method is calculated by water displacement, requiring the person being tested to be submersed naked in a tank of water while expelling all the air from the lungs (!!!). The DEXA is a machine using x-ray techniques which can measure bone density as well as body fat. Both are usually found only at universities and research facilities and can be very expensive to utilize.

The latest gadgets on the market are the body fat or "bioelectrical impedance" scales, most notably those made by Tanita. They operate like regular scales except they send a low-level electrical signal through one leg, across the hip and down the other leg. The scale measures where water isn't, so the amount of resistance encountered by the imperceptible electric current computes body fat percentage. The obvious problem is the person's hydration level. If the muscles are dehydrated, the scale will read some of the muscle as fat. My experience with this brand's accuracy was good; the person being weighed was on a very regulated food, exercise, and hydration schedule, and we measured at the same time of the day each month. Most of these scales are rated as mediocre by CONSUMER REPORTS. I feel, however, they can be very accurate if similar care is followed with food, hydration, and a consistent monthly weighing schedule.

Skinfold testing is among the least expensive methods for gauging change in body fat. Measurements are taken at various spots around the body with a giant caliper and, if the person using the calipers is experienced, can be quite accurate. Most gyms offer this service to their members and some doctors are beginning to use these in their practices. A Colorado company, Accu-Measure, LLC, developed a personal caliper designed to be used by one person in the privacy of the home. Contact Accu-Measure, LLC at: 1-800-866-2727 or go to: www.accumeasurefitness.com

Of premier importance is working toward positive changes without getting bogged down by an arbitrary number calculated by the gadget du jour. Pick a method you like and to stick to it because it is your consistency which will reflect the changes you want.

LINDA BUCH - BODY LANGUAGE (tm)- June 28, 2004

Biking in the Aerobic Zone

"I am an avid bicyclist. If I stay in the aerobic zone recommended by my heart rate monitor, I just don't get the fatigue and shortness of breath I have always associated with fitness building. Is it really possible to build endurance and aerobic fitness by staying under 85% or so of maximal heart rate? How does one get stronger if the muscles and CV systems are not pushed?" Ed McAuliffe, Colorado

Since the 1980's, the standard formula for figuring out your maximum heart rate (the maximum number of heart beats per minute 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 only intended as a guide, not as a gold standard and, in fact, it is thought that 30-40% of the population does not fit this formula at all. Keep this in mind before deciding what your aerobic heart rate "should" be.

Where aerobic activity makes the heart muscle stronger, improves the body's ability to utilize oxygen efficiently, and reduces body fat, anaerobic activity builds strength and muscle. Examples of aerobic activities include running, walking, swimming and cycling; anaerobic activities include sprints, boxing, tennis, weightlifting, and any other exercise where short bouts of intense activity are repeated. Aerobic pathways are used for endurance and can efficiently utilize oxygen to burn fat and carbohydrate for energy. Anaerobic activity is so intense that oxygen does not have time to combine with the fats and carbohydrates in the muscles and must rely primarily on glucose already stored there.

Both energy systems are used when bicycling so it would be a mistake to focus primarily on the aerobic heart zones. Pushing yourself in short bursts, into that 85% mark and even beyond, will definitely help you improve your cycling and your fitness in general. According to Neil Wolkodoff, Ph.D., of "Energy Zone," "Most people don't realize that anaerobic training helps to increase your aerobic cruise-control speed, so you should use interval training at least once per week."

Heart rate monitors are great tools for keeping exercise programs honest because you know throughout your activity how hard your heart is working. By staying rigidly in one particular heart rate zone, however, opportunities for improved muscle strength and endurance will not be enjoyed. Also, heart rate monitors are individually accurate only if correlated with something called the VO₂ Peak Test (which measures your volume of oxygen uptake during exercise). This test will establish YOUR zones by measuring your "anaerobic threshold," which is when the lactate clearing begins and is usually experienced as an intense burning sensation in the muscles. By mixing up your training, you can push that threshold higher and enjoy more intense training sessions.

If you want to delve into this more, make an appointment with Neil Wolkodoff, Ph.D., at the Greenwood Athletic Club (303-770-2582 ext. 372) and check out his Energy Zone program. His program will help you find your optimum training zones which will aid greatly in building fitness.

(Thank you to Neil Wolkodoff, Ph.D. of Greenwood Athletic Club for his assistance with this column.)

LINDA BUCH - BODY LANGUAGE™- July 5, 2004

Different Ways to Build Muscle

“I am a 72 year-old, 5’7”, 180# retired navy special ops guy with an injured right shoulder. In recent years this has hampered my ability to do any heavy weightlifting and I have been discouraged by doctors to do more than I am already doing. Any advice or suggestions for building muscle while at the same time dropping some fat around my waist?” Tonio Rocciano (mcbm usn ret.), Denver, CO

Misinformation abounds when it comes to “getting big.” Many muscle magazines and websites continue to reinforce the notion that forcing a muscle to flex by lifting really heavy weights is the only way to make your limbs look like tree trunks. Granted, “Arnold” did not become Mr. Olympia a zillion times by curling cucumbers but the trick for you and your injury will be to add some variety to your workout, getting away from doing the same kind of lifting every day.

To refresh your memory, there are three different types of muscle contractions: concentric, eccentric, and isometric. A *concentric* contraction occurs when the muscle fibers shorten simultaneously, often referred to in bodybuilder circles as “the positive” contraction. The flip side of the concentric contraction is the *eccentric contraction* (“the negative”), which occurs as you slowly lower the weight back to your starting point. In an eccentric contraction, the fibers are lengthening while at the same time trying to maintain muscle tension in the contracted position. This tends to rip the muscle fibers, causing microscopic tears. An *isometric contraction* occurs when the force against the muscle is generated without either lengthening or shortening, like the tension created when you press the palms of your hands together.

In general, the bodybuilding workout involves moderately heavy weights, which are heavy enough to reach a state of “failure” about six to 12 repetitions into the set. Bodybuilders begin another set before the muscles are fully recovered, so rest periods are of a short duration.

According to author and strength conditioning specialist, Jose Antonio, Ph.D., of the University of Nebraska, however, “Muscle hypertrophy [size] occurs only when performing eccentric contractions...which put your muscle under a great deal of tension causing microtears and severe delayed-onset muscle soreness. You need that damage to induce growth.” It is during the recovery phase of such a workout, (where a farrago of chemical and cellular activity takes place to rebuild and repair the damaged tissue), that hypertrophy (increase in cell *size*) and hyperplasia (increase in cell *numbers*) occurs. According to research, eccentric exercise also improves concentric strength along with tendon strength.

What this suggests for you is the integration of eccentric contraction-based workouts into your weekly routine. As long as you attempt this in a progressive fashion, you will be able to tolerate the muscle soreness usually associated with this type of lifting.

As for losing body fat, nothing accomplishes this like a balanced, clean diet (fruit, vegetables, whole grains, beans and lean meats) and plenty of cardiovascular exercise.

LINDA BUCH - BODY LANGUAGE (tm)-July 12, 2004
MEDICAL STEROID USE AND THE BONES

“I take prednisone daily for an autoimmune disorder. What can I do to prevent bone loss? Currently I walk for an hour three times a week and attend an aerobics class that includes some light weightlifting 2-3 times/week. I am 38 and relatively fit. What else can I do?” R.H., Denver, CO

Powerful anti-inflammatory drugs like prednisone are useful in treating diseases like rheumatoid arthritis and asthma. But, modern medicine can be a double-edged sword; there is relief from pain but also, as in the case with prednisone, the possibility of developing osteoporosis. Anyone who is going to be taking therapeutic drugs over the long term must prepare for this possibility.

