2007 SPECIAL FEATURES ARTICLES

Articles contained in this eBook for 2007

LINDA J. BUCH –January 22, 2007
CORE AND ABDOMINALS

"You can have six-pack abs in just eight weeks!" promise the infomercials, showing a guy who looks like Danny DeVito becoming magically transformed into Mathew McConaughey. Just make 20 easy monthly payments of $$ for something that crunches, twists, flattens or rolls and, TA DA! Six-Pack Abs!! But wait! There's more! For an additional $$, you can also get a three-months supply of a "Super Mega Fat-Melting" supplement, a secret formula that is "not sold in any store."

Like the guru's of marketing always tell us, you sell the sizzle, not the steak…..

Magazines have their "sizzle" factor, too, with tantalizing articles titled, "Ten-Weeks to a Tight Tummy," or, "Magically Melt the Midriff." So, let's repeat some Wisdom of the Ages: "Caveat Emptor" (Buyer Beware) and "If it sounds too good to be true, it probably is."

Having fabulous looking abdominal muscles is a decent goal (usually just a dream) but like yet another Wisdom of the Ages-- "Beauty is Only Skin Deep"-- it behooves us to look beyond swimsuit model and action hero body images. The abdominal muscles, and all the back and gluteus muscles that work with them---known collectively as The Core--are central to virtually every move we make.

Whether it is sitting in a chair or climbing a "fourteener" we can hardly move without the cooperation and function of these muscles. It makes no sense to focus all attention on rippling muscles if, when you bend down to tie a shoelace, you get a back spasm or a slipped disc due to poor structural integrity. It would be wise, therefore, to look beyond the "sizzle" and go for the quality of the "steak."

It is a popular misconception that hours of quotidian crunches, numbering in the hundreds of repetitions, is necessary in order to properly exercise and shape the abdominals. In fact, one to three sets of fifteen repetitions two or three times a week is all that is necessary. Also, since the abdominal muscles are used to stabilize us while we are standing up, performing exercises while in line at the grocery store is entirely possible. Another good way to sneak in an abdominal workout is in a Pilates or yoga class.

A WEE BIT OF ANATOMY

The "abdominals" actually include several muscle groups:

1. The **Rectus Abdominis** (the so-called "six-pack" that originates at the pubic bone and inserts at the lower ribs and breast bone). They stabilize the pelvis and help to flex and rotate the lumbar area of the spine.
How to activate: Perform a basic crunch or a pelvic tilt. (A "pelvic tilt" is accomplished by drawing the abdominal muscles towards the spine as you tilt the hipbones forward while also squeezing the butt muscles. Return to neutral after a count of two.)

2. The **External and Internal Obliques** (which slant along the side of our torso both over and under the rib cage) stabilize the pelvis and lumbar region of the spine and help with twisting the trunk and bending from side to side.
How to activate: Perform any exercise involving a twisting motion.

3. The **Transverse Abdominis** (these are the deepest fibers of the entire abdominal group and are primary for spine stability) act as a natural weight belt across the hip joint.
How to activate: Pull the belly button toward the spine.

The other group of muscles that work closely with the abdominal group are the muscles that run along the spine (called **The Erector Spinea)** which help stabilize the spine, strengthen the trunk, and maintain good posture.

Strength training and conditioning specialists know that the body is a synergistic machine where everything must work together in order to achieve high performance with minimum risk for injury. And since these muscles are designed to stabilize us as we move through life rotating, twisting, and turning, functional stability is of paramount importance. Here is a basic routine for both abdominal and core strength as well as core stability.

These exercises can be performed two to four days a week with about 10 to 20 repetitions each. REMEMBER TO BREATH throughout all the exercises!

1. **Transverse abdominal**:
(The key to both safety and success for this exercise is to draw the belly button toward the spine.)

BEGINNER:
-Lie on your back on the floor with the right leg straight and the left leg with knee bent and foot flat. Arms are stretched overhead.
-Exhale as you lift the right leg, arms, head, shoulders and upper back off the floor toward each other. Inhale and return to the starting position.
-After completing all repetitions, switch legs and resume.

INTERMEDIATE:
Everything is the same *except* lift the foot under the bent knee one inch off the floor and do not allow it to touch for the entire exercise.

ADVANCED:
Hold a medicine ball in your arms and perform the intermediate level form described above.

2. **External and internal obliques:**

BEGINNER: “Standing twist.”

-Stand with hands on hips and feet shoulder-width apart and eyes forward on a fixed spot. Exhale and rotate the shoulders and torso gently to the right; inhale and return to neutral. Repeat on the left side.

ADVANCED BEGINNER: “Reverse Rotation.”
-Lie on your stomach, elbows out and chin resting on top of hands.
-Tighten your abdominal and back muscles, exhale and raise your chest and arms a few inches off the floor.
-Rotate the chest to the right and hold. Then rotate the chest to the left and hold. Inhale as you return to the floor.

INTERMEDIATE: “The Bicycle.”
-Lie on the floor with the lower back pressed firmly on the ground. Place your fingertips on the side of the head--elbows bent--to give your head gentle support.
-Bend the knees and lift the feet off the floor, forming a 45-degree angle.
-Slowly start a bicycle maneuver, touching your left elbow to the right knee and then right elbow to the left knee. Exhale when the elbow and knee come toward each other and inhale when switching to the other side.

ADVANCED: “The Woodchop.”
-Using a light hand weight, medicine ball, or rubber tubing that is firmly attached higher than the head, stand and hold the weight or tube over the right shoulder, arm straight.
-Exhale as you draw in the belly button and pull the weight diagonally across the body toward the opposite foot. Inhale and return to the starting position. Repeat on the other side.

OTHER ADVANCED OPTION (that also involves the rectus abdominis):
-Perform a full sit up (knees bent, feet flat, torso comes completely off the floor) and perform a torso twist at the top of the crunch

3. R**ectus abdominis**:

BEGINNER: “Basic Crunch.
-Lie on the floor, knees bent and arms crossed over the chest.
-Exhale as you, flatten the lower back against the floor (this is called a “pelvic tilt”) and lift your head and shoulders off the floor about 30-degrees. Return to the floor.

OR, if you have head and neck issues, try the “Rollup” crunch:
-Lie on the floor with your arms at your side and knees bent.
-Exhale and by contracting the abdominal muscles and performing a pelvic tilt, roll the knees toward the chest. Lower slowly and repeat.

INTERMEDIATE: “Stability Ball Crunch.”
-Lie on a stability ball with back supported by the ball, feet shoulder width apart and fingertips supporting the head.

-While keeping a neutral spine and head position (in other words, do not lift or drop the chin), exhale and lift the upper torso away from the ball, inhale and return.
-To make this more difficult, keep the legs together rather than apart.
If you do not have a stability ball, "U-Shaped Crunch":
-Lie on you back on the floor, knees bent, feet flat and fingertips along side of head for support.
-Tighten the abdominals, press the lower back against the floor, pull the belly button toward the spine, exhale and bring elbows and knees toward each other.
-Inhale and return to the starting position.

ADVANCED: "Heel Push."
-Lie on your back with hands flat at your side and legs straight in the air, above the hips and perpendicular to the ground.
-Exhale, pull belly button toward spine, while at the same time pushing the heels toward the ceiling. Hold for a couple of beats, inhale and return hips to the ground.

EXERCISES TO IMPROVE OVERALL CORE STABILITY

1. "Stand and Stabilize."
-Stand with hands on hips and feet hip width apart.
-Inhale and lift the knee level with the hips.
-Pull belly button in and hold for a count of three.
-While holding the abdominal muscle tight, exhale and extend the leg out straight to the side. Hold for three seconds and return to start position. Perform 10 repetitions then switch sides.

2. "The Wobble."
-Using a stability cushion, wobble board, or thick foam pad stand on right foot for 15 seconds. Switch feet and repeat.
-Work up to 30 seconds per foot.

3. "Single Leg Squat."
-Stand on the right leg with good posture and neutral spine alignment.
-Brace (tighten) the core muscles as you inhale and push the hips back, lowering them as you keep your chest open and eyes forward.
-Exhale and return to standing. Repeat six to eight times on each leg.
-Note: The knee of the supporting leg should not travel over the toes.

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CORE MUSCLE STRENGTH AND STABILITY TEST

(Designed by the United Kingdom's senior sports coach, Brian MacKenzie):

Objective: To monitor the development of the abdominal and lower back muscles.
Equipment Needed:
-Flat Surface
-Mat

-Watch with a second hand

Conducting the Test:

- Position the watch on the ground where you can easily see it:
- Assume the basic plank position (elbows and toes on the ground, spine straight, core muscles braced, head neutral)
- Hold this position for 60 seconds
- Lift your right arm off the ground
- Hold this position for 15 seconds
- Return your right arm to the ground and lift the left arm off the ground
- Hold this position for 15 seconds
- Return your left arm to the ground and lift the right leg off the ground
- Hold this position for 15 seconds
- Return your right leg to the ground and lift the left leg off the ground
- Hold this position for 15 seconds
- Lift your left leg and right arm off the ground
- Hold this position for 15 seconds
- Return you left leg and right arm to the ground
- Lift your right leg and left arm off the ground
- Hold this position for 15 seconds
- Return to the basic press up position (elbows on the ground) - as in the picture above
- Hold this position for 30 seconds

If you were able to complete this test then it indicates you have good core strength. If you are unable to complete the test then repeat the routine 3 or 4 times a week until you can.

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THE TEN WORST ABDOMINAL EXERCISES
From Peter Francis, Ph.D., of the Biomechanics Lab at San Diego State University:

1. ELECTRONIC AB STIMULATION. A better use of the electricity used by these machines, which contract the abs with electronic current, is to power up your ipod and tune into some motivational music.

2. BENT OVER TWIST. Placing a weight across the shoulders, bending at the waist, and twisting puts too much strain on the ligaments and connective tissue of the erector spinea muscles along the spine.

3. STRAIGHT LEGGED SITUPS WITH FEET STABILIZED. Jerking the body off the ground against the force of the feet being held down can seriously injure the back. The better way is to keep the feet free and with NO jerking movements, curl your body slowly off the ground one vertebrae at a time.

4. ROMAN CHAIR SITUPS. Lifting and lowering the legs 90-degrees puts more work on the muscles of the hips than of the abs. Too much compression is put on the spine itself.

5. TWO-DUMBBELL SIDE BENDS. Many men in particular are deluded into thinking that leaning side-to-side while holding weights will somehow get rid of the "love handles." This is not only erroneous but by building the muscles around the hips and waist, your waist-size may actually increase.

6. STRAIGHT LEG DOUBLE LEG RAISES. Lying on the floor while performing double leg lifts puts too much strain on the lumbar spine, low back discs, and spinal ligaments.

7. AB ROCKER. This machine is relatively harmless but has been proved in the lab by Dr. Francis to be 80-percent less effective than a regular crunch.

8. THE AB WHEEL. This rolling device has its place among highly trained and well-conditioned athletes, the less conditioned infomercial watcher will probably just experience low back pain or, in a worst case, severe back injury.

9. CRUNCH MACHINES IN HEALTH CLUBS (like Nautilus). The lumbar and thoracic spinal areas are the primary pivot points. Unless the seat is adjusted properly and the body is aligned correctly, the hip flexors do most of the work. This can put too much pressure on the lumbar discs.

10. SEATED SPINAL TWIST MACHINES. Again, these machines put too much pressure on the spinal ligaments, particularly in the lumbar area.

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HOW TO DEVELOP A STRONGER CORE AND FLATTER STOMACH

From Exercise physiologist and "ABOUT: SPORTS MEDICINE (http://sportsmedicine.about.com)" content producer and editor, Elizabeth Quinn, M.S.

1. NUTRITION. The first key to losing body fat and gaining muscle is with proper nutrition. You need to create a diet that burns slightly more calories than consumed. Begin by reducing your portion sizes and maintaining a balanced diet of carbs, protein and fat.

Eating several small meals throughout the day helps many people stay more satisfied and reduces hunger. Other tips for avoiding fat gain include: getting calcium, eating breakfast and eating high fiber foods. Make sure you stay well hydrated by drinking water

throughout the day. Also, be sure not to cut calories too drastically or you could inadvertently lower your metabolism.

2. AEROBIC EXERCISE. Aerobic exercise is the best way to burn calories and manage (or lose) weight. Reducing your calories without exercise will lead to initial weight loss, but you'll likely reach a plateau and you may also lose muscle. A personal exercise plan will get you past plateaus and can help you maintain muscle.

3. ABDOMINAL EXERCISE. Finally, to get defined abs, you should perform specific abdominal exercises that work all the abdominal muscles. There are many exercises you can do to work the abs. One of the better ab tools you can invest in is an exercise ball. Exercise balls are great for crunches, twists and other movements. Because you stabilize your torso on the ball, you use more muscles than when performing standard crunches.

4. CORE TRAINING. You can also perform core stability exercises to improve your torso strength, balance and stability. Your core is made up of abdominals, lower back and hips and creates a foundation for all other movement. These muscles stabilize the spine and create a strong center around which the extremities can move. A strong core is important in every aspect of movement; especially power movements.

LINDA J. BUCH –February 5, 2007

BRIDE AND GROOM FITNESS: Getting there and STAYING there, even after the Honeymoon

"Whew! At last, I can eat!" says the bride to her groom (who is trying to quell an expression of total confusion) in one of Kim Warp's New Yorker Magazine cartoons (12/25/06 and 1/1/07, page 96). Yes, it is the season for the women (and men) who are newly engaged to be planning weddings. And, there is nothing like knowing you will be the center of attention to inspire a sudden interest in becoming totally buff.

But, as the aforementioned cartoon so aptly suggests, it is one thing to focus intently on dropping a pile of weight for an event and another to abide those changes long past the reception. There is no reason for that bite of wedding cake or the last group photo to mark the decent back into those good old bad habits!

FOOD FOR THOUGHT: Beyond "FISH, CHICKEN OR BEEF?"

Goals work. When a targeted event is on the calendar, every competitor has to figure out what has to be done in order to be ready for the game, race, or event. Training and nutrition protocols are organized. Workouts and meals are scheduled so that on the day of the event, the competitor is in peak shape physically, emotionally, and nutritionally. This goes for Olympic athletes, marathoners, triathletes, as well as brides and grooms.

But even elite athletes drop out of their previously rigorous training regimen after the event is over. There is no shame in the bride and groom letting things go for a few weeks while they travel, set up house, and reorganize themselves into the rhythm of living together as a married couple. However, set a date for getting back into the routine of exercise and the habit of eating properly or pay the price down the road.

Edward Abramson, Ph.D., a licensed clinical psychologist, professor emeritus of Psychology at California State University, Chico, author of several books, and an internationally recognized expert on obesity, dieting, and eating disorders, notes that after 10-15 years of marriage men put on an average of 19 pounds, women put on about 24 pounds. Perhaps, then, some of the "new life together" discussions should include activities to do together (or separately) as well as some ideas on cooking, eating out, and other ways to support NOT gaining that post-wedding "fat and happy" weight.

"Married people are heavier than people who have never been married," says Jeffery Sobal, Ph.D. researcher and Professor of Nutritional Sciences at Cornell University. "Recently married people eat about half or more of their meals together." This means that you not only have an eating buddy but meals become more regular than when single. This can mean a greater caloric intake than you had been used to as well as the inevitable celebratory "joie de vivre" that can caste the control of fatty foods to the wind.

Rather than risk future tussles about exercise (who is doing it and who isn't), weight loss (who needs to lose some and who doesn't), or the need to change lifestyle in order to

drop some pounds (who wants to change the status quo and who won't) why not face up to it NOW along with the other important conversations that are happening about home, work, money, and children?

FOOD AND NUTRITION

The pressure is on. Everyone knows that, as the Paul Masson Winery states, "All good things take time." But with the frantic farrago of pre-wedding planning, shortcuts can become tempting. It is far healthier to deal with the stress with good food and exercise than with crash diets or dangerous pills and teas.

Most fitness and health professionals recommend allowing about six months prior to the wedding date to *safely* get into decent shape. This means making new, clean choices regarding food for the long term, not a quick last-minute fix. Registered Dietitian, Bonnie Jortberg, MS, and Senior Instructor, Department of Family Medicine, University of Colorado at Denver and Health Sciences Center, recommends the following when making pre-wedding food choices:

1. Remember to eat regular meals and snacks - pre-wedding time can be very hectic, and skipping meals can lead to the "over-hungry" syndrome where you eat anything in sight. Keeping to a regular schedule of eating every 2 to 4 hours can help you control your hunger, make better food choices, and control your portions.
2. Set a realistic pre-wedding weight goal. Many brides-to-be want to lose excess amounts of weight before the wedding, sometimes even buying dresses several sizes too small. Remember that 1 to 2 pounds of weight loss per week is realistic, so plan accordingly. You don't want to end up with drastic weight loss measures before the big day.
3. Get the most out of your calories: watch the high fat & high-sugar snack foods, soft drinks and alcoholic beverages. Include more high-fiber foods, fruits and vegetables, and drink plenty of water.

BUFFING THE BOD

Exercise options abound and are only limited by budget, time, and imagination. There are specialized programs that target the pre-wedding weight loss market, including a local Colorado program like Bridal Bootcamp 360, the invention of personal trainer and author, Tamara Kleinberg.

According to Kleinberg, the areas that are the most exposed in today's form-fitting wedding dresses are the back, shoulders and arms and, therefore, need special attention. But, in general, most programs will focus on the whole person--physically and emotionally--not just certain body parts.

Local Bootcamp 360 trainer, Mandy Cash, says, "I try to teach a healthy lifestyle, not just weight loss, because that sticks with you forever. Staying with an exercise program helps the relationship as well because emotionally you feel better about yourself and typically

are a more positive person when you are in good shape." She recommends about five to six months of training prior to the wedding for optimum results and to help the lifestyle changes stick. "Coming to me needing to lose 30 pounds with a wedding date six weeks away is both unhealthy and ill-advised."

In general, it is much easier to achieve success by hiring a trainer, participating in classes that incorporate both strength training and cardiovascular exercise, or hooking up with a mentor/ buddy to stick with you as you engage in your fitness pursuits. Going it alone does not provide the support, accountability, and consistency necessary for real success.

AFTER THE THANK YOU NOTES ARE MAILED

Now the trickiest part of a healthier and leaner future begins. It is important to either be on the same page regarding good health or to at least keep an open, non-accusatory, non-threatening dialogue going, especially if one of you is more into a healthy lifestyle than the other.

This is especially necessary if children become part of the scene. When children are in the picture, they will be more inclined to maintain a healthy weight and lifestyle if you lead by example rather than by decree. Kids deserve health-conscious, healthy parents. This is good motivation for keeping temptation at bay.

If children are not part of the plan, consider healthy eating and regular physical activity to be part of your health insurance. After all, who wants to spend the best years of your life and precious resources (financial and time) dealing with heart disease, high blood pressure, type-2 diabetes, and all of the other diseases that follow an overweight and sedentary lifestyle? It is far easier to keep it off than to take it off!

FIVE WAYS TO AVOID POST-WEDDING WEIGHT GAIN

1. Plan ahead. Figure out some basic menus for the week. Do not go to the store without a list; stick to the list.
2. Keep a healthy, well-stocked pantry. If there is no food in the house, drive-thru windows and pizza delivery becomes more commonplace. Also, if you buy it, you will eat it so buy sensibly.
3. Size matters. Watch your portion sizes because men require more calories than women-do not share food portions equally.
4. Exercise together. Establish some new traditions for your new life, like a walk every evening after dinner or some mutually enjoyable activities on the weekends.
5. Watch out for-and deal with-sabotage. If one partner decides to exercise and lose weight, but the other wants the status quo, talk about the reality and necessity of doing the right things for health reasons. Try to compromise and be supportive of each other. Find goals you can pursue together.

SIDE BOX:

The wedding date is set and now the fun begins. Getting started on looking and feeling your best will come with a little bit of work involving all the biggies: strength training, cardiovascular workouts, and core strength (you will need this for the dancing at the reception)! Here are the basics to get you started, and not just for the brides; grooms need to do this, too.

Strength training should be scheduled at least twice a week and cardiovascular exercise at least four times a week. If you are new to strength training, start with lighter weights, bands, or light selections on the machines and 12-15 repetitions per set. Perform at least two sets per exercise.

Strength training:

CHEST
-DUMBBELL PRESS (When performed on a ball instead of a bench, the core muscles get an extra workout)
-PUSHUPS (Start with the easiest one you know how to do and increase your difficulty every couple of weeks. Try for 15 pushups with ease before moving on in difficulty).

BACK
-LAT PULLDOWNS (Pull the bar to the collarbone, not behind the neck!)
-CHINS (There is no shame in using a spotter or a machine designed to assist this exercise!)

SHOULDERS
-DUMBBELL PRESS (seated or standing)
-LATERAL DUMBBELL RAISE

LEGS
-SQUATS
-LUNGES

BICEPS
-DUMBBELL CURLS

TRICEPS
-PUSHDOWNS
-DUMBBELL KICKBACKS

ABDOMINAL AND CORE
-CRUNCHES ON THE BALL

Cardiovascular:

Start with 15 to 20 minutes three to four days a week. Treadmills are always good but cross trainers, elliptical machines, and bikes are also excellent.

RESOURCES

Books:

BOOTCAMP 360 FOR BRIDES, Tamara Kleinberg, HarperCollins, 2004, $16.95

BRIDAL BOOTCAMP, Cynthia M. Conde, Running Press, 2004, $14.95

BUFF BRIDES, (The Complete Guide to Getting in Shape and Looking Great for Your Wedding Day), Sue Fleming, Villard, 2002, $15.95

EVERYTHING WEDDING WORKOUT BOOK, Shirley Archer, Adams Media, 2007, $14.95

DVD's:

BUFF BRIDES, (Countdown to Gown), (DVD, Peter Pan Studios), 2007, $10.99

THE WEDDING WORKOUT, (DVD, Rodale Press), Women's Health Magazine, 2006, $14.98

PROGRAMS:

Boot Camp of the Rockies (BCOR), (http://www.bcor.net), 1.888.397.LEAN or, 303.494.4242. Provides indoor, outdoors, virtual (via the phone) training and exercise programs.

Bootcamp360, (www.bootcamp360.com) Call 303-981-6071 or. E-mail: bootcamp360denver@yahoo.com. This organization currently operates in the Littleton area.

LINDA J. BUCH –July 30, 2007
SENIORS/SILVER SNEAKERS

"Age is an issue of mind over matter," observed Mark Twain. "If you don't mind, it doesn't matter." It certainly doesn't matter to the millions of Boomers and seniors who are storming the doors of health clubs and recreation centers across our country these days.

According to the International Health, Racquet & Sportsclub Association trend report from 2002, (IHRSA), "Older adults and seniors account for 23% of the total memberships, people over 55 represent 28% of all frequent attendees." American Sports Data Inc., a research firm in Hartsdale, New York, reports that the number of people 55 or older who exercise more than 100 days per year increased 33 percent from 1998 to 2004, compared with zero growth in the 18-to-34 age bracket. Those over the age of 55 purchased one-forth of all club memberships nationwide, making them the fastest growing segment for health club memberships.

This is due to a combination of things. First, Baby Boomers are paying attention to the information about how exercise can be a bulwark against heart disease, hypertension, stroke, diabetes, osteoporosis, depression, and even some cancers (breast, colorectal, and skin among them). Second, physicians have changed their tune about strenuous exercise for older people and helped shift social mores along the way. Older women, once told that weight lifting was bad for them, are now pumping iron with a vengeance; men and women who were once told to take it easy and just play golf are now training for triathlons.

Paul J. Fishman, M.D., with Geriatric and Family Medicine in Lakewood, CO recommends that, when it comes to weight loss and a life-style change, staying faithful to the plan on a daily basis is key. "Never give up," encourages Dr. Fishman. "Every day the patient is tempted to break the rules and go back to their old ways." Dr. Fishman reminds us that "the real reward of staying consistent and persistent is that you get to do the things you want to do instead of wasting your time in the doctor's office or in the hospital."

Five years ago at the age of 68, Carole Kort, office manager and medical assistant for Geriatric and Family Medicine, weighed 254 pounds and was taking 3 different prescription medications for her high blood pressure. Dr. Fishman challenged her to loose 100 pounds in one year, promising to pay for her vacation to New York. Today, the former Marine and professional baseball player is 114 pounds lighter and off all prescription medications. "Every morning at 4:30 AM, I put on my pedometer and walk the treadmill for 30 minutes, before I head off to work where I complete my 10,000 daily steps running back and forth between patients," says Kort proudly. Today, at age 73, Kort (who used Weight Watchers do get her diet in line) sets an example for all the geriatric patients that come into the clinic. (And, yes, she did take the trip to New York!)

Research dating as far back as the 1970's found that people who do not challenge their

muscles through strength training (lifting weights, using weight machines, or working with resistance bands) lose five to seven pounds of muscle every decade. This loss not only reduces the metabolic rate (by two to five percent per decade) but also sets us up for overall weakness that can lead to frailty and loss of independence.