You may be one of the lucky 50% whose bones are unaffected by your drug therapy. Just to be sure, however, get a bone mineral density test at the outset with follow-up tests every six months. Also, if your estrogen levels are low, and if you are pre-menopausal, estrogen therapy may be advised.

Nutritionally, supplementation with calcium (1200-1500 mg/day in divided doses with meals) with vitamin D (600-800 IU/day) can be very beneficial in the fight against developing osteoporosis. Magnesium is another important nutrient, which, along with calcium, contributes to stronger bones. Nuts, whole grains, beans, dairy products and green leafy vegetables are common sources of both nutrients. Two major studies published recently in *The New England Journal of Medicine* suggest that folate and other B vitamins may also help the bones.

Walking is good exercise in general, as is lifting weights. The latest research, however, points to the need for exercise that includes heavier weights and activities with more impact. Exercise for bone health **MUST** overload the skeletal system in a way that is different from daily activities in order for bone to be positively affected.

Leading tissue researcher, Kenneth McLeod, Chair of the Bioengineering Department at Binghamton University (NY) found that just taking calcium and doing some walking will not make new bone. “There has to be a signal to make bone, and it turns out that if you don’t have adequate fluid flow across your bone, you’re not going to have adequate cell metabolism to trigger [bone] cell formation,” states McLeod. He has found that the key to triggering bone growth is to focus primarily on a specific type of muscle fiber (called Type IIA), which responds to both endurance and explosive movements. The key to bone stimulation for you may mean heavier weightlifting protocols and aerobic activities, which involve as much impact as you can safely handle.

By using a scale of 1 to 5 (with “1” lifting a banana and “5” lifting a giant box of kitty litter) strive to get to level “4” where 8 repetitions is all you can do with proper form. Vertical jumping (jumping rope, volleyball, basketball, tennis), boxing, martial arts, jogging and so forth are all good examples of high-impact activities. As for your walking routine, adding a weighted vest may be of some benefit, especially if you do some

vertical jumps during your walk. Yes, the other folks on the walking path may think you are a crazy lady but your bones will jump for joy!

LINDA BUCH - BODY LANGUAGE (tm)-July 19, 2004
DANGERS OF ANEMIA

[Dear Readers: I received the following letter (condensed here) after my column on anemia, appeared in the DENVER POST May 31, 2004. She is giving us all a tremendous gift by sharing her experience, hoping that this will help others. Thank you for reading. Linda Buch]

“I have been a regular blood donor for several years, surpassing four gallons donated. After donating in January 2003 I found that subsequent donations did not meet the blood donor hematocrit standard of 38% (37%-48% is considered normal for females but blood donor standards requires a higher number than 38%). As failed attempts mounted, I tried eating iron-rich foods, consulted a nutritionist, a pharmacist, and the phlebotomists at the blood donor center. It was only after a conversation with an RN in April 2004 who suggested a visit with my doctor to evaluate this that I found out the truth. I have Stage III Multiple Myeloma, which is a type of cancer [of the plasma cell]. I had few other symptoms associated with anemia, had been taking iron supplements almost daily, and, since I had been exercising regularly without being fatigued, did not worry about anemia. Therefore, I urge people who have even slight anemia to push for further testing and to never assume it can be fixed just with food and iron pills.” Sue Cantrell, Arvada, CO

Because we think we know the symptoms and the cure so well, it is easy to assume that we know what to do if we think we are anemic. After all, anemia is frequently the result of an iron deficiency and, iron pills and iron-rich foods are in every supermarket so no big deal, right? But anemia is often a warning sign for some very serious conditions including, but not limited to, gastrointestinal bleeding, malabsorption of vitamin B-12, high blood pressure, lupus, Crohn’s disease, celiac disease, aneurysm, enlarged spleen, and malignancy, such as multiple myeloma.

Multiple myeloma starts in the bone marrow with an abnormal plasma cell. Plasma cells are important because they produce the myriad antibodies which fight infections and diseases. If one of those cells goes out of control by overproducing one particular antibody, the normally varied antibody stash goes out of balance leaving the others in short supply. Since this happens in the bone marrow, the myeloma can spread to *multiple* sites throughout the body. Excess calcium and abnormal proteins in the blood and/or urine can signal problems, requiring further testing. Other symptoms include bone pain, recurring infections, kidney pain, mental confusion, and vision problems.

Our first line of defense for good health is an annual physical exam, which should include a full blood panel, a urine test, and—especially if you are over age 40—a bone density test. If we just don’t feel quite right, or if blood work and urine samples are borderline normal, be an advocate for yourself and push for answers. And, if you are a blood donor hero like Sue, pay attention to changes that occur with your hematocrit/hemoglobin that can deny you the opportunity to donate.

Being advocates for ourselves can be challenging but, increasingly, it may be our only avenue for maintaining good health. If something does not feel quite right, do not assume or let anyone else assume for you.

LINDA BUCH - BODY LANGUAGE (tm)-July 26, 2004

FAD DIETS

“I have an abiding distrust of the recent “low carb” fad diets and wonder what we will see in terms of long-range health affects. But, how are people able to shed so much weight on such diets, even without exercise?” Helen Hood, Bailey CO

Sophia Loren once proclaimed, “Everything you see I owe to spaghetti.” If Sophia can laugh in the face of what is now “Low Carb” madness, so can the rest of us. A decade ago the clarion call was, “Eat carbs, not fat!” Now it's “Eat fat, not carbs!” And, are Americans any lighter now than the last decade? Not even by an ounce. In fact, we have leaped nationally from a population 50% overweight in the 1980s to the 65% mark today.

The word “diet” comes from the Greek word *diaita*, which means “course of life.” For way too many, this means a life-course dominated by an obsession with organized food programs, all promising to be The Answer to obesity. While many of the plans do contain scattered nuggets of scientific truth and some nutritional accuracy, most are simply The Answer to the authors' financial woes.

The simple answer as to why these diets seem to work, especially for those with 20#'s or more to loose, is that the books organize every aspect of food consumption. The dieter is told what to eat, when to eat it and, most importantly, *how much* to eat. The calories are all worked out in advance and, as long as the food is weighed and measured, voila! Caloric consumption is under control.

But, is the new plan something that can be embraced over the long term, and is it healthy to do so? Over the long term, any diet low in fiber and high in fat-particularly saturated fat-can backfire. A study published recently in THE ANNALS OF INTERNAL MEDICINE pointed out that in six months the low carb dieters lost slightly more weight than the low fat dieters. In one year, however, both groups were equal in their weight loss but the low-fat dieters also reduced their cholesterol.

Carbohydrates are the body's preferred food. Every cell in the body depends on glucose to some extent; and, the brain and nervous system depend on glucose *totally*. On a daily basis, this can mean 600 calories of pure glucose just for the brain, which translates to about 150 grams of daily carbohydrate intake. So, when the Atkins diet, et al., limit carbohydrate intake to 20 grams a day, where is the brain food? And what about the rest of the cells and tissues?

The truth is, the body is a perfectly balanced energy system and is a ruthless accountant when it comes to calculating energy in (food) and energy out (activity). In fact, it is so precise that if all you do is add three Altoids® a day over what your body requires, you will gain a pound at the end of a year!

We live in a society where food is accessible 24/7 and is a cornucopia of caloric carnage. By simply cutting out 250 calories a day (one bagel) or expending an additional 250

calories (a two mile walk or 5,000 additional steps/day) you can be 25#'s leaner at the end of a year without “dieting.”