The research showed that no matter what age we start, positive results can occur. In 1996, Wayne Westcott, Ph.D., fitness research director at the South Shore YMCA in Quincy, MA, strength training consultant for numerous national organizations, and author of 20 books on fitness, conducted an eight-week study with 1,100 participants from age 21-80 where the participants engaged in 25 minutes of endurance exercise for the cardiovascular system and 25 minutes of strength exercise for the muscular system two to three times per week.

He found that there was very little difference between the age groups when it came to measuring improvements in body composition and blood pressure, especially when it came to blood pressure. Seniors with hypertension made the most improvement with many going from three points above the hypertensive levels to three points below those levels after only eight weeks.

It has also been proven through decades of research that exercise reduces body fat, increases bone mineral density, improves glucose utilization, increases height, improves posture and balance, reduces constipation, reduces resting blood pressure, improves cholesterol and triglyceride levels, reduces low back pain and arthritic pain, and reduces depression. What are you waiting for?!

Daily exercise can mean the difference between aging gracefully or aging abruptly. As the late physician and running enthusiast, George Sheehan, MD, once remarked, “Exercise is done against one's wishes and maintained only because the alternative is worse.” Elisabeth Armengol, 73, and a retired executive secretary, found this to be true for her. “I began exercising at the Aurora Center for Active Adults [formerly the Aurora Senior Center, located at 6th Avenue and Peoria] in 2004 when my doctor told me I had Type 2 diabetes.”

Armengol is typical of many people who have started and stopped exercise programs over the years. The diabetes diagnosis shocked her into finally doing something about it. “Three months after attending the “Sit, Stand, and Be Fit” class three times a week, I was told I would not need medication; one year after starting I had the best glucose reading ever,” she states with deserved pride, “and I dropped two dress sizes!”

Aurora is certainly on the right track with their now completed renovation and expansion of the Aurora Center for Active Adults. On Monday, July 16, Aurora is re-opening its Aurora Senior Center with a new moniker — the Aurora Center for Active Adults — and, with the addition of a 3,600-square-foot weight and cardio room situated prominently at the front of the building, a new emphasis on health and wellness.

Some older adults take this to “Olympic” proportions. The Senior Olympics is the largest

multi-sport event in the world for seniors. This past June 2007, The Senior Olympics Summer National Senior Games were held in Louisville, KY. (The National Senior Games Association is a not-for-profit member of the United States Olympic Committee dedicated to motivating senior men and women to lead a healthy lifestyle through the senior games movement. The next competition will be August 2009, in San Francisco where they expect 14,000 athletes over the age of 50 to compete.)

The event features competitions in track & field, swimming, tennis, table tennis, badminton, cycling, basketball, softball, race walk, road race, triathlon, archery, and golf, to name a few. The Games oldest athlete was John Donnelley who, at age 100, competed and won a gold medal in Table Tennis. 52 men and women competed in the triathlon, with two women and two men in the age 80-84 categories.

Insurance companies, with the ever-watchful eye on the bottom line, have seen the value of investing in fitness programs for seniors.
In Colorado, Humana, Kaiser Permanente, and SecureHorizons by UnitedHealthcare are all part of a program called SilverSneakers. Founded in 1992 by HealthCare Dimensions Incorporated (HCD, now called Healthways) promoted physical activity programs on the premise that preventative benefits should be incorporated into the managed care portions of Medicare.

The best part is that people love this program. “We underestimated the response we would get,” said David Hallman, Supervisor of the Hiawatha Davis, Jr. Recreation Center (3334 Holly Street, Denver). “We started the program here about three weeks ago and were set up for 30 people. On the first day, we got 64!” Hallman quickly divided the classes so that every participant would get proper attention.

They still have 56 people showing up regularly for classes, which now meet twice a week, Tuesdays and Thursdays, at 10:00 and 11:30 for one hour each. SilverSneakers classes are customized, designed exclusively for older adults who want to improve their strength, flexibility, balance and endurance.

The SilverSneakers Fitness Program is offered at no additional cost by leading Medicare health plans and Medicare Supplement carriers throughout the country. Instructors are trained, certified, and accredited by the program. By all accounts, the SilverSneakers program is a giant success. A study conducted by the Institute for the Study of Aging found that health care costs of SilverSneakers members during the first year of program participation were on average $441 lower than for non-participants.

According to Healthways Account Manager, Jean Tesone, Colorado has 100 SilverSneakers centers with 65 in the Denver Metro area alone. In the month of May, over 81,000 seniors have visited the classes and there are over 23,135 active enrollees (117,638 Coloradoans are eligible). “We also offer an aquatic program called SilverSplash, and just launched a chair-based yoga program called YogaStretch which has already become very popular,” says Tesone.

Resources:

The SilverSneakers Fitness Program
9280 S. Kyrene Rd., Ste. 134
Tempe, AZ 85284
888-423-4632

National Senior Games Association, nsga.com

American Association of Retired Persons (AARP), 1-888-687-2277), AARP.org

National Institute on Aging Information Center, P.O. Box 8057, Gaithersburg, MD 208981, 800-222-4225 nia.nih.gov

"From Fat to Fit," Carole Carson, Hound Press, 2007, $14.95

Side Boxes:

The National Institutes of Health (NIH) recommend four types of exercises:

1. Strength Training: Building muscle increases metabolism, which helps to keep your weight and blood sugar in check.

How to begin:
-Proper form is very important. It is a good idea to take a class.
-Lift weights at least twice a week.
-Start with lighter weights and increase resistance gradually.
-The goal is to lift the heaviest weight you can for eight repetitions.

2. Balance Exercises: These exercises build leg muscles and improve proprioception, which helps to prevent falls. Falling is often the cause of hip fractures, as many as 300,000 a year (many of them among seniors), according to the NIH.

How to begin:
-Hold onto a sturdy table or chair and alternate standing on one foot then the other.
-Gradually challenge yourself by holding on with just fingers, then fingertips.
-The goal is to be able to stand steadily on one foot without holding on and smoothly switch to balancing on the other foot.

3. Stretching Exercises: These can give you more freedom of movement, which will allow you to be more active in general.

How to begin:
-Always warm up the muscles first with a short walk or light calisthenics.

-Stop at once if you feel any pain.
-Always move into a stretch slowly, not with bouncing movements.
-The goal is to increase range of motion for the joints so that reaching, sitting, standing, and twisting can be done with more ease.

4. Endurance Exercises: Involve any activity, walking, jogging, swimming, biking, gardening, dancing—that increases your heart rate and breathing for an extended period of time.

How to begin:
-If you have been inactive for a long time, build up your endurance gradually, starting with as little as 5 minutes at a time.
-Add more exercise time gradually; do little sessions throughout the day instead of trying to do it all at once.
-Try to do a little endurance activity every day.
-The goal is to be able to perform 30 minutes of endurance exercise non-stop.

MORE STORIES FROM AURORA CENTER FOR ACTIVE ADULTS:

At age 68 and retired from the military and from Storage Tech, avid runner Frank Lepus's knees could no longer handle the pounding that jogging gave them. "I do the cardiovascular machines at the Active Adult Center instead," explains Lepus. "That and the strength training I do there have kept my blood pressure and cholesterol medication stable." He also goes to the Aurora Center because of the camaraderie and the competitive group dynamic of the class. "The staff is helpful," he adds, "I can ask questions and get answers."

Marianne Davis, 58 and a retired United Flight Attendant, decided that she did not want to work out with 30 year olds so she goes to the Aurora Center and enjoys the Total Fit class three days a week and strength training twice a week. "My flexibility and strength improved and the aches and pains disappeared," said Davis.

"Old age is no place for sissies," said Betty Davis; and Lucille Walden, 78 and retired from the Aurora Public Schools, is no 'sissy'! Walden has exercised all of her life, still completes at least four half-marathons a year and also enjoys tap dancing. "I used to assist the instructor for the low-impact aerobic classes," she explains, "but now I am just a participant. Taking the class, along with walking and running, allow me to do what I want to do."

LINDA J. BUCH –April 30, 2007
PUPPY POWER

Humans aren't the only ones who are gaining girth; our puppies are putting on the pounds as well. In fact, according to a National Academy of Sciences report on pets and nutrition, 40% of dogs in the U.S. are considered to be overweight (humans are already over the 60% mark). The good news is that, because dogs need to be walked along with their human companions, dog ownership usually means more enjoyable physical activity for the humans who care for them.

Fit dogs (just like fit people) tend to live longer with fewer health problems, have stronger bones, better muscle tone and healthier cardiovascular systems. Before deciding to leash up "Phideaux" and head out onto the dusty trail, be sure you are aware of your pet's level of fitness and exercise limitations just like you are aware of your own.

Kevin Fitzgerald, DVM at Alameda East Veterinary Clinic, is understandably passionate about the health and safety of the animals, especially now that summer is almost here.

"First, be realistic," says Fitzgerald. "The dog has been a couch potato all winter just like most humans. Instead of heading out for a long, once-a-week 45 minute session, start them out with frequent daily 10-minute breaks instead." Knowing your dog's physical situation is equally important. Is your companion animal a hyperkinetic one-year old Irish setter or a very senior 14-year old beagle? Does the animal have arthritis? Heart disease? Allergies?

"Second, be aware of the substrate. Humans have socks and shoes to protect against the heat and vagaries of cement and gravel; dogs have only their pads, which is a living foot. Their pads can burn and scuff off," he warns.

"Third, watch the time of day," suggests Fitzgerald. "Early in the morning or in the cool of the evening is much better for the animal than the heat of mid-day, which brings me to the last point--to be aware of the signs of overheating."

Dr. Fitzgerald teaches us that dogs have two ways of sweating and ridding themselves of excess heat: through their pads and by panting. Signs of overheating include excessive panting, a breath every second (instead of 9 to 25 times a minute, depending on size and age of dog), and being wobbly on their feet. "Find as much shade as possible when exercising and be sure to carry water for them. Be realistic on distance, especially with older animals and those with black or dark fur."

Swimming is also good exercise for dogs (and humans). "Just like with children, dogs should never be left unattended in pools or hot tubs," says Dr. Fitzgerald. "Most dogs cannot get out easily."

Finally, "We dig our graves with our teeth" says Fitzgerald, quoting the Roman poet, Lucretius. "Don't overfeed your animal just because you exercise with them."

Jackie Sainsbury, owner of Affection & Praise Family Dog Training, Inc., Denver, CO, stresses the importance of observing good doggie etiquette when out on a trail or in a park. "Not all dogs get along with other dogs and could get aggressive if another dog just runs up to them. Also, not all people enjoy dogs running up to them. So that everyone can enjoy the parks and trails, only let your dog greet another dog or person when given permission. Only have your dog off leash if your dog comes to you when called, which can be obtained with proper training."

Jackie pointed out that it is because of the irresponsibility of people that dogs are banned from national parks' trails. "Communities will just keep cracking down harder on dog laws unless people show consideration for everyone, including observing leash laws, picking up after dogs and keeping dogs from chasing wildlife."

"And now," as Monty Python would say, "for something completely different."

Many people are not into jogging or going on hikes with companion animals but still desire exercise that is bit more vigorous. While you are standing around watching your dog picking up P-Mail and visiting favorite doggie depositories, you can do the old standbys like jumping jacks, running in place, doing push-ups against a park bench or step-ups at a curb. For those wanting more, put your body through some different kinds of paces. The dog's frequent stops allow you to try movements in different directions, ("multidimensional exercise.")

Humans do not live or move one dimensionally; we have the ability to move in many planes. When we, as adults, grow away from the frenetic nature of playground activities, most of us lose the physical "chain of events" that occur when we move outside our regular walking and working patterns.

On the occasion that we do move outside our normal pattern, injury can be the result. The good news is that our bodies can learn new patterns; we just have to ask them. (A study done at the University of Kansas Medical Center in 2006 found that patients in the early stages of Parkinson's disease improved their balance and kept up with exercise by participating in a multidimensional program, which, in this study, was Tai Chi.)

Multidimensional (or three dimensional) exercise means moving your body in different directions (or planes). This requires your body to respond to movements that are different than those that normally occur throughout the day.

Imagine standing in the middle of a giant clock, facing the 12. Movement towards the 12 and back towards the six is in the sagital plane; movements to and from the three and the nine is in the frontal plane; movements diagonally towards the one, two, four, five, seven, eight, 10, and 11 are in the transverse plane.

"Everything you need to know about three dimensional movement you can learn from your dog," says Physical and Exercise Therapist Stuart Wilson, owner of Champion

Sports Medicine and Physical Therapy, Denver. “They walk forward (sagital plane), jump sideways when a sprinkler goes off next to them (frontal plane), and spin around chasing their tail (transverse plane).”

We generally exercise, walk, and run in the sagital plane, moving our arms and legs forward and backward. A good way to challenge the body is to step in different directions, change toe positions (toes in, toes out), add arm movements, bend, twist, skip, hop, lunge and so forth. “In life, we move in all three planes; we need to train in all three, reminds Wilson. “Most injuries come from too much or too little movement in one of these three planes.”

The only limitation (besides physical disability or injury) is the imagination. When moving the body in new ways it is always important to use common sense. If you experience joint pain, reduce the range of motion or change activities.

(Three Side Bars):

Choose one from column “A” for the Legs and one from column “B” for the arms. Yes, people may think you are nuts but it is all in the name of fun, frolic, and—of course—fitness.

Legs—Column A:

1. Forward Walk
2. Giant steps
3. Skip
4. Lunge
5. Hop

Arms—Column B:

a. Arm swings (exaggerated)
b. Swing side to side (across the waist)
c. Arm wave (side-to-side overhead)
d. Arm dip (with each step, they dip as you twist towards the forward leg)
e. Arms up (hold overhead)

Optional add-ons for more variety:
1. Toes in
2. Toes out
3. Toes straight
4. Stepping/jumping/hopping/lunging/skipping diagonally (transverse plane)
5. Stepping/jumping/hopping/skipping sideways (frontal plane)

General safety points from Dr. Kevin Fitzgerald:

1. No pet should ever, ever be walked or run from a moving vehicle (car or motorcycle), a bicycle, skateboard or rollerblades. This is dangerous for you and the dog.
2. Dogs should always be walked or run on a leash.
3. Never transport a dog in the bed of a truck. Keep them in the cab.
4. Never tie up a dog in direct sun without water, or leave them in the car during a hot day.
5. Give the longhaired dogs a short haircut for summer.

Event:

-“FURRY SCURRY,” the two-mile walk to raise funds for the Denver Dumb Friends League’s homeless and abandoned animals.
-9:00 AM Saturday, May 5, 2007 at Washington Park.
- DDFL.org, or call 303-751-5772
-Standard fee is $50.00

LINDA J. BUCH –October 29, 2007
EXERCISE AND TRAVEL

"The true traveler is he who goes on foot, and even then, he sits down a lot of the time," said French novelist, Colette. Whether it is for business or pleasure, travel involves a lot of sitting, reclining, and just hanging out. Indeed, business trips—and especially relaxing vacations--should involve a fair amount of downtime. Business trippers need to stay sharp for the tasks at hand. As for vacationers, well, that is why it is called a vacation! But whether it is a business meeting, or an escape from meetings, there is no need to return home in worse shape than when you left.

Surviving Business Travel

Success in business requires (among other things) creativity, planning, and flexibility. By a frightening coincidence, that is also what is required in order to stay on a good exercise and diet schedule.

If "Extreme Travel" were a sport, Freelance Photojournalist and War Photographer, Zoriah (who has traveled to 50 countries, lived in 21, and is on the road eight to 10 months of the year) would be the champion. When at home he exercises five days a week, performing a variety of weight-training routines and at least 20 minutes of cardiovascular. When on the road—often in very dangerous places—he still manages to keep himself in top shape through sheer will and commitment. "Routine is the most important factor," says Zoriah. "If you start up right when you arrive somewhere, and just put it in your schedule, it will be easy to maintain and will do more for your mood than anything else."

He has figured out some amazing and creative ways to do just that. "Carrying workout gear is too difficult," explains Zoriah. "All I ever bring is one resistance band; anything else I just configure while I am there so I can just leave it when I depart." He uses his luggage, five or 10-liter water bottles, tree branches, and anything else he can "McGyver" into exercise equipment. "When I go back to NYC between trips, the trainers at my gym marvel at the fact that I often come back in better shape than when I left—better, even, than those who live in the city and go to the gym every day."

Regardless of the occasion, travel is stressful and physical activity is a stress-buster. Staying in the movement mode is always a good idea. When in Denver, attorney Stan Garnett, works out six days a week on a treadmill or bicycle, and with weights. His job as a trial lawyer often means ramped up pressure on the road. "Working out when traveling is even more important because it is essential for managing stress," says Garnett. "I try to run outside when possible just for the fresh air but I always stay at hotels that have health clubs just to be sure I can get in a good workout first thing in the morning." He travels with the usual running gear but also take along a heart rate monitor and a GPS. "The GPS keeps me honest on the actual miles run when I am in unfamiliar surroundings."

Jeanette Hyatt, Auditor for the Department of the Interior, Office of Inspector General, belongs to a nationally known fitness chain in Colorado. When possible, she looks for

hotels that are close to their facilities in that area so that she can attend classes. If that is not an option, she goes to other gyms in the vicinity. “As a last resort, I use the fitness center in the hotel,” says Hyatt. “They usually have at least a treadmill and I can do some pushups and sit-ups on my own.”

“Heredity and vanity are what keep me exercising,” quipped Chuck Turner, Executive Director of the Colorado Bar Association. “I want to keep fit and feel good.” At home, he runs every other day and tries to do some strength training on alternate days. “When on the road, unless the weather is impossible, I run,” says Turner. “When you travel to the same cities with some frequency you can make friends with fellow runners or just go exploring on your own.” He also notes that most hotels have a concierge who knows where to find good running trails. In addition to running attire he also takes plastic bags to deposit the sweaty clothes for the trip back home.

Travel Tips:

-Why wear business shoes? Instead, wear athletic shoes to and from your destination. That way, if you arrive early or have a delay in departure, you can comfortably walk the concourses and terminals.

-Regardless of whether you travel by train, plane or automobile, during the trip, get up and walk and stretch at least once an hour. If on an airplane this can help prevent Deep Vein Thrombosis (DVT), blood clots that can form in the legs. (The genesis of this condition seems to be cramped conditions in which people cannot move their legs enough.) This can be tricky because of service carts in the aisle, but take the opportunity to move about the cabin when it is safe and clear. Train travel makes moving around much easier because you can walk the cars enroute, and then walk outside during the stops. When driving, be sure to stop and walk around for a few minutes every hour.

-Planning ahead can save time. If there is an exercise facility on the hotel property, find out if there are personal trainers available or if you need a reservation for a particular piece of cardiovascular equipment. The hotel manager or concierge is a good resource for convenient health clubs, bicycle and boat (canoes and rowboats, of course!) rentals, walking tours, and so forth.

-Finally, be realistic. Most hotel and resort destinations have limited space and you will be busy with the business that brought you there in the first place. You may not be able to do 100 percent of your normal routine. Getting in 50 percent may be all you can reasonably accomplish.

Exercise can be energizing, even when you’re feeling jet lagged. In that case shorter and lighter workouts are safer and more rewarding. Also, when traveling to other time zones, try to stay with the same time schedule you normally reserve for when you are at home. This can actually help your own body clock to readjust more quickly.

Diet and Travel:

“A dinner lubricates business,” commented English Jurist, Lord William Stowell. Business dinners are often unavoidable, but it is one thing to occasionally splurge during a celebratory banquet--it is a whole other matter if you make overindulgence a habit. Why pack on unwanted pounds on the road and then struggle to take them off back at home?

Making sure that the foods you choose are high fiber, and keeping yourself hydrated (with water, not soft or alcoholic drinks), will keep your digestive system running more smoothly. It is not necessary to always order large entrees. Order off the appetizer menu to keep portions smaller. Choose grilled meats, not fried, and order plenty of fruits and vegetables. Or, make it a habit to go vegetarian when on the road to cut back on calories.

Hotel minibars, airport concourses, and roadside convenience stores are not known for healthy snacks. Take dried fruits, nuts, and granola bars with you to avoid the high sugar and fat usually available. Be sure to drink plenty of water. Airplanes are very dehydrating and travel can definitely mess with the digestion. Water keeps the system running smoothly.

“It is very hard to maintain a good diet while traveling,” says Hyatt. “I try to get a motel room with a refrigerator so that I can keep fruits and yogurt for breakfast.” She also recommends either splitting meals with someone you are traveling with, or bringing half the entree back to the hotel for later (in order to keep from eating too much).

“I am mindful of what I eat in general,” says Turner, “but my running is ‘dessert running’…when I get in a run, I can eat desert.”

Garnett suggests eating early in the evening, which helps control food intake, keeps good digestion, and allows for better sleep.

Zoriah, who travels on a very tight budget, eats mainly from street stalls. “Luckily, in most other countries in the world, poor people eat really good food...lots of vegetables, and things fresh from the market each day since they can’t afford refrigerators. Also, they have little money for meat. I buy my snacks from the markets and nuts and chips from corner stores.”

Intrepid hiker and walker, Kip Hughes, advises taking your own food on the airplane. “Be sure to take lots of variety, you never know how long your trip will be,” she suggests. As for restaurants, “Identify your food,” says Hughes. “Try not to eat things disguised in sauces that you didn't make yourself.” Her advice differs from Zoriah’s when it comes to local fare. “There is a fine line with fresh foods and the threat of stomach problems. Follow all the wise advice from the travel experts about not eating fresh fruit and veggies, or washing in a certain way,” she suggests. “I always take a few Larabars in my suitcase when I go to third world countries.”

Vacation is about decompressing, doing new things, getting away from routine. So, while vacations are not generally used as weight loss venues, there is no need to come home heavier. The flip side is when a vacation is turned into a fitness boot camp. Hughes, who travels regularly to many exotic locales, once observed how the focus on exercise could easily get out of balance. Once, when on a hiking tour in Nepal, she observed a fellow traveler who wore her heart rate monitor the entire time, walking vigorously and rarely stopping even to look at the view. "She was more focused on keeping her heart rate up than in appreciating the amazing surroundings." Maintaining weight and general fitness is a more reasonable objective.

SIDE BOXES:

Kathleen Zelman, RD, director of nutrition for WebMD Health and the WebMD Weight Loss Clinic, offers five basic suggestions for vacationers:

1. Plan ahead to fit in fitness. Vacations can be used to try new activities not practical at home. There are not many opportunities for surfing here in Colorado, for example, but this activity abounds in many areas around the world. Hiking in rainforests, horseback riding, or working with a golf or tennis pro are other options.
2. Be prepared. Carry healthy snacks and try to stick to your regular eating schedule.
3. Avoid dining out disasters. Restaurants can be a mystery when it comes to ingredients and preparation. Don't be afraid to ask questions. Avoiding fried, creamy, and crispy foods (or enjoying a taste rather than a platter) is suggested. Also, renting a place with a kitchen will give you more control as well.
4. Indulge in moderation. "Nothing in excess," said the Oracle of Delphi. "Umbrella drinks" are loaded with calories . Cruise ships and resorts are famous for having tables of food available 24/7. Stay well hydrated with water (drink a glass in between other drinks) and try the local fruits and vegetables.
5. Pare down portions. You are on vacation so slow down and enjoy the food. Eating slower, with smaller portions, will keep you in control.

"He who would travel happily must travel light," said Antoine de Saint-Exupery author of "The Little Prince."

The Mayo Clinic recommends the following light packing options:

1. Athletic shoes
2. Exercise clothing
3. Swimsuit
4. Jump-rope
5. Resistance Bands
6. Personal music (iPod, Walkman, radio)
7. Exercise video or DVD
8. Pedometer

And, they recommend staying flexible and creative if the facilities or options are less than ideal:

1. Use the halls and stairways. If the facilities are less than appealing, non-existent or if the weather does not permit going outdoors, walk the halls and climb the stairs between laps.
2. Get wet. Use the hotel pool to swim laps or for some high-resistance running.
3. Skip rope. Parking areas and fitness facilities are good locations.
4. March in place (with vigorous arm movements to get the heart rate up) and do jumping jacks. Good old calisthenics are still valuable tools and can easily be done in a hotel room.
5. Use your body weight. Pushups, pull-ups, crunches, and squats are all terrific exercises and can be performed just about anywhere.
6. Try aerobics on TV. Most domestic hotels have cable. Find the "FitTV" cable station and workout with the show. Or, if the hotel has a DVD player in the room, they may also have exercise DVD'S for rent.
7. Use resistance bands. Every single area of the body can be exercised with these lightweight and easy to pack tubes.

Travel Exercise Resources:

"Versastick," the complete travel gym. Weighs three-pounds, includes bands, collapsible bar (TSA approved for carry on), and DVD, versastick.com, (888) 93-VERSA (83772)

"Fitness for Travelers: The Ultimate Workout Guide for the Road," □ Suzanne Schlosberg, Houghton Mifflin, 2002, $14.00.

"The Fit Traveler: Take Your Workout With You," Eide, Publisher's Design Group, 2006, $17.95.

Healthy Travel Network, HealthyTravelNetwork.com

"Dining Lean: how to eat healthy when you're not at home," □ Joanne, V Lichten, Nutrifit Publishing, 2007, $19.95.

"The Athletic Minded Traveler," Jim Kaese and Paul Huddle, Social Publishing, 2004, $18.95.