TOO FEW CALORIES?

“I am 21-years old and workout daily using a varied routine of running, spinning, and classes for hips, buns and thighs. I would like to lose five more pounds but I know I eat too few calories, which is probably the reason I am unsuccessful. I am afraid to eat more even though I know I should. Should I gradually add more calories or calculate my BMI and add all the calories immediately? I try not to eat too many carbs and I eat very low fat. My recent physical indicates good health.” Carol, Colorado

It is a great paradox but sometimes it is possible to stop your body’s fat-loss in its tracks by not eating enough. Too few calories will actually stagnate your metabolism because your body thinks you are in the midst of a famine. Low caloric intake can also slow the thyroid and cause the loss of lean muscle mass, which is never good for weight loss.

You did not tell me your height and weight so it is possible you are already at your ideal body composition. Here are some formulas for determining body mass and proper caloric intake:

The Body Mass Index is used by the Federal Government to establish obesity guidelines for the public: first, calculate your body weight in kilograms (your weight in pounds **divided** by 2.2); next, convert your height in inches to meters and 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 to see where you stand regarding personal corpulence by government standards. The downside is its premise. Just using height and weight discounts how much of that weight is muscle. According to this calculation method Arnold Schwarzenegger is obese!

The **HARRIS BENEDICT EQUATION** is a formula used to determine your total energy expenditure (calories) at rest. This is just an estimate because this formula cannot take into account your lean body mass. Those with more lean mass (more muscle) will need more calories; over-fat individuals (less muscle) will need fewer. This equation will, therefore, underestimate the calories for a leaner person and overestimate for the very fat person.

First, use this formula to determine your BMR (Basal Metabolic Rate):

WOMEN: $BMR = 655 + (4.35 \times \text{weight in pounds}) + (4.7 \times \text{Height in inches}) - (4.7 \times \text{age in years})$

MEN: $BMR = 66 + (6.23 \times \text{weight in pounds}) + 12.7 \times \text{height in inches} - (6.8 \times \text{age in years})$

Second, to determine your total daily calorie needs, multiply your BMR by the appropriate activity factor:

1. Sedentary (little or no exercise): BMR x 1.2
2. Lightly active (light exercise 1-3 days/week): BMR x 1.375
3. Moderately active (moderate exercise 3-5 days/week): BMR x 1.55
4. Very active (hard exercise 6-7 days/week): BMR x 1.725
5. Extra active (very hard exercise/physical job/ intense athletic training): BMR x 1.9

While these two formulas will help you get a picture of where you are regarding body mass and caloric intake for activity level, it does not address your nutritional quagmire. If “low carb” means you are cutting out processed foods and sugary snacks, OK. But, if it means you are

avoiding fruits, vegetables, whole grains (including bread and pasta), and beans, then you are cutting essential nutrients out of your diet. Also, why cut fats? Fats found in foods like olive oil, salmon, almonds, and avocados are good for you. They not only help the body absorb fat-soluble vitamins A, E, D, and K, but also can reduce LDL cholesterol.

I strongly recommend the services of a Registered Dietitian to help you determine your proper weight and body mass and to rebalance your food intake to insure good health. Your physician may be able to assist you in finding a Registered Dietitian or, call The American Dietetic Referral line at 1-800-366-1655 to find someone in your area. You can also visit www.eatright.org, click on "Find an RD" and enter in your zip code to find the nearest RD.

(Thanks to Suzanne Farrell, RD for her assistance.)

LINDA BUCH - BODY LANGUAGE (tm)-August 9, 2004
Sarcopenia

“Avoiding sarcopenia is one of my long term goals. I eat animal protein only on the days I weight-train. If I eat protein at lunch and lift weights in the early evening, is the protein doing me any good? I do consume whey protein immediately after a workout.” John K., Colorado

Sarcopenia is usually defined as “the age related loss of muscle mass, strength and function.” Since the relationship between muscle mass and strength is tangible, hanging on to muscle as we age is crucial for maintaining personal independence. This requires diligent exercise, particularly with resistance training. As Betty Davis once remarked, “Growing old is not for sissies.”

Two factors are really at the forefront of your concerns about sarcopenia. First, when and what to eat in order to properly support your activities; and, second, exercising properly in order to stimulate and maintain the muscle you have. Because glucose is essential for optimum performance of the muscles, the body’s preferred fuel prior to a workout is complex carbohydrate. Fat is preferred for low intensity exercise and longer bouts of exercise. Therefore, most sport nutrition professionals recommend a small meal high in complex carbohydrate with some fat about two hours prior to exercise. A pasta dish with vegetables and a teaspoon of olive oil would be an example of this.

According to the Mayo Clinic, consuming a meal which contains both carbohydrate and protein (at a ratio of 4 grams carbohydrate to 1 gram protein) within two hours after a workout is the ideal way to refuel. Consuming whey protein is fine, but if you add some fruit or other carbohydrate to your meal, you will be replenishing your muscles more efficiently.

Len Kravitz, Ph.D., and Chantal Vella, M.S., who posted research titled, *Sarcopenia: The Mystery of Muscle Loss*, point out that, as we age, protein synthesis (the body’s ability to utilize the protein ingested) decreases along with the specific type of muscle cell (called a *satellite* cell) responsible for the development of new muscle tissue. In addition to resistance training, therefore, it is equally important to consume enough calories—and protein—to nourish muscle mass. About 0.7-0.9 grams of protein per pound of body weight per day is normally recommended.

As for exercise, the first muscle fibers to decrease in responsiveness as we age are *fast twitch* muscle fibers. These are the fibers that handle high intensity, explosive moves such as picking up a bag of groceries or jumping out of the way of a renegade grocery cart. According to Kravitz and Vella, “Resistance training should include cycles of high-intensity/low volume training (relative to the person’s fitness level.)” They recommend performing at least eight to 10 total exercises which target all of the major muscle groups (chest, back, shoulders, buttocks, legs, and abdominal muscles). Most studies on exercise with older adults find that two-three sets per exercise is preferred to performing just one

set. Lifting weights offers the most stimulation to your muscles. Performing 10-15 repetitions (using weights perceived to feel “somewhat hard”) at least twice a week is ideal.

LINDA BUCH - BODY LANGUAGE (tm)-August 16, 2004
EXERCISE AND OSTEOARTHRITIS IN KNEES

I have Osteoarthritis (OA) in my knees. I attend a light aerobic/stretching class two mornings, lead a water exercise class two other mornings, and walk 2 miles on Saturdays. Will I benefit from using an Aerodyne stationery bike in order to strengthen my knees? I am 71, 5'4-1/2" and 142#." Ginger Playford, Colorado

Ginger, you are a "poster person" for exercising and osteoarthritis! While it is assumed that aging is the culprit, in reality it is often overuse, misuse, or trauma that seems to initiate many of the osteoarthritis diagnoses. Obesity can also be a factor due to the strain of extra weight on knees, ankles, and hips. In Ancient Times (a few decades ago) the prescription for someone with the aches and pains of OA was pain pills, lots of rest, and heat compresses. After all, who wants to move when they are in pain? Current information, however, stresses exercise as a key component. Sadistic as this may seem, the science backs up this recommendation.

Joints are just hinges with cushions (cartilage). The lubricating "oil" for the joints is a thick liquid called synovial fluid. In the absence of blood vessels, this fluid is what supplies oxygen and nutrients to the cartilage in the joints. If OA strikes the joint, it is the movement of this fluid across the joint, initiated by exercise, which provides relief from stiffness and pain.

By engaging in joint-stabilizing and muscle-strengthening exercise an OA sufferer can still be challenged physically yet avoid undue stress and strain on the joints. Swimming has the least impact and is terrific total body exercise; bicycling and walking are also gentle on the knees and are wonderful options; rollerblading is another fun activity that is gentle on the knees BUT requires a bit of instruction and proper safety equipment. And let's not forget resistance training. Lifting weights keeps the muscles strong (which improves joint stability) and also helps to maintain bone.

Stretching is a valuable component to a good, well-rounded program. But stretching improperly can make things worse. To learn more about the proper way to stretch (as well as to find exercise classes and other useful information), contact the local Arthritis Foundation (800/268-7800) or go to <http://www.arthritis.org>. A physical therapist can also provide the necessary support and instruction. Other options, with the support of your physician or physical therapist, can include yoga and Pilates.

Wearing appropriate shoes is a big part of pain management. If at all possible, wear shoes with enough cushioning to reduce the impact on joints as your feet pound the ground in the course of a day. Since it may not be acceptable to wear athletic shoes to work, talk to a podiatrist about finding shoe stores that will help you fill the bill yet keep your feet from being mistaken for Bozo the Clown's.

In general, find an activity level that is comfortable and enjoyable for you, without increasing pain or swelling of the joints, and enjoy to your heart's content.

LINDA BUCH - BODY LANGUAGE (tm)-August 23, 2004
CHRONIC LEG PAINS

“I am 84 and have suffered from leg pains all my life. If I exercise, the pain and burning is much worse. I have done some research on lactic acid and it describes my condition. I think my muscles create too much of it. Doctors have been no help. I take calcium daily but the only relief I have is from an ice pack at night. Surely there is something I can do.”
Alta A. Pape, Arvada, CO

Since lactic acid accumulates in the muscles during very intense exercise, and since you are experiencing chronic pain regardless of whether or not you are exercising, it is going to be necessary to look beyond lactic acid as the cause of your pain. It is always tempting to investigate symptoms and self-diagnose, especially if your experience with physicians have been less than satisfactory, but symptoms alone do not necessarily represent an accurate diagnosis. We are going to have to look much deeper.

Is it possible you have some problems with circulation? Is adequate oxygen getting to your legs? Have you been checked for a possible blockage of your blood vessels? The formal name for this condition is intermittent claudication and is often brought on by even mild exercise like walking. If this is the case, your options can range from simple lifestyle changes like quitting smoking (if you are a smoker), continuing to exercise (because this helps the body build more blood vessels and helps the blood circulate), and eating a heart healthy diet low in saturated fats and high in fruits, vegetables, grains and beans. If you are diagnosed with intermittent claudication, your doctor may also have other pharmaceutical options for you.

Your primary objective, however, must be to insist on getting your physician to order the proper tests in order to find the cause of your pain. Have you had blood work done lately? If not, this should be at the top of your list. You could have high cholesterol, high blood pressure, high levels of something called C-reactive protein (which indicates inflammation), high levels of an amino acid called homocysteine (which can damage blood vessels), atherosclerosis (commonly called hardening of the arteries), or other vascular disorders. Are you diabetic? Diabetes can cause damage to blood vessels and nerves, among other things. Are you currently taking statin drugs to lower cholesterol? If so, a serious side effect can include muscle pain, which must be dealt with at once.

It is very important that you try again with a physician in order to get to the root of your pain. An unfortunate byproduct of our current health care system is that most doctors are overworked and over-scheduled. Please call and ask for a *consultation* with your doctor so that sufficient time is provided for you to get the answers you need and deserve. Also, your doctor may be able to recommend you to a pain management specialist, often an M.D. known as a *Physiatrist*, to help you find the right remedy to at least make you more comfortable.

If all the tests are run and everything still comes up normal for you, acupuncture may be an option. Practitioners in the state of Colorado must be licensed and certified by the NCAOM for traditional Chinese acupuncture, or IAMA for medical acupuncture.

Additional therapy options might also be acupressure, massage therapy, hydrotherapy, or chiropractic.

LINDA BUCH - BODY LANGUAGE (tm)-September 13, 2004
WEIGHT LOSS PLATEAU

“What do you recommend for a very physically active 57 year old woman who follows a low carb diet and can’t lose the last 15 pounds? I have tried everything I know and have read about and it is very frustrating. I do Deep Tone (one day a week), Pilates (two days a week), and aerobics (three to four days a week). Marilyn, Colorado

Zeus punished the legendary King of Corinth, Sisyphus, by condemning him to push a rock up to the top of the hill for all eternity. The caveat was that when he got the rock to the top, his strength would fail, the rock would tumble back down the hill, and he would have to start all over again. Feel familiar? We watch our diet, exercise, lose weight and then, after many months of continuous success, everything just stops and we feel like we have to start all over again. If this describes what you are feeling, you are not alone. In fact, this whole phenomenon seems to be part of our genetic programming.

Franca Alphin, a sport’s dietitian for Duke University’s Sports Performance Program, defines a plateau as, “Following a meal plan and exercising regularly [but] no lost weight in two or three weeks.” Researchers have been studying this common occurrence among dieters for decades. It seems to be a universal “part of the journey,” says David Klurfeld, Professor and Chairman of the Nutrition and Food Science Department at Wayne State University. “We know that the body readjusts metabolism to fight the weight loss. Evolution has basically favored people who could store extra weight.”

The mission, therefore, is to figure out how to fool Mother Nature.
In general, here are suggestions from many experts in the field:

1. Do a diet log for about three days. Count, weigh and measure everything. We tend to consume more than we think we do so if a few hundred calories have slipped in, take note and cut back a bit on portions or choices. Also, if you are opting for processed foods (regardless of the “low-carb” moniker on the label, processed is processed), add more fresh fruits vegetables and whole grains. They fill you up and are much higher in nutritional quality. On the flip side, are you eating enough calories for your activity level? Too few calories can actually slow down your metabolism. A visit with a Registered Dietitian could help you sort this out.
2. Make some changes to your exercise program. The body is designed to conserve energy, not expend it. By doing the same activities on a regular schedule, the body becomes more efficient and actually reduces the number of calories burned. A change in routine would be of great benefit. Try a new sport every now and then, like bicycling or swimming. Or, try some different classes, such as spinning or kickboxing. Change up your resistance training by alternating week-to-week between heavier weight with fewer repetitions, with lighter weight and more repetitions.
3. Finally, be patient and keep your eye on the prize. In our microwave society we are used to instant results, but our ancient physiology has thus far refused to

upgrade. Remind yourself that you are pursuing a healthier lifestyle, which will benefit you over the long term. Try not to focus on arbitrary numbers on a scale and instead, be proud of the positive changes you are making for yourself every day you eat right and exercise.

LINDA BUCH - BODY LANGUAGE (tm)-September 20, 2004
Dealing with, and Avoiding, Injury

“When I do a sit-up, a bulge appears in the midline of my stomach, right around the sternum area. A year and a half ago, my doc said it was nothing to worry about but it seems to be getting worse. I am looking for additional information before going back for another checkup.” Steve Driessen, Littleton, CO

According to www.MDAdvice.com, the usual indications that something is wrong in the abdominal area include pain, muscle spasm, swelling, loss of strength, inflammation of the connective tissues (particularly the tendon sheath), and “crepitation,” which is a crackling feeling and sound when the area is pressed with the fingers.