LINDA J. BUCH –May 28, 2007
OFFICE POSTURE

Judging by the way we all slouch and slump over our desks, it is easy to forget that we are, in fact, bipeds designed to stand upright. But since most office workers sit on chairs while behind desks and in front of computers---sometimes for hours at a time--- they often experience the vagaries of working in unnaturally cramped positions.

Office chairs are rarely the best medium for good posture and sitting for hours is just plain unhealthy. Slouching, repetitive motion, and bending forward towards the computer monitor (while relaxing the abdominal muscles) create rounded shoulders, weak abdominal and lower back muscles, and tight hip flexors (the muscles that allow the thigh to lift up).

These sorts of poor office habits create huge health care expenses for businesses as well as for citizens in general. According to the U.S. Department of Labor Occupational Safety and Health Administration (OSHA), "Repetitive strain injuries are the nations' most common and costly occupational health problem, affecting hundreds of thousands of American workers, and costing more than $20 billion a year in workers compensation." Musculoskeletal disorders, including carpal tunnel syndrome, affects 7% of the population and accounts for 14% of physician visits and 19% of hospital stays. According to the National Center for Health Statistics, 47% of the cases are considered to be work related.

More people visit chiropractors because of back pain than any other complaint. According to Lynn Sarkela, D.C., Denver, “The big complaints from anyone who sits for a living are typically neck, upper-back, and mid-back pain.” She points out that “slouching and rounding the back while sitting can increase pressure on the lumbar disks by 25 to 100-percent, depending on how you are sitting; and, for every inch the head moves forward off of the neutral spine position, the pressure on the discs in the neck increases incrementally up to the weight of the head.”

As for prevention, Sarkela recommends never sitting for longer than 20-30 minutes without a break. “Stand up for at least 30 seconds to a minute and try to restore normal posture,” advises Sarkela.

Improved posture is a good place to start. It is a fact that good posture reduces back pain and gives you a sound physical foundation to carry you through your day. Poor posture has a domino effect throughout the body, compounding the stresses and tensions.

When standing correctly, certain bony landmarks should line up: the head is erect and sits directly above the neck and spine; ears are over the shoulders; shoulders are over the hipbones; the hipbones bisect the knee joint; the knee joint bisects the ankle joint. When the terms “neutral head” or “neutral spine” are used, this means everything is in alignment with the rest of the body.

To assess your posture check the following:

*How are you positioned?
*Is your spine compressed?
*Do your muscles feel tense and fatigued?
*Are you able to breathe deeply?

How to Maintain and Restore Good Posture

Sarkela recommends this simple sequence to restore posture. This exercise can be performed either sitting or standing (if sitting, sit at the front of the chair seat):

1. Whether sitting or standing, straighten or slightly arch the lower back.
2. Allow arms to hang at your side.
3. Turn the palms forward.
4. Pull the shoulder blades down and back.
5. Tuck the chin.

Hold this for 15 to 30 seconds and repeat one to three times.

Stretches for Pain Relief

It is not necessary to join a gym or enroll in zillions of classes in order to regain strength and stability of your muscles. Here are few simple yoga moves and/or muscle strengthening exercises, which, if performed daily, can get you started toward a pain-free office existence. Denver metro area yoga instructor, Danny Poole, (YogaDanny.com) offers several yoga exercises to relieve the stress of sitting that can be done at your desk.

Two exercise cues will be standard for each exercise:

*. Each move will be held for about 30 seconds.
*. Correct breathing is vital to achieving the desired relaxation. Inhale from the lower stomach up to the shoulders; exhale from the shoulders to the lower stomach.

1. “Spinal Twist.” (Only the upper body will twist; the lower body will face forward under the desk).
- Place the left hand on the right armrest and the right hand on the back of the chair; look over the right shoulder.

**Before repeating on the other side, perform a “Forward Bend” to help realign the spine before twisting the other side:

-Back the chair up, spread the knees, bend forward and reach gently for the floor.
-Let the head relax and take 10 deep breaths

After repeating the “Spinal Twist” on the other side, perform the “Forward Bend” again.

2. “Open Sesame.” (Seated or standing)

-Open and extend the arms parallel to the floor, palms facing forward.
-Keep opening the chest and squeezing the shoulder blades together as you pull the arms toward each other behind you.
-Keep your face and shoulders relaxed.

3. “Hip Opener.” (Opens the hip flexors)

-Sit back on chair, placing your right heel top of the left thigh.
-With the right hand, push the right knee gently towards the floor.
-Repeat on the other side.

4. “Reverse Hands.” (For wrists and forearms)

-Stand up and place the palms of both hands on the desk, finger tips forward.
-Rotate the hands about 160-degrees to the outside (left hand will turn counter-clockwise, right hand clockwise). Thumbs will now be outside.
- Hold for 15 to 30 seconds. When finished, rub your hands and wrist.
-Flip the hands over so that the backs of the hands are on the desk and the fingers are pointing in toward your body.

5. “Side Stretch.”

-Stand with neutral spine. Reach the right arm towards the outside of the right knee as the left hip juts left.
***Perform the “Forward Bend” from a standing position (relax the knees, shoulders, and neck as you gently drop your arms down to the front of the knees).
-Repeat on the other side.
-Perform the “Forward Bend” again.

Muscle Strengthening Exercises for the Office

A lot of the problems we experience with back and neck pain can be connected to America’s general malaise when it comes to exercise. Muscle weakness, especially for the muscles that support the skeleton--like those of the abdominal, back and gluteus areas—makes us susceptible to injury and disability over time.

Muscle strengthening exercises you can easily do in the office are:

1. Pushups (against the wall or desk): Strengthens chest, back, shoulders and arms.
2. Hand Squeezes: Clench and release the hands five times to relieve tension and increase flexibility.

3. Chair Squats: (Be sure your chair is against a solid object so it cannot roll away.) Stand in front of your chair, brace the core muscles as you push the hips back and down onto the seat. Do not allow the knees to push forward over the feet.
4. Dips (triceps): With your back to a sturdy table or desk, place the heels of the hands on the edge, next to your body. Take one step away with each foot, bend the elbows so that your body lowers below the desktop by about four to six inches and straighten. Keep the chest open and back straight.
5. Biceps Curls: Fill a water bottle and curl it as you sit at your desk.
6. Abdominal Squeezes: While sitting or standing straight, pull the belly button into the front of the spine. Hold for a count of ten.

Side boxes:

Sitting posture for office chairs, From Spine-Health.com:

1. Be sure your back is aligned against the back of the office chair. Avoid slouching or leaning forward, especially when tired from sitting in the office chair for long periods.
2. For long-term sitting, such as in an office chair, be sure the chair is ergonomically designed to properly support the back and that it is a custom fit.
3. When sitting on an office chair at a desk, arms should be flexed at a 75 to 90 degree angle at the elbows. If this is not the case, the office chair should be adjusted accordingly.
4. Knees should be even with the hips, or slightly higher when sitting in the office chair.
5. Keep both feet flat on the floor. If there's a problem with feet reaching the floor comfortably, a footrest can be used along with the office chair.
6. Sit in the office chair with shoulders straight
7. Don't sit in one place for too long, even in ergonomic office chairs that have good back support. Get up and walk around and stretch as needed.

Recommended resources:
“Ageless Spine, Lasting Health,” Kathleen Porter, Synergy Books, December 2006, $24.95.

“Yoga for Wimps,” Miriam Austin, Sterling Publishing Company, 2001, $17.95.

“Deskercise: The Workplace Workout,” Dr. Todd M.Berntson (chiropractor), Center Path Publishing, 2004, $21.95.

“Stretching in the Office,” Bob Anderson, Shelter Publications, 2002, $11.95.

LINDA J. BUCH –June 25, 2007
AQUATICS

Water workouts just make cool sense in the hot summer, like indoor workouts make practical and warm sense during a snowy winter. Why sweat on a treadmill when you can stay relatively cool in the water and still get a great workout? Many people are under the false impression that water exercise is not as productive as land-based activities. They would be wrong.

"Water exercise is highly recommended, especially for those who enjoy water based work outs or have a musculoskeletal condition that prevents them from engaging in impact or land exercises such as walking, jogging, or biking," says Ray Browning, PhD and Research Instructor in The Center for Human Nutrition at the University of Colorado at Denver and Health Sciences Center (UCDHSC). "In order to burn calories, however, the intensity must be similar to activities that are land based. Fortunately this is easy to do in the water."

According to Liz Weinandy, Registered Dietitian and Masters of Public Health at the Ohio State University Medical Center, in 30 minutes at a moderate pace, a 150-pound person will burn 200-250 calories bicycling, 300-350 calories jogging outside, 200 calories walking briskly, and 200-250 calories swimming. "Aquatic exercises, such as deep water aerobics where the feet do not touch the bottom, will burn more even more calories," says Weinandy, "but remember that factors such as gender, muscle mass, age, ability, and terrain will increase or decrease these caloric values."

And, since most exercise classes are conducted in waist-deep water, you don't even have to know how to swim to enjoy gravity-defying workouts. "Water workouts are sometimes the only way anyone with back, foot, or joint problems can comfortably, safely, and effectively enjoy a good workout," says Weinandy.

Water, which is approximately 800 times the density of air, provides enough buoyancy to reduce body weight by 50 percent or more and creates resistance in all directions. The harder you push, the more resistance you feel. Simply *walking* in water strengthens the legs and abdominal muscles. "Water exercise supports most people's agendas regardless of disability, injury, age, level of athletic expertise, pregnancy, or weight," observes Nancy Hall, who has been exercising in a water aerobics program for six years.

Denver Parks and Recreation has 16 outdoor pools and 11 indoor pools with exercise classes ranging from beginning water aerobics and water walking to deep-water aerobics and water polo. For those adults who do not feel they are strong enough to do lap swimming (or who find that activity too tedious or boring), try a water aerobic class.

Lee Regon, Aquatic Recreation Instructor with Denver Parks and Rec/Aquatics, is a retired teacher for Denver Public Schools and has been teaching Aqua Aerobics at Harvard Gulch Recreation Center (550 East Iliff) for 15 years. "Everyone pushes to their

own personal limit. We range from low to high cardio in our classes," enthuses Regon. The ages of the men and women in the class runs from teens to 96 years of age.

Nancy Hall started taking Lee's class just for general exercise. What she found was that this was the gentlest way to work out really hard without the adverse recovery often experienced in other activities. "This is a full blown cardiac workout where you sweat a lot without even knowing it," says Hall. "My body feels tighter, stronger, and better shaped. Even my chronic neck and shoulder pains feel better."

Karen Newlon, Aquatic Coordinator for Denver Public Recreation Outdoor Pools, has taught many water aerobics classes, some in deep water where there is no bottom to touch. While most people will wear a buoyancy belt, it is not required. "With a deep water class, there is not as much of a need to focus on different parts of the body because the whole body is involved most of the time," points out Newlon. "The cardiovascular part of a deep water aerobics class will run 30 to 45 minutes and can be very strenuous if you want it to be," notes Newlon.

At the Congress Park pool (800 Josephine) on Sunday mornings from 9:30 to 11:30 the Denver Masters Water Polo Club (DMWPC) gathers, offering instruction for the new person and vigorous one-hour games for all interested participants. Members are men and women age 16-mid 50's with the average age at about 30+. Some players have NCAA experience and others are brand new.

"Water polo is a combination of soccer, swimming and wrestling," explains Brian Clark, the organizer of the DMWPC. "Participation, therefore, tends to self-regulate. Water polo is for someone who is relatively accomplished as a swimmer, who loves the water but hates to just swim laps, who likes action and likes to keep moving. It is an amazing workout," says Clark.

Water is a popular medium for rehabilitation because of the buoyancy and the control each individual has over the workout intensity. National Jewish Medical and Research Center offers warm water in a 92-degree indoor pool. Exercise classes are offered throughout the day in both shallow and deep water. Paul Heitzenrater, Pool Coordinator, emphasizes that, while the classes are not open to the public per se anyone who needs to exercise in a warm water environment can do so with a prescription from their physician. "People can go into whatever class suits their comfort level," says Heitzenrater. "We do not break the classes down into beginner versus advanced."

Physical therapists teach all of the classes at National Jewish. They offer oxygen for those who need to be/ stay on oxygen. "Our goal is to get people into the classes so we work with them individually on land until they are ready to go into the water," explains Heitzenrater. Classes generally have eight to 10 people in the shallow classes and six to eight in the deep water. Exercise tools such as buoyancy belts, noodles, paddles, and dumbbells are available for class use.