A doctor’s visit is definitely in your immediate future. After you schedule the appointment, think about your past athletic activities and note whether or not you may have sustained punch or other trauma to your abdominal wall? Have you been performing extensive or prolonged abdominal exercise sessions while using heavy weights? Is there a history of abdominal-wall weakness in the family? Organizing these kinds of thoughts ahead of time will make the doctor visit more productive.

There are many other areas your physician and you should discuss as well. Additional causes of abdominal-wall strains can be obesity, poor nutrition, cardiovascular problems, and poor muscle conditioning, so a complete physical may be in order. If this is an injury that can be dealt with through therapy, the advice and rehabilitation instructions from your physical therapist will be essential for recovery.

No one wants to be sidelined by an injury, especially if a bit of caution could have prevented the problem in the first place. The first rule, therefore, is **DO NOT OVERDO!** It is easy to decide to exercise. It is quite another thing to do an honest assessment of our ability level and build up appropriately. Regardless of whether the activity is weight lifting, running or bicycling, start lighter, slower, and with a shorter distance than you think you should do or could do. Try to begin your exercise program in a relaxed state of mind rather than one of intense urgency. Statistically, those who are aggressive and impulsive have much higher injury rates than those who put less stress on themselves. After a week or two of staying at a slower pace, see how you feel. Are some muscles and joints *really* sore? This could indicate either weak muscles or muscle imbalances. Rather than just pushing onward through the fog of pain you should have an evaluation by a personal trainer or therapist.

Other suggestions for avoiding injury are: to avoid intense exercise when you are tired or still stiff and sore from the last session; increase the amount of rest as you increase the exercise intensity; be sure your food and water intake is appropriate for your exercise level; pay attention to your equipment, making sure it is appropriate for the activity and in good condition; treat every minor injury with respect to keep it from becoming a major

injury; allow time for a warm up and a cool down period; and, if you experience pain, stop.

LINDA BUCH - BODY LANGUAGE (tm)-October 4, 2004
STRETCHING

“Recent literature on the subject of stretching says stretching is falling out of favor, including by world class athletes who have given up stretching and have fewer injuries. What is your viewpoint?” Richard Latchaw, Sterling, CO

For decades, scientists and fitness professionals have been arguing and testing the advantage, or disadvantage, of stretching. In an attempt to make sense of all the conflicting data, researchers at the National Center for Injury Prevention and Control and, at the National Center for Chronic Disease Prevention and Health Promotion reviewed tests and studies dating from the 1950s and 1960s to the present, about 361 studies in all. A recent article in *MEDICINE & SCIENCE IN SPORTS AND EXERCISE* (Thacker, S.B. et al. 2004, 36 (3): 371-8), titled, *“The impact of stretching on sports injury risk: A systematic review of the literature,”* conclusively found (drum roll) **that there is no conclusion** (cymbals)!

Stretching, most assume, is supposed to improve flexibility, prevent injury, and relax the muscles after a bout of exercise. Many of the reports indicated that flexibility of the trunk and joints (particularly those joints of the knee, hip, shoulder, and ankle) was indeed improved with stretching, particularly when done passively (where another person provides the force). These reports also found that stretches held for a 15-30 second duration were more effective than those of a shorter duration, and were just as effective as those held longer than 30 seconds.

As for injury prevention, most of the studies found no association between stretching and injury prevention. One study of military trainees, however, did show that both the most flexible and least flexible men had more injuries than those of normal or average flexibility. Thacker et al concluded that, “There was insufficient evidence to endorse or discontinue routine stretching before or after exercise to prevent injury among competitive or recreational athletes.”

Most exercise professionals agree that what is important for injury prevention, flexibility and performance is taking the time to do a light, five to 15-minute warm up --such as an easy spin on a bicycle, a brisk walk, lifting with light weights, or a few slow laps in the pool—along with some stretching of the muscles and joints involved before engaging in any physical activity. This combination has been found to be especially effective on improving the flexibility of joints in the lower torso (hip, knee and ankle).

Whether you like to stretch a little before or after exercise seems to come down to your own personal experience with how it makes you feel and perform. For most of us, improving and maintaining flexibility as we age is a key component to vibrant health. I feel stretching is a very useful and necessary element to that end and, to whatever degree possible, should be a part of an exercise program. The very best resource for stretches is still *STRETCHING* (Shelter Publications, Inc.) by Bob Anderson in which every stretch for any conceivable activity is both expertly explained and illustrated.

LINDA BUCH - BODY LANGUAGE (tm)-October 11, 2004
SHOULDER INJURY

“I have torn my rotator cuff in a skiing accident. I still have some discomfort five months later. Can you recommend exercises to avoid surgery?” Mark, Colorado

Shoulder injuries account for at least 13% of all visits to orthopedic surgeons. Because the ball of the arm bone at the shoulder is larger than the socket that holds it, we are afforded an amazing 360-degree range of motion with our arms, a mechanical marvel which allows for 100-mph fast balls, 400-yard golf drives, dolphin-like swimming speeds, holding a blow-dryer, hammering a nail, or picking up groceries. Any injury to the tendons, ligaments, cartilage, cushions and/or muscles that hold or protect the whole glorious mechanism can be a major buzz kill.

Many times these injuries can be avoided by simply paying attention to posture, proper body mechanics, and by maintaining the balance of strength between the muscles in the shoulder area. But even if form, muscle strength, and alignment are all copasetic, injuries happen and when they do, the pain and discomfort can be both relentless and debilitating.

Fortunately, surgery does not have to be your first option; in fact, it doesn't have to be an option at all. According to Thomas F. Murray, Jr., MD, at Orthopedic Associates of Portland, “Conservative treatment of rotator cuff disease classically includes rest, activity modification, nonsteroidal anti-inflammatory medications, and physical therapy.... But the hallmark of an effective rotator cuff program is therapeutic exercise.”

Since it does not sound like you have an advanced case of rotator cuff disease, you would probably do well to be examined by an orthopedist or physiatrist. If surgery is not necessary, more than likely they will recommend that you begin exercise rehabilitation treatment with a Physical Therapist. Since it is impossible for me to know the exact nature of your problem, prescribing a set of exercises for you in this column would not be appropriate. A professional should be consulted to determine and analyze the aspects of your situation in order to create the proper therapy protocol. According to Amy Valenta, MSPT, PT at *Back to Motion*, Denver, CO, and therapist for the US Women's National Rugby Team, “It is important to have a thorough evaluation performed when dealing with a rotator cuff tear. On top of strengthening the rotator cuff itself, it is important to be sure that the surrounding joints are moving properly and that the supporting musculature is firing correctly.” Most of the time, a few months of therapeutic exercise is all that is needed.

Ice or heat compresses may help settle down any muscle spasms you experience. And don't discount the benefits of massage, which not only relaxes tight muscles but also helps to increase blood flow to the injured area. Acupuncture is another option that has found favor with many people who have shoulder pain.

Regardless of how you decide to deal with this, get moving on a solution. Disuse of an important joint like the shoulder can easily compound and then cascade to other parts of the body, creating problems in other areas such as the neck and back.

LINDA BUCH - BODY LANGUAGE (tm)-October 25, 2004
COMMON SENSE ON PORTIONS and MEASUREMENTS

“Most measurement numbers for food portions, ratios of protein, carbohydrates, and fats in the diet have no realistic meaning for most people. Can you clearly explain this in a way that can be grasped by regular folks?” Tom Johnson, Colorado

Like the Coneheads of Saturday Night Live fame, we Americans enjoy “mass quantities of food and drink” as standard fare. It’s as if our eyes have grown to twice their normal size. For example, the eight-ounce soft drinks of the 1960’s are now typically 20-ounces; bagels, which used to be the size of a hockey puck, are now as large as a DVD; and, dinner plates which used to be 10-inches across, now teeter on the restaurant serving trays at 16 inches. And the food on those giant plates fills every square inch. Because of our lop-sided portion perception, we now typically eat 148 more calories or more per day, which can pack on as much as 15 pounds a year!