Retired EPA employee (now an internationally recognized bronze sculptor), Jane Russo, was diagnosed with fibromyalgia 17 years ago. People with fibromyalgia often suffer painful joints, requiring warm conditions in order to control the aches and pains. The overall comfort and joint support inherent in a warm water pool provides the non-weight bearing environment that is essential for Russo's situation. "We do it all in our aquatic classes--stretching, cardiovascular, and strength training," says Russo. "As a result of my taking these classes for the past eight years, I have cut back on my pain medications, I sleep better, feel better, and have lost weight."

Aquatic exercise classes are offered at most pools for all ability levels, with classes where stretching, walking, and running are the primary focus to the intense and vigorous deep-water classes where buoyancy belts may be necessary.

Water workouts are becoming more imaginative as athletic trainers and recreation centers seek to motivate members. Special "weights" made of Styrofoam are publicly available for water use; "noodles" are ubiquitous in pool areas in general, often showing up as class tools. Creative teachers have even used tennis rackets, golf clubs, and baseball bats as challenging props. Tired of sweating in the same kickboxing class? Try kickboxing in the water for a different experience. There are even treadmills specially designed for use in the water.

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Resources/Side Boxes:

Aquatic Organizations:
United States Water Fitness Association, P.O. Box 243279, Boynton Beach, FL 33424, 1-561-732-9908, uswfa.com.

Aquatic Exercise Association, Box 497, Port Washington, WI 53074, 1-888-232-9283, aeawave.com

Denver Masters Water Polo Club
Brian@USA.com

Denver/Metro Contact Information:
Denver Parks and Recreation:
(720) 913-0642, Denvergov.org/Parks_Recreation

Statewide:

Blue pages of phone book or Dexonline.com
Warm water programs:

Arthritis Foundation, Rocky Mountain Chapter: 303-756-8622,

National Jewish Medical and Research Center
303-398-1336

NJC.org

Equipment:

Underwater Treadmill:

Aquabilt PAT 201 Water Treadmill
gymcor.com, 800-482-4553

Hydro-Fit, Hydrofit.com, 800-346-7295

Winged Water Walker, (715) 248-7258, Aquaticnet.com

LINDA J. BUCH –December 24, 2007
CROSS COUNTRY SKIING

It is Alpine skiing that gets the glamorous press because no camera can resist those action images of coiled bodies snaking through mogul fields or the dazzling athletics of catching air over a bump. Recreational cross country skiing, on the other hand, invites a visual impression that is less explosive, more bucolic. Instead of steep fall lines, the backdrop is wide-open spaces, stands of pine trees, and deep tranquility.

Cross country skiing, (also called Nordic skiing), has been praised by exercise physiologists and researchers as one of the very best aerobic activities. The sport requires constant and rhythmic movement of the arms and legs to push, propel and glide the body over the terrain. Continuous motion of this sort engages the heart, lungs and muscles in a more aerobic way than downhill skiing, which is quicker and more intense in a shorter time period, or more anaerobic. But cross country isn't just a sport for tranquil glides through the wilderness; it is also an intense Olympic sport that claims one-third of the awarded medals.

There are enough different styles of cross country skiing to accommodate any whim. In addition to the "classic" mode, which involves straight-ahead gliding, there is also "ski-skating," which utilizes a shorter ski and requires racing moves that are more like ice-skating or rollerblading. "Telemark" combines cross country with downhill.

Getting Started

"The coolest thing about cross country skiing is that anyone at any age can do it," says REI sales specialist, Pam Clark. "Someone new to the sport can go out for a short period of time or for several hours."

For those who want to check out this sport, the best place to start is at one of the Nordic ski centers located throughout Colorado. Virtually every ski area has one nearby. Most offer equipment rentals, lessons, and guided tours and trails for all ability levels.
Chris Frado, President of the Cross Country Ski Areas Association, explains that cross country skiing is the equivalent of walking, jogging, or running because, as with these activities, you can choose your own pace from casual to aggressive. "However," Frado points out, "since cross country skiing involves the use of poles, the experience becomes a full body workout, unlike simply walking."

Frado has three recommendations for those who want to give this sport a try:

1. "Don't overdress." Since this is a sport that depends on self-propulsion, the body heats up very quickly. According to the Centers for Disease Control and Prevention (CDC), "Cross country skiing burns an average of 650 calories per hour, compared to fitness cycling that averages 540, exercise walking at about 450 calories, and downhill skiing at 520 per hour."

2. “Go to a Nordic Center and take a lesson.” Certified professional instructors know the best way to teach you the rhythm of gliding, sliding, and arm/leg co-ordination. They can teach you to turn, stop, how to get up if you fall, and relax in a professional, non-judgmental fashion. “Rather than taxing relationships and friendships, let an expert do the instructing. In two hours or less you can acquire skills for a lifetime of fun,” says Frado, “and you will keep coming back to enjoy the natural movement that is cross country skiing.”

3. “Rent equipment from the Nordic Center to experience the latest improvements in gear.” The old days of leather shoes attached only at the toe with the three-pin binding have given way to a boot and binding system that holds and stabilizes the foot better. “It is much easier to put different pressures and turns onto the skis because the boot fits into the binding more securely,” points out Frado. “The boot, binding and ski are more of an entire system that stabilizes the foot when the heel is down.”

----Ski Style Options----

*Classic

The classic form of Nordic skiing is like walking, only you are on long, skinny skis and slide over the ground. While this is a good aerobic workout, the classic method of cross country is mostly a pleasant glide over any terrain that you choose. Beth Buehler, PR Director of the Gunnison-Crested Butte Tourism Association, suggests, “You have the choice of going on groomed track or in the backcountry, on bike trails, golf courses, or breaking your own trail. It’s a sport that can be done in any state that gets enough snow! No mountains needed. My husband received his first set of Nordic skis in 7th grade living in rural Iowa.”

*Skate Skiing

For the person who is looking to challenge themselves in the winter, the choice de jour is skate skiing. “It has become the technique of choice for those who like a fast experience and are looking for something different than Alpine,” explains Frado. Keith Bauer, Director of the Crested Butte Nordic Council, explains that the skis are shorter and the technique is more like speed skating. “A person needs to be in better shape to do it,” he suggests. Pam Clark of REI points out that cyclists who want to stay in shape during the winter often get into skate skiing. “Skate skiing is very fast and skiers can go for hours,” says Clark.

*Telemark

Telemark is for those who enjoy the “free heel” freedom of cross country skiing, yet want to also ski alpine downhill runs. Telemark skiing is characterized by the distinctive turn where the uphill heel lifts up, the knees bend low, and the inside ski pulled beneath the skier’s body. The graceful, curving turns characterize the telemark skiers from the alpine skiers, whose skis are generally always parallel. A well-known Denver psychiatrist got

into telemark skiing so that he could enjoy Alpine skiing with his sons and his wife. “We did not enjoy skiing separately all day. My wife enjoys alpine and my sons only do telemark. So I learned to telemark so we could all enjoy the slopes together,” he explains.

---Gear---

The gear for cross country is very different from alpine, or downhill, skiing, with the major departure beginning at the feet. In alpine skiing the participant’s foot is completely attached to the ski, which allows explosive activity and sharply edged turns down a snowy hill. With cross country skiing in general, the participant’s foot is attached at the toe of the boot, leaving the heel free. This gives the skiers much more flexibility, allowing them to descend, ascend, and glide across a variety of snowy terrain. Each style has its own gear nuances but one of the nice things about cross country gear is that it is inexpensive relative to that of alpine skiing.

-Classic cross country ski gear has improved from the old style three-pin binding from a decade or so ago. Beginners, who will probably be comfortable on the flatter, groomed trails, will use skis that are narrow, light where waxing is not required. More advanced skiers who may want to get into the back country will require a wider, stiffer ski with metal edges for better control. If you decide to pursue this sport, using skis that require waxing is the next step. Learning the nuances of the different waxes for the different conditions and temperatures for that particular day will enhance the skiing experience and improve your performance.

Boots and bindings are where the greatest improvement has occurred. The new boots are warmer, lighter, and fit more securely into a binding that stabilizes the foot much better on the slide while still giving the heel the freedom that makes the sport so appealing. As for poles, they should fit right under your armpits.

-Skate skiing is the muscular opposite from the perceived mellowness of classic skiing. If you have a need for speed, or are an avid rollerblader, cyclist, or ice skater, this is for you. Skate skis are shorter, and generally have a stiffer flex than classic skis. Skating poles are much longer, coming up to the chin, and the boots are taller and stiffer for added stability.

-Telemark is primarily a technique for descending hills, which means you can get on the lifts with the alpine skiers or go into the backcountry. Today’s telemark ski closely resembles alpine skis but have bindings that secure the toe only. The boots flex at the ball of the foot to allow for the specific telemark turn.

---Conditioning---

Since you control your speed, distance, and terrain, even if you are not in the best shape, you can still get out and enjoy this sport. But there is no getting around the fact that cross country skiing is a total body activity involving heart, lungs, legs, core muscles of the

gluteus, back and abdominals, as well as those of the shoulders and arms. Hiking and walking with walking poles are good ways to assess your conditioning, especially at altitude. The good news is that you do not have to know how to downhill ski in order to get into cross country skiing.

Runners, rollerbladers, and/or moderately long-distance bicyclers will probably have a good base to build upon for cross country skiing. If you do not currently have a good aerobic conditioning base from which to work, but are interested in pursuing cross country in more depth, start some training now and you could be ready to do some longer trails in six-weeks or so. Flexibility and strength are also a big part of the mix so a well-rounded fitness program is best.

For those who are interested in getting further into the backcountry, however, physical pre-conditioning is an absolute requirement.

---Aerobic Conditioning---

As a rule, performing 30-40 minutes of continuous cardiovascular activity four to five times per week is a good place to start. The best choices are any, all or some combination of the "big four:" running, walking, bicycling, and swimming. Since outdoor terrain is all about variety, your workout should reflect that as well. Mix up endurance training workout (where your time is prolonged and more rhythmic) with interval training (where sprints are mixed into the session).

Keep boredom at bay by pursuing a variety of venues such as spinning classes, cross-country skiing machines, stair climbers, and elliptical cross-trainers. In-line skating is another excellent choice. If you do a lot of walking, add walking poles.

--Flexibility—

Stretching and warming up is always advised before heading out on any prolonged activity. Yoga classes are great places to learn proper stretching, breathing, and mental focus. About five minutes a day of general stretching should be plenty. Some basic stretches include those for the shoulders, back, hip flexors, calves, quadriceps, and hamstrings.

--Strength--

Strength training workouts should be employed two to three times per week. Performing two to three sets with 10-12 repetitions per set is a good general program for most activities. Strength exercises for the upper body should include chest presses, row and lat pulldowns for the back, exercises for the deltoids of the shoulder, and a variety of abdominal crunches for the rectus abdominis and the obliques. Leg presses, lunges, hamstring curls, and calf raises should be included for the lower torso.

SIDE BOXES:

Do you want to check out cross country skiing…for free? Don't miss the Free Nationwide cross country ski day called "Winter Trails" on January 12, 2008. Call your local Nordic ski area to register.

Cross Country Ski Areas Association, xcski.org, 1-877-779-2754

Colorado Cross Country Ski Association, PO Box 5688, Keystone, CO 80435, coloradocrosscountry.com

REI, REI.com, 800-426-4840.

Books:
"Cross-Country Skiing: Building Skills for Fun and Fitness," Steve Hindman, The Mountaineers Books, 2005, $19.95.

"Ski Skating With Champions: How to Ski With Least Energy," Einar Svensson, Ski Skating with Champions, 1995, $39.95.

"Free-Heel Skiing: Telemark and Parallel Techniques for All Conditions," Mountaineers Outdoor, Paul Parker, $2001, $19.95.

DVD's:

XCZone.TV

LINDA J. BUCH –November 19, 2007
INTERVAL TRAINING

'Tis the season and the frenzy that often defines the holidays is almost upon us. For parents and kids, this usually means school projects and special events; for adults in general, the stress of family gatherings, parties, and end of the year work deadlines start to crowd the calendar. We know that physical activity can relieve the pressure but the time factor—"lack of time" being the number one excuse for not exercising--can create the perfect reason for letting it all go "until after the holidays."

So, if there is an exercise solution that not only provides a great work out in less time but also is more effective at getting you in shape in the process, what's not to love? The Swedes call it "Fartlek," which means speed play, or what we call "interval training." This essentially requires, one to three times a week, mixing short bursts of intense speed with longer periods of moderate speeds during a regular cardiovascular workout.

According to the American College of Sports Medicine, more calories are burned in short, high intensity exercise. But, maintaining a high level of intensity (often defined as a heart rate above 80 percent of your maximum) is usually only sustainable for short periods of time compared to aerobic training (even cheetahs burn out after a few minutes of chasing prey!), so dropping back to a normal pace for a while is necessary. In a nutshell, "interval training" is when you mix in one to four minutes of intense, high speeds with the more moderate aerobic pace throughout the workout.

A typical cardiovascular workout, that utilizes energy sources such as glucose and body fat, is primarily aerobic ("with oxygen"). Aerobic exercise involves a warm-up for a few minutes followed by 30 or 40 minutes of a regular, moderate pace where breathing is steady and rhythmic. There is nothing wrong with this workout—the benefits of regular cardiovascular exercise include weight loss, lower risk for heart disease, lower blood pressure, improved bone density and protection against Type 2 diabetes.

Over the long term, however, the problem becomes two-fold: first, the body adapts to it, which can frustrate continued improvement; and second, it gets boring. Mixing up the pace is the key to a more interesting workout with better results as the bonus.

Adding an anaerobic component can make the workout much more interesting and effective. "Anaerobic" literally means "without oxygen." The energy system at this level of intensity is high and fast burning (and creates intense, muscle burning fatigue). But, the super-fast bursts of speed force your body to recruit more muscle fibers in order to maintain motion. This in turn creates more muscle for you; a body that has more muscle burns more calories, even at rest.

After several weeks of adding the anaerobic pace to your workout, these newly recruited and created muscle fibers stay trained and available. Research has shown that interval training also improves the body's ability to utilize fat as energy by stimulating the

mitochondria (the cell's engine) to burn fat first and increasing the release of growth hormone, a biochemical response that improves fat loss.

*Research

Over the past two years, The Journal of Applied Physiology has published several studies that have been very supportive of interval training.

In 2005 the Exercise Metabolism Research Group at McMaster University, Ontario, Canada did a small study with eight male and female students who were recreationally active, not serious competitive athletes. They found that, in just two weeks of adding intense sprints (with two days of rest in between exercise bouts), six of the eight students doubled their endurance. This means they were able to cycle longer at their more normal moderate intensity before becoming exhausted.

In 2006 (published in May, 2007), another team of researchers from the University of Guelph, Ontario, Canada, the University of Stirling in Scotland, and McMaster University, Ontario Canada looked at how interval training affected fat oxidation, or how fat is utilized as fuel. The eight 22-year old women in the trial performed one hour of cycling seven times over a two-week period, consisting of 10 four-minute bouts of high intensity with two minutes of rest between intervals. The researchers found that, after this training period was over, the amount of fat utilized for fuel during an hour of moderate cycling had jumped by 36 percent.

And this is sort of exercising is not just for young, buff college students.

In September 2007, a study submitted by the University of Strathclyde, Scotland used healthy women aged 75 to 85 years old in their research. The subjects performed three minutes of fast walking on a treadmill with two minutes of slower walking for twenty minutes each session. After 12 weeks, the interval training group increased their over-ground walking speed by 13 percent and improved the amount of walking they were able to perform during each exercise session by 67 percent. In other words, they could walk faster and farther before tiring.

Beginning or Improving a Cardiovascular Program

For those who are regular exercisers already, are ready to take it up a notch, interval training is your key to success.

The first thing that needs to be established is your basic heart rate level, which is usually between 50-65 percent of your "target heart rate." If a heart rate monitor is not available, use what is called Rate of Perceived Exertion (RPE), which is a scale of one to ten. If "one" is sitting quietly, and "10" is running from that cheetah, a comfortable exercise level should feel like a "five." The anaerobic interval training level will be at about 85 percent of your target heart rate, or feel like a seven or an eight.

This training method is very helpful if you are trying to improve your performance in a new form of exercise. Many people who are interested in getting into a running program, for example, give it up because it is difficult to get into that enviable rhythm that some runners seem to enjoy so easily. Instead of going right into a run or slow jog, warm up by walking for the first five minutes. Increase your walking pace over the next five minutes, and then perform a slow jog for one minute, dropping back to a fast walk for another four or five minutes. As this gets easy, increase the jog time and decrease the walk time.

Eventually, you will be able to alternate one minute of jogging and one minute of walking. Increase the amount of time spent running gradually over the next couple of weeks. It won't be long until you are able to run for five and 10 minute periods or longer; the next thing you know you will be running a 5K!

Swimmers can improve their endurance in a similar fashion. Begin by sprinting one length of the pool out of every four. Cyclists can start by adding a half-mile of fast peddling to every two miles of their normal pace. If walking is preferred to jogging, walking benefits can be improved by adding short bursts of speed in between your regular pace, either between landmarks along the trail or for specific periods of time. Speed walk or "wog" for one minute and walk at a normal pace for four minutes.

Kim Goss, a former strength coach for the US Air Force Academy and now Editor of Bigger Faster Stronger magazine (biggerfasterstronger.com), points out that the fat burning benefits of anaerobic training occurs after the workout. "With aerobic training, the caloric burn occurs primarily during the workout; with anaerobic training, the caloric afterburn can go on for several hours." This is because, as discovered in the research, working out at this intensity level creates a hormonal response that increases the rate the body burns calories, even after a workout.

SIDE BARS

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Here are some sample workouts. Everyone is different so go at your your own pace and pay attention to how your feel:

For Beginners—A 30 minute Interval Training Workout on a Treadmill:

Mode	Time (minutes)	Speed (mph)	Incline	RPE*
Warm up	5	2.5-3.0	0	3
1st interval	30 seconds	3.5	0	4
Recovery	2	3.0	0	3
2nd interval	1	3.5	1	5
Recovery	3	3.0	1	3
3rd interval	1.5	4.0	1	5
Recovery	3	4.0	0	4
4th interval	1.5	4.0	2	6

Recovery	3	4.0	1	5
5th interval	2	4.0-4.5	2	7
Recovery	2.5	3.5-4.0	1	5
6th interval	2	4.5	3	8
Recovery/cool	3	3.0	0	3-4

For Intermediate/Advanced:
A Sample Treadmill Workout for both Power and Speed (created by Noelle Brownsen, owner of Fitness Station, Denver, CO):

Mode	Time (minutes)	Speed (mph)	Incline	RPE*
Warm-up	0-3	3.5	1	2
Speed walk	3-7	4.0	3	5
Power walk	7-11	3.5	5	6
Speed walk	11-15	4.0	7	7
Power walk	15-19	3.3	8	8
Speed walk	19-23	3.8	9	8-9
Power walk	23-27	3.0	10	9-10
Cool down	27-30	3.5	0	3

*Rate of Perceived Exertion

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How to Determine Your Target Heart Rate (THR) (Karvonian Formula):

Determine your resting heart rate by doing the following:

Prior to getting out of bed in the morning, take your pulse on your wrist (radial pulse) or on the side of your neck (carotid pulse).

Count the number of beats, starting with zero, for one minute. If you don't have a stop watch or a second hand in your bedroom, you can measure the time by watching for the number to change on a digital alarm clock. Find your pulse and start counting when the minute number changes the first time, stop counting when it changes again.

To help assure accuracy, take your resting heart rate three mornings in a row and average the 3 heart rates together.
Another element in finding your training heart rate zone is determining the intensity level at which you should exercise. As a general rule, you should exercise at an intensity between 50% - 85% of your heart rate reserve. Your individual level of fitness will ultimately determine where you fall within this range. Use the following table as a guide for determining your intensity level:

Beginner or low fitness level . . .50% - 60%
Average fitness level . . . . . 60% - 70%
High fitness level . . . . . 75% - 85%

220 - Age = Maximum Heart Rate
Max Heart Rate - Rest. Heart Rate x Intensity + Rest. Heart Rate = Training Heart Rate

For example, Sally is 33 yrs old, has a resting heart rate of 75 and she's just beginning her exercise program (her intensity level will be 50% - 60%.) Sally's training heart rate zone will be 131-142 beats per minute:

Sally's Minimum Training Heart Rate:
220 - 33 (Age) = 187
187 - 75 (Rest. HR) = 112
112 x .50 (Min. Intensity) + 75 (Rest. HR) = 131 Beats/Minute
Sally's Maximum Training Heart Rate:
220 - 33 (Age) = 187
187 - 75 (Rest. HR) = 112
112 x .60 (Max. Intensity) + 75 (Rest. HR) = 142 Beats/Minute

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How to Do Safe Interval Training

1. Be sure you are in good health. The presence of heart disease or high blood pressure can provoke heart attack or stroke. Also, anyone with arthritis or who is over age 60 should get clearance from a medical professional before any experimentation with this level of intensity.
2. Warm up before starting intervals. This will vary between individuals but preparing the muscles by increasing the heart rate and blood flow is important for injury prevention and overall comfort.
3. Even if you are an experienced athlete, add the short periods of intensity conservatively at first. Over the long term, this will yield better results.
4. Your periods of intensity should be in the 80 to 85 percent range of your maximum heart rate; recovery periods should be at about 60 to 65 percent. A heart rate monitor would be a very useful tool to employ in order to maintain the right levels of output.
5. Plan for at least a 10-minute cool-down after your session. Gentle stretching is best on warm muscles that have been exercised rather than prior to exercise.
6. Go to a podiatrist or to a running specialty store and get properly fitted for shoes. Higher intensity training requires better footwear.

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“What can interval training do for me?”

1. “You’ll burn more calories.” Even increasing the intensity for a few minutes at a time, once or twice a week, the caloric burn will increase.
2. “You’ll improve your aerobic capacity.” This means being able to exercise longer and with more intensity, such as being able to perform your normal 60-minute walking distance in 45 minutes.
3. “You’ll keep boredom at bay.” The variety is refreshing and stimulating for both body and mind.
4. “You don’t need special equipment.” This is about modifying your current routine, not changing activities.

Source: The Mayo Clinic

Resources:

“Ready, Set, Go! Synergy Fitness,” Phil Campbell, Pristine Publishers, 2007, $19.95.

“Treadmill Training for Runners,” Rick Morris, Shamrock Cove Publishing, 2004, $15.95.

“The Interval Training Workout,” Joseph T. Nitti, M.D., Hunter House Publishers, 2001, $16.95.

“Heart Rate Monitor Guidebook,” Sally Edwards, Heart Zones Publishing, 2005, $24.95

LINDA J. BUCH –March 19, 2007
"NO PAIN, NO GAIN?"

"No pain, no gain," challenged the body builders in the 1980's. "Pain is weakness leaving the body," brags the Marine Corps t-shirt. "No Pain, No Jane," taunts the billboard advertisements for the Mary Jane ski area. "Feel the burn," promised Jane Fonda.

People who exercise know that sometimes muscles seem to burn during hard exercise or feel a little sore over the next day or two (and the mere thought of pain is often enough to keep some people planted on the couch.)

Paradoxically, those already in pain from arthritis are told that exercise can help to relieve it. And then there is pain that stops you right in your tracks midway through a workout. Is pain good? Bad? Ugly? Inevitable? Avoidable?

PAIN FROM EXERCISE: THE GOOD

The "No Pain, No Gain" bromide from the '80's still seems to thrive in our consciousness. According to Wikipedia, "It expresses the belief that solid large muscle is a result from hard training and repeatedly suffering sore muscles, implying that those who avoid pain will never reach the professional level of bodybuilder."

While many fitness professionals and sports medicine researchers believe people should "train, not strain," others (particularly body builders who are going for maximum muscle growth) flat out do not buy that advice. Yes, exercise in general (not just weight lifting) can bring on something called "Delayed Onset Muscle Soreness" (DOMS) but the correlation between muscle soreness and bigger muscles is still being debated.

The cause of DOMS is posited to come from two sources: waste products that build up in the muscle and/or the microscopic tears in the muscle tissue that occur when the muscles are pushed harder or more differently than normal. This can come from trying out a new exercise or by increasing the intensity or duration of the activity. For example, if you usually jog one mile a day, then suddenly decide to push yourself to two or three, some soreness is inevitable, is usually mild, and generally disappears after 12-48 hours.

HOW TO AVOID DOMS

-Be sure to take the time to warm up and cool down after an activity. Slow, easy stretching can be very beneficial to the joints, and a good 15-minute warm-up is recommended to get your cardiovascular system and lungs working.

-Perform light, easy stretching after exercise.

-When strength training, start with lighter weights and high repetitions (12-15). Increase the weight lifted over several weeks.

-Try not to make sudden changes in activity. If you do try something new, go easy for a week or two.

-Gradually increase the amount of time spent at the new activity; get some experienced coaching before just diving in.

All bets are off, however, if the snow HAS to be shoveled, the garden HAS to be weeded, or the attic HAS to be cleaned and cleaned NOW!

In that case (or if you ignored the recommendations above):

HOW TO TREAT DOMS

-Mild discomfort should go away after three days at the most.

-If you are already sore, perform some easy, low-impact aerobic exercises in order to increase the blood flow to the affected areas.

-Do some gentle stretching and/or massage on the affected area.