The nutrition experts usually recommend a diet that is 30-35% protein (lean meat/fish/poultry), 55-60% carbohydrates (primarily fruits/vegetables/grains/beans), and 25-30% fat (avoiding saturated and trans fat). We are supposed to eat 25 grams of fiber daily and balance our calories to meet our actual energy needs (or eat fewer calories if we are overweight). The reality is that few people, regardless of their profession, can really look at a plate of food and tell you what percentage is fat, protein, carbohydrate, fiber or, the number of calories. Even professionals have to get out the books and scales to calculate what is actually there.

Unfortunately, the “supersize me” mentality which has developed over the last 20 years, keeps the balance between portions and proper calories lumbering towards obesity. A medical professional, such as a Registered Dietitian, physician, or other qualified nutrition expert, can help get us into the right ballpark when it comes to how many calories we need for our particular goals. Since snack foods and soft drinks now comprise 30% of our daily calories, the hard work is in paying attention to the choices we make.

According to the USDA and other agencies concerned with nutrition, we should all be eating *at least* THREE to FIVE servings of vegetables per day and an additional TWO to FOUR servings of fruit. Since ½ cup is a serving, this is not that difficult to do. The American Institute for Cancer Research (AICR) recommends that our plates be 2/3 or more of vegetables, fruits, grains and beans and 1/3 meat fish or poultry.

Some good visual cues on portions are in order. Vanderbilt University’s Online Wellness Center at <http://vanderbiltowc.wellsources.com> suggests using your hand as a tool for food measurement and portion-control purposes. The following is a way to stick to suggested dietary serving sizes:

Palm = @ three ounces of meat,

Fist = @ one cup (which is *one* serving of raw vegetables or *two* servings of cut fruit, pasta or cooked vegetables),

Handful = a serving of nuts,

Two Handfuls = One serving of most snack foods.

Thumb = One ounce or one tablespoon

Thumb Tip = One teaspoon

LINDA BUCH - BODY LANGUAGE (tm)-November 8, 2004

Muscle Cramps

“I am 76 years old and enjoy tennis doubles five times a week. I am strong but take medicine for high blood pressure. I get cramps on my lower legs and thighs. Can you advise me please?”

J.C. Millan, Colorado

The physiological description of a cramp, according to the “Merck Manual” (Merck Publishing, \$29.95) is, “A sudden, brief, usually painful contraction of a shortened muscle or group of muscles.” Muscle cramps (a cramp is sometimes referred to as a “charley horse”) seem to attack out of nowhere and make the muscle feel like it just became lunch for starving piranhas. The most commonly affected muscle groups affected by cramps are the calf (back of the lower leg), hamstrings (the back of the thigh), and the quadriceps (front of the thigh). Cramps can also occur in the arch of the foot, in the hands, along the rib cage and in the abdominal area.

Muscle is specialized tissue designed to stretch and contract, allowing our limbs, joints, and torso to move. A muscle contraction employs a complex chemical soup involving water and positively and negatively charged mineral particles called electrolytes (sodium, calcium, potassium, magnesium, chloride, phosphates, and bicarbonate.) If these go out of balance--particularly the sodium, calcium and potassium--cramping can occur.

It does not sound as if you are in poor condition so it is most likely you are getting cramps from other factors, such as muscle fatigue and dehydration. Or, could this be a side effect of your blood pressure medication? You should discuss this possibility with your physician at once.

Assuming your physician has ruled out problems with your medication, the first place to make changes is in your hydration habits. Begin by drinking at least a pint (.5 liter) of non-alcoholic fluids about two hours before you begin exercising. This will give your body plenty of time to absorb what it needs and to excrete the excess before the first serve. During play, be sure to take adequate breaks (about every 15 minutes) for replenishing fluids lost through sweating. Water is the best choice, but if you sweat excessively or exercise in extreme heat, you may find that a sport drink containing electrolytes (particularly sodium, chloride and potassium) may be the better choice. After playing, it is important to replace fluids lost so your body can recover properly. The easiest guide to figuring out how much you need to drink is to weigh yourself. Replace each pound lost with one pint of fluid (usually water).

Another idea is to develop a program of stretching and flexibility, especially for before and after your matches. The best resource for stretches particular to your activities is, “Stretching” by Bob Anderson (Shelter Press, \$13.99). Always warm up before stretching with a short walk or gentle calisthenics.

Finally, do a thorough examination of your diet. Keep a food diary for at least three days, writing down everything you eat and drink. Review this with your physician to be sure

your calcium, potassium and sodium intakes are appropriate for your activity level and prescription protocol.

LINDA BUCH - BODY LANGUAGE (tm)-November 14, 2004

Firming the Inner Thighs

“I am 60-years old and in pretty good condition. My legs are strong (I have climbed some ‘fourteeners’ with no ill effects) and I lift hand weights. I am noticing sagging on the inside of my legs in the thigh area. What exercise/weight training can I do to firm up this area?”

Barbara Bouche, Colorado

Soft inner thighs are the bane of most women regardless of activity level. It is believed that women have weaker, softer-looking inner thighs because of the width of our hips, creating a larger angle between the hip and the knee (called the “Q-angle,” or quadriceps angle) than the same angle for men. A woman’s larger Q-angle can create muscle imbalances that affect the muscles of the inner thigh (usually referred to as “adductors”). Because of the wider hips, women also tend to have stronger quadriceps (muscles on the front of the thigh) than hamstrings (muscles at the back of the thigh) and adductors.

Since we cannot control the width of our hips, we have to focus on something over which we really have some authority-the quality of our muscle. Since you enjoy hiking you are no doubt putting your legs through some strenuous paces. Fortunately, there are plenty of exercises you can perform which will help you strengthen and stabilize this muscle group.

The best way to work the legs is to cross-train among all the areas involved and not try to isolate one specific muscle group. When we engage in activities like hiking our gluteus, quadriceps, hamstrings, adductors, abductors, and calves all participate. Some of the best routines for you are known as multi-joint exercises (because they involve the hip, knee, and ankle joints) and include, but are not limited to, squats, lunges, and dance moves like the plié.

Since I cannot show you pictures of these exercises, you would be wise to engage the services of a personal trainer or other fitness professional in order to learn proper form; or, pick up a book or video which illustrates proper form, such as those listed at:

<http://www.egymequipment.com/properform.html>

Remember, if your knees or back hurt when doing any of these exercises, you need to check your form before continuing.

Squats can be performed with dumbbells, with a bar across the shoulders, by “sitting” with your back against a wall, with feet under the shoulders, wider than the shoulders, and even on one leg (with the other leg behind you on a bench). Another great way to engage the adductors is to perform the squats while holding a ball between the thighs.

Lunges usually involve either stepping forward or stepping behind, usually while holding dumbbells, a medicine ball, or a weighted bar across the shoulders. A more advanced method is executed by stepping sideways. Another popular technique is to lunge as you walk across the room while holding weights, cleverly called a “walking lunge.”

The plié (particularly the grand plié) is a ballet move performed with the legs in a stance where the feet are wider than shoulder-distance apart.

LINDA BUCH - BODY LANGUAGE (tm)-November 21, 2004
“Food for Fitness” Review

Every now and then books cross my desk, which deserve some approbation. Two such books are “Food for Fitness” by Chris Carmichael (Putnam, \$25.95) and “The Step Diet Book” by James Hill, Ph.D., John Peters, Ph.D., and Bonnie Jortberg, M.S., R.D. (Workman, \$22.95). I will review each of these books for you over the next two columns and hope that you will check them out for yourself or consider them as holiday gifts.

Most books in the exercise and diet genre are aimed at the couch potato types who are overweight and under-motivated. Chris Carmichael’s, “Food for Fitness” (Carmichael was U.S. Olympic Coach of the Year, Hall of Fame Cycling Coach, and Lance Armstrong’s coach for 14 years) is a notable exception. Physically active adults are often left to their own devices when it comes to proper nutrition. As Armstrong states in the forward he wrote for this book, “Like many new athletes, I paid little attention to what I ate when I started out, and for a while I was successful in spite of the food I was eating. Perhaps the biggest lesson I’ve learned about sports nutrition is that paying attention to it can make your dreams come true, and neglecting it can be your undoing.”

This book is not just for elite athletes but also for active people who have made a commitment to exercise. Whether you walk 30 minutes a day or run 30 miles a week, as an active person you have different nutritional needs that need to be addressed. “By the time you finish this book,” Carmichael writes, “my hope is that you will think of food in a new way: as the fuel that enables you to achieve your dreams and goals. In this context, each and every nutrient plays an integral role, and each will enhance the type of activity you are pursuing.” In other words, as your activity level changes, your nutritional needs change accordingly.

“Food for Fitness” is easy to understand and is full of charts that explain and recommend the proper amounts of fats, carbohydrates and proteins based on the individual’s weight and activity level. Chapters are also included on healthy fast food, and the unique nutritional needs of teens, women, vegetarians, and the elderly.

Carmichael did not write a “diet” book. Most books in this category conjure mystical machinations rife with promise and possibility but short on real science and sense. With few exceptions (proving the rule), the majority of these books lighten the wallet, not the waist. “Food for Fitness” is dependable because it tells the truth about nutrients, and food choices (even fast foods). The mystery of how to put it all together in a plan designed to fit with and support your training schedule is clearly and plainly organized.

If you have been frustrated with your progress as an athlete, regardless of whether you are a casual participant or heading for the next Olympics, this book will help you set and achieve your goals through greater understanding of how to coordinate training with fuel.

LINDA BUCH - BODY LANGUAGE (tm)-November 28, 2004

Book Review: The Step Diet Book

Last week, I reviewed “Food for Fitness” by Chris Carmichael (Putnam, \$25.95), an excellent diet and nutrition guide for athletes and active adults. This week, I am focusing my attention on a great book for everyone who wants to stop gaining weight and start feeling better but just cannot quite get a grip on how to get going. For those in this dilemma, check out “The Step Diet Book” by James Hill, Ph.D., John Peters, Ph.D., and Bonnie Jortberg, M.S., R.D. (Workman, \$22.95).

“The Step Diet Book” is easy to use and clearly explains the core concept of “energy balance,” (if you want to lose weight, calories consumed cannot exceed calories expended) which our “supersized” food portion environment tends to frustrate. The solution is so simple it is astonishing: walk as many steps every day as you can, with a goal of at least 10,000 steps a day and reduce your caloric intake by 200 (one candy bar). A pedometer is included in the package so you can start changing your life, and the health of your entire family, for the better immediately.

Surprisingly, weight gain can be stopped simply by adding 2,000 more steps (about a ten minute walk) and eliminating 100 calories (one soft drink) each day! As co-author Bonnie Jortberg explains, “Most people fail at weight loss because they drastically change their eating habits, such as following a “low carb” diet, and they don't integrate physical activity into their daily life. People find that they cannot maintain these kinds of changes long-term, so they regain their weight. “The Step Diet Book” emphasizes small, yet sustainable lifestyle changes for weight loss by reducing portion sizes and increasing steps, something that everyone can do for a lifetime.” (Jortberg)

Too often, diet books offer magic solutions for overweight people. “Eat/skip/ these foods in combination/alone and watch fat melt off your body *without exercise!*” is a common and, unfortunately, egregious claim made by many diet plans. Most cynically target the desperate and do little to change either unhealthy personal lifestyles or deal with that of the family unit. “The Step Diet Book” prepares the reader not with specious advice and a pile of recipes but with a sound structure which lays the emotional groundwork for change, stops the weight gain, sets appropriate goals, and teaches lifelong skills for long term success.

The basis for all of this lies with the pedometer (the book comes with a free pedometer so you can get started on a healthier and leaner life *today*) that helps you establish a base line for your current activity level. Once you see how many steps you average per day you can start setting daily goals to gradually add more steps. Combine this with awareness of the empty calories consumed and you can lose one-two pounds a week.

If you are sick and tired of the short-term “gotta look good for the wedding/reunion/vacation” approach, only to sink back into years of diet desperation,

buy this book and start living your life with the freedom that a healthy, yet simple, structure can provide.

LINDA BUCH - BODY LANGUAGE (tm)-December 5, 2004
Exercise and Arthritis Of Cervical Vertebrae

“I am concerned about the type of exercises I can do for arthritic changes that are going on in my cervical vertebrae. Some of the vertebrae are fused and I have lipping between the spines and the bodies of the remainder with a lack of most disk spaces. Any suggestions would be appreciated.” Robert Kreycik, DVM

The human body is miraculously held upright by a column of 33 bones that extends from the skull to the pelvis. The cervical vertebrae are the seven that constitute the upper part of the spine, from the skull to the chest. These vertebrae not only support the neck but also give it the necessary flexibility.

Wear and tear on the spine is experienced by all of us who trundle about on two legs. Injury or repeated trauma, such as that experienced from sports injuries, recreation, or work, can lead to arthritis, which usually manifests itself once we are over age 50. Most treatments involve rest, immobilization with a collar or brace, drug therapy, and exercise. Other remedies may include cold compresses, massage, warm water massage (Jacuzzi or whirlpool), and chiropractic manipulation. In some severe cases, surgery may be the only option.

When cervical arthritis develops, “pain in the neck” takes on a much deeper meaning. Symptoms of cervical arthritis include chronic neck pain, muscle weakness, numbness in the neck, arms, hands and possibly even fingers, tenderness to the touch at the neck, stiffness that limits movement, headaches, and even loss of balance.

Michael Schiff, MD, Director of Clinical Research at the Denver Arthritis Clinic and Clinical Professor of Medicine at the University Of Colorado, reminds us that there are many forms of arthritis and the therapy is specific to the type you have. He suggests you ask your physician, “What type of arthritis do I have? What is the prognosis for continued disability? Are there medical treatments that might slow the progression of the disease?” Dr. Schiff also supports exercise, referring to it as “the key in all forms of arthritis. You should see a registered physical therapist to go over exercises TO do and NOT to do. This can be done in one visit then done at home.”

According to Amy Valenta, MSPT, PT at *Back to Motion*, Denver, CO, and therapist for the US Women’s National Rugby Team, “Knowing specifically what kind of arthritis is present, and the types of symptoms that the patient is having, is key to prescribing the appropriate treatment and exercise program. I would recommend that the patient be seen by a physical therapist to establish a program that would encompass all of his needs. The main goal of the program should be to decrease destructive forces on the joint, strengthen the muscular support of the joint, and to improve or maintain joint mobility.” Your work with a physical therapist will probably also include a review of your posture, and learning ways to carry yourself at work so you do not continue to aggravate your neck. You may also need to invest in a different pillow for sleeping.

LINDA BUCH - BODY LANGUAGE (tm)-December 12, 2004
HERNIA POST-OPERATION

“I recently had a hernia repaired and still, after two weeks, my stomach is still protruding on the left side and is hard when I am standing. The doctor says it will go away but how can things appear the same as before surgery?” Jennifer, Colorado

Encarta World English Dictionary defines “hernia” as “a condition in which part of an internal organ projects abnormally through the wall of the cavity that contains it.” The most common hernia involves a weakening of the abdominal wall, creating a condition where a loop of the intestine or other tissue can push through. The pain can be severe. Occasionally, unless immediately tended to by a physician, the involved tissue can become strangulated (lose its blood supply), a situation that can create serious consequences.

Fortunately, since many hernias eventually require surgical intervention, the techniques have improved since the days of old when more invasive cutting and stitching was the norm. Today many surgeries are done with a laparoscope, an instrument with a tiny camera on the end, which can project the area to be repaired onto a video screen. Instead of having to cut and stitch, a plastic mesh is placed over the weakened area to reinforce the muscle.

The very idea of surgery can freak anyone out. This is why we are often a bit overwhelmed in the aftermath when, having endured all of the surgical hassles, find that things aren't 100% as quickly as we might prefer. “Try not to draw conclusions about further complications this close to surgery,” reminds Michael Napierkowski, MD, FACS with Rocky Mountain Surgical Associates in Denver, CO. “Patients often expect things to look and feel completely normal immediately after the operation, because they have been told that the defect is now repaired, but the tissues need several weeks to heal first. Generally, patients' initial concerns are alleviated as the healing tissues soften and associated swelling subsides.”

Without knowing the type of hernia repaired or type of incision used to fix it, it is difficult to determine what might be occurring in your particular case. Dr. Napierkowski suggests several possibilities.

“First, when there is an incision through the groin, frequently there is a healing ridge or thickened scar that forms below the incision that some patients interpret as a recurrence or persistence of the bulge they felt before the operation. Second, if mesh was used, there is now an empty space where the bulge used to be. There is likely to be a collection of fluid or a small amount of blood there for a few weeks that eventually will go away.” Both of these common conditions improve with time. In Dr. Napierkowski's opinion (with the limited amount of information available to him) recurrence of the hernia is the least likely possibility.

Surgery is stressful and we often miss or forget a lot of the pre-surgery instructions and expected post-surgical conditions. When the physician or surgeon is briefing you, take a

list of questions in with you to be sure all of your concerns are answered or, ask a friend or relative to come with you to watch your back and write down the details.

LINDA BUCH - BODY LANGUAGE (tm)-December 19, 2004
CREATINE AND MUSCLE CRAMPS

“I was taking creatine for my weight lifting and I started experiencing muscle cramps in my legs, around my knees. I have stopped taking creatine until I research that it is OK. Could I get a heart cramp? Can creatine cause other problems?” Tim Casados, San Francisco, CA

Of all the supplements on the market, creatine seems to be the one that is generally legal and, more importantly, seems to work safely. Creatine monohydrate is the form most commonly taken as a supplement because, in this form, it is able to pass through cell membranes. Creatine supplementation is especially effective for high intensity exercise of short duration, such as weight lifting and sprinting. It is also being studied to see if it could improve the health of those with muscular dystrophy, ALS, congestive heart failure, and rheumatoid arthritis.

Creatine phosphate, concentrated mainly in muscle tissue including the heart, 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.

A normal American diet gives us about one gram of creatine phosphate daily, primarily from red meat and fish, but can be depleted from these foods when cooked. An additional two grams are produced daily by the kidneys and liver.

But creatine is not without its detractors or concerns. While most of the complaints are anecdotal, (a recent study published in the September, 2004 issue of the *International Journal of Sports Medicine* shows that creatine side effects are rare), the most common complaints are cramping of skeletal muscle tissue (not cardiac tissue), muscle spasms, and bloating.

More serious concerns have been studied regarding reports of abnormal heart rhythms and problems with kidneys, especially among those with existing kidney disease. Pete Wilson, Ph.D., of the Department of Medicine/Endocrinology at the Denver, VA Medical Center/UCHSC reminds us that, “Creatine supplementation (and clearance) is frequently accompanied by potassium depletion.” This depletion causes muscle cramping as well as abnormal heart rhythms.

Regarding your problems with creatine, you have several scenarios to consider if you do not want to stopping using the supplement altogether. First, are you getting adequate hydration? Dehydration can be a factor in muscle cramping with or without creatine. Second, are you following the dosage recommendations established by the manufacturer?

Because of the tendency toward water retention while taking creatine, high doses could adversely affect the function of the heart, kidneys, and liver. And, third, are you buying a reputable brand? Always try to buy from a USA manufacturer who is registered with the FDA. This is a popular product. Beware of “bargains.”

New Year's Resolutions

We all breathe a sigh of relief when the New Year arrives. “*Now, absolutely, once and for all, I resolve on all that I hold dear--AND I REALLY MEAN IT THIS TIME-- I WILL eat right, quit smoking, and exercise. No more kidding around!*” Books are purchased, videos are cued up, gyms are joined, diets are designed, and for about three weeks, NOTHING gets in the way of this resolve. And then it happens. The schedule gets busier, the stress levels rise, Girl Scouts show up with cookies, and Valentine candy appears. The gym membership card ends up in a desk drawer, videos gather dust, cigarettes are “borrowed,” and books become drink coasters. How can we keep this from happening *again* for 2005?

It takes 21 days to change a habit and four-to-six weeks to make it a lifestyle change. With this in mind, here are some tips on winning your own personal reality show:

1. **FORM A POSSE.** Support groups are crucial to success. Get yourself a diet/exercise/quit smoking buddy, or group of buddies, so that you have to be accountable. A support network can also help with a contingency plan when tempted to backslide into old habits.
2. **MAKE A LIST.** No one changes anything without first making a decision to do so. Make a list of the positive aspects of what you want changed and why you want or need to do so. Keep it in sight throughout the day and refer to it whenever you feel discouraged or have a setback.
3. **RETOOL YOUR BRAIN.** Negative self-talk (“Oh, what’s the use?”) has to be replaced with a positive focus (“Look what I accomplished today.”)
4. **ACCEPT THAT SOME DAYS ARE MORE SUCCESSFUL THAN OTHERS.** Why scrap an otherwise great day because of a minor slip-up? You can start your day over at any time. Beating yourself up with a mental “two-by-four” only batters the emotions.
5. **HAVE MORE FUN.** There is more to life than treadmills and step classes. The definition of insanity is “*doing the same things over and over, expecting different results.*” If every January you have joined some class that bored you to tears, why do that again? Buy a pedometer and see how many steps you can take each day, try snowshoeing, learn to samba, take a martial arts class, join a spinning class, do *anything* but the same old stuff you have always done.
6. **ONE DAY AT A TIME.** We live in a microwave, high-speed society. It is easy to become impatient with our human physiology, which operates on a far more ancient time frame. Extra pounds, for example, did not suddenly appear overnight. As vintner Paul Masson said, “Nothing good happens fast.”
7. **NEVER SAY “ALWAYS” AND “NEVER.”** Watch out for the words “always” and “never.” Setting the bar too high, like deciding to exercise every day for no less than one hour or by swearing off chocolate forever, can guarantee failure. Dr. Sandra Gilfillan, a Dallas psychiatrist, suggests, “It is important to be reasonable in what you expect yourself to do.”