-Try a nonsteroidal anti-inflammatory medication (aspirin or ibuprofen). These will only deal with the soreness, not speed the healing.

- A 2003 study from the University of Georgia showed a significant reduction in post-exercise muscle soreness from moderate doses of caffeine.

PAIN FROM EXERCISE: THE BAD

If you are still in pain after a week, it is time to get a diagnosis from a medical

professional. “Bad pain” often feels sharp, comes on suddenly, and stops your activity. The pain could be a pulled muscle, strained or torn ligament or tendon, twisted joint, a dislocated joint, or even a break or fracture of bone. The injured area could swell immediately, a real good sign to stop what you are doing.

HOW TO TREAT BAD PAIN:

-RICE: If possible, IMMEDIATELY employ a technique called “RICE” Rest, Ice, Compression, and Elevation. This means stop what you are doing and sit or lie down in order to protect the injured area. Put a cold compress wrapped in a thin towel on the injured area for no longer than 20 minutes. This will help reduce the swelling. Wrap the injury securely (not so tight that you feel numb or feel throbbing) in an ACE bandage. Raise the injury above the level of the heart.

-MASSAGE: If the pain or swelling does not go away after 48 hours, get medical attention. If it is a minor sprain or strain, you should see improvement in a couple of days. At that point, light massage of the injury can be helpful in the healing process.

PAIN FROM DISEASE: THE UGLY

Arthritis, fibromyalgia, Paget’s Disease (bone), general joint and muscle pain due to aging, heart disease, stress, all of these and many more chronic diseases all carry a certain amount of pain and discomfort on a daily basis. In virtually every case, exercise has been found to be beneficial in minimizing the pain.

But remember:

-A physical therapist should be consulted to learn the type of exercise that will be helpful for your condition. For some, light strength training is helpful, for others water exercise is key. Many people benefit from yoga and Pilates.

-Proper form is crucial. This can also be learned from a physical therapist as well as from a properly certified personal trainer.

-There are many more factors involved with chronic pain including (but not limited to) psychological, social, and emotional issues. Stress relief is also a key component. Take all of this into account as you learn how to cope.

-Painful conditions like arthritis and chronic lower back pain respond better to movement than to immobility.

EXERCISING THROUGH PAIN?

“I will just exercise through the injury until it goes away.”

Pain from exercise is the body’s messenger. Ignoring the pain and just toughing it out could make the injury worse.

However, as Dr. Richard Steadman, Orthopedic Surgeon in Vail and founder of the Steadman Hawkins Research Foundation points out that ‘Don’t exercise’ is definitely the easiest and safest way to deal with an injury, especially if it is severe. “But,” he adds, “If the injury is not severe, resting it will probably prolong recovery.” Medical researchers are now realizing that some exercise may be important to the healing process.

“We want to keep you moving,” said Dr. William Roberts, a sports medicine specialist at the University of Minnesota and a past president of the American College of Sports Medicine. “Injured tissue heals better if it’s under some sort of stress.” It is CRUCIAL, however, to be under a physician’s care at the initial stages of exercise re-entry. Remember: “Nothing Exceeds Like Excess.”

So which is it?

Here are some guidelines for exercising through an injury:

-Muscle pulls, sprains and strains need time to heal so follow the doctor’s or physical therapist’s advice. You may be surprised how exhausting AND how much time it takes to perform all of those rehabilitation exercises!

-Use common sense. Slow down, cut back on the intensity, and don’t forget RICE. Use anti-inflammatory medications carefully. They mask pain that could lead to making the injury worse. Inflammation, redness, and swelling that is tender to the touch are a sure indicator that something is very wrong.

-There are always alternatives to your normal exercise choices. If the lower body is injured, find some exercises for the upper body. If you have access to a pool, swim; if you can bicycle, do so. Crosstrain until the pain is gone.

-Sitting around moping is unproductive and will annoy your friends. Take this opportunity to check some books out of the library, organize your desk, or catch up on correspondence and communication.

-If weight gain is a concern, adjust your dietary intake to reflect your temporarily slower lifestyle.

-Avoid forceful, ballistic stretching. Gentle stretching can promote healing.

LINDA J. BUCH –September 10, 2007
GOOD FORM/BAD FORM

Strength training, also referred to as weight lifting and resistance training, is simply any exercise that builds or strengthens muscle. It is one of the major components of fitness and is often recommended by fitness and medical professionals as a remedy for, or as a bulwark against, a variety of ailments and diseases.

It is important to build and maintain muscle because it is involved in every activity--regardless of how robust or infinitesimal. Muscle is also very metabolically active, which means the more muscle we have, the more calories we burn.

Ongoing research has shown that a consistent program of strength training can slow the progression of osteoarthritis, increase bone density, lower blood pressure, lower bad cholesterol, reduce the risk of coronary heart disease (CHD), promote flexibility, reduce depression, boost self-confidence, decrease lower back pain, improve balance, improve functionality among sufferers of fibromyalgia, help stabilize blood sugar in diabetics, accelerate the loss of body fat, improve quality of life for the frail, and help maintain an independent lifestyle for the elderly.

According to research reported by the National Institutes of Health, sedentary people lose about one-half pound of muscle per year after age 20. After age 60 the rate of muscle loss doubles. This ultimately results in a 15 percent decline in strength per decade after age 50 and 30 percent per decade after age 70. Fortunately, muscle responds enthusiastically when made to lift, push, or pull progressively heavier resistance; and, muscle can be rebuilt as well as preserved.

But to become stronger, the weight or resistance that the muscle has to move must be enough to stimulate change. Lifting unchallenging, weensy weights will not provide much benefit. The general rule is that once you can easily lift a weight for 15 repetitions, it is time to increase the resistance.

The key to success for building muscle are finding the mode of resistance training that you like and that you can safely perform, whether it is machines, bands, or free weights. It also helps to have a support system, such as a trainer or friend.

What constitutes “proper form?”

Posture

Proper form begins with posture; posture means proper alignment of joints, particularly those of the shoulder, hip, knee, and ankle. Slouching or rolling the shoulders forward, locking the knees or pushing the knees forward past the toes, and allowing the lower pelvic area to thrust forward, and thus rounding the lower back, are all examples of bad form, to say nothing of bad posture.

When standing correctly, certain bony landmarks should line up: the head is erect and sits directly above the neck and spine; ears are over the shoulders; shoulders are over the hipbones; the hipbones bisect the knee joint; the knee joint bisects the ankle joint. When the terms “neutral head” or “neutral spine” are used, this means everything is in alignment with the rest of the body.

According to Lynn Sarkela, D.C., Denver, you can assess your posture by checking the following:

*How are you positioned? (Look at your landmarks and assess how everything lines up as you sit, stand or recline.)
*Do your muscles feel tense and fatigued?
*Are you able to breathe?

Posture is particularly important when forcing muscles to handle resistance because without proper alignment, injuries can occur.

Breathing

People tend to hold their breath throughout the day, or to breath shallowly rather than deeply. It is easy for this tendency to carry over into the weight room, which can be dangerous because holding the breath when lifting weight of any kind can dangerously raise the blood pressure. The general rule is to “Exhale during the Exertion.” You will notice that any time you have to fight gravity, whether lifting or lowering a weight, you will be exerting yourself--so breath!

The Basics

Those new to strength training should focus on the primary muscle groups: chest, back, shoulders, biceps, triceps, legs and abdominals.
According to the American College of Sports Medicine (ACSM), exercise sessions should last about 30 to 60 minutes, twice a week, with at least one day of recovery (but preferably two days) between sessions. Each exercise should consist of 8 to 15 repetitions for one set (which should increase to two sets as strength improves). This routine has been known to produce safe and effective results when the approach is done "progressively," which means gradually increasing the weight and modifying the number of repetitions, as you get stronger.

Dumbbells are inexpensive and easy to come by so they will be used to demonstrate these exercises. Barbells and resistance bands can also be used. Good sense suggests that it is more productive to challenge yourself enough to know that you have been exercising, but not so much that you are miserable.

A simple free weight exercise for each of these major muscle groups is will be shown with both good form and bad form. This will provide a very basic platform upon which

you can build a good and interesting program. It is always advisable to learn new skills from certified professionals. A few sessions with a personal trainer is advised.

The following are seven very basic exercises to help get you started. No expensive equipment is necessary but dumbbells, which are designed to fit properly in the hand for the purpose of weight training, are preferred over soup cans (or other household items).

*****BASICS of Good Form When Standing/Seated*****

(Utilize the following when performing shoulders, legs, and biceps exercises to follow):

-Stand with legs under shoulders, knees soft, head neutral. If seated, be sure the back is supported; sit with spine in alignment with head and hips; feet flat on floor.
- Keep head neutral and inhale as you tighten the muscles of the core, hips tucked in, so that the spine is aligned with head and neck.
-Keep your shoulders square, shoulder blades retracting towards each other, eyes looking straight ahead.
-Exhale when pushing or pulling the weight (Exhale on the Exertion).

****In General: Always use smooth, controlled movements when handling weights.
****

#1--Chest

Exercise: Dumbbell Press
Primary Muscle worked: Pectoralis
Why this is important: Increases upper torso strength, especially for pushing activities.

Good Form:
-Lie on a bench (or on the floor) so that your back is flat, spine and head in alignment.
-Hold the weights in the groove between the palm and heel of the hand, close to the thumb.
-Begin by holding the weights over the chest, palms facing the feet (if you have a shoulder injury, hold the weights so that the palms face each other in what is called a “neutral” position). The wrist will be straight and the elbows will be directly under the wrists.
-Inhale and lower the weights slowly until they are just at the shoulder joint.
-Exhale and push the weights back to the starting position.

Bad Form:

-Back is arched.
-Weights are flopping towards the shoulders as the elbows point towards the feet.
-Weights will held towards the fingers so that the wrists are bent at right angles.

#2--Back

Exercise: Dumbbell Row
Primary Muscles Worked: Latissimus Dorsi, Rhomboids
Why is this important: Increases strength in upper torso, especially for pulling activities.

Good Form:
-Either place left hand and knee on a bench, right leg stretched behind you to help extend the spine; or lean into a sturdy object (desk, kitchen counter) with the left hand, left foot flat on the floor, right leg will be stretched behind.
-Right arm holds the weight perpendicular to the floor.
-Head is neutral in alignment with the spine.
-Shoulders are square with shoulder blades slightly retracted which engages the back muscles.
-Abdominal muscles are tight, lower back will have slight curve (slightly concave).
-Inhale and Pull back the right shoulder while also retracting the right shoulder blade. This starts the initial lift of the weight.
-Exhale as weight is then pulled up to the ribs, powered by the back muscles.
-Inhale and lower slowly. Switch to other side when repetitions are completed.

Bad Form

-Shoulders are round; head is drooping with chin on chest.
-Lower back is rounded (convex) with tailbone tucked.
-Arm pulls weight up and down without engaging the back muscles.

#3--Shoulders

Exercise: Standing Dumbbell Press (can also be performed seated)
Primary Muscles Worked: Deltoids
Why is this important: Strengthens and stabilizes the joint of the arms; necessary for pulling, pushing, and lifting.

Good form:

-Hold the weights in the heel of the hands, by the shoulders, palms facing forwards (note: if you have a shoulder injury, the palms will remain neutral).
-Inhale.
-Exhale and press the weights overhead.
-Inhale and return the weights to the start.

Bad Form:

-Knees are locked and back is arched. If seated, legs are behind the shoulders with only the toes on the floor.
-Chin is tilted up, head is back, and you are watching the weights as they press overhead.
-Abdominal muscles are protruding.

#--Legs

Exercise: Squats
Primary Muscles Worked: Quadriceps, Gluteals, Hamstrings, Hip Flexors, and Calves
Why is this important: Strengthens the lower torso and stabilizes the joints of the hips, knees and ankles for walking, sitting and standing; strengthens the core muscles.

Good Form:

-Lower your body by bending at the hips, pushing your buttocks behind you.
-Knees should not pass over the toes; back should remain straight.
-Your upper leg will get as close to parallel with the floor as is possible.
-Exhale, push evenly through the feet, and return to a standing position.

Bad Form:

-Shoulders are rolled forward and head is tipped down.
-Knees push forward over the toes and weight is primarily on the balls of the foot.
-Core muscles are not tight, slowing the upper torso to drop forward, curving the back.

#5--Biceps

Exercise: Biceps Curl
Primary Muscle Worked: Biceps
Why is this important: Strengthens the arm for pulling and lifting; stabilizes the joints of the shoulder, wrist and elbow.

Good Form:

-Keep elbows by the ribs at your side.
-Inhale and rotate the weight in the right hand so the palm faces up.
-Exhale as you pull the weight up towards the shoulder, keeping the wrist flat so that the weight does not “tip” inward.
-Inhale as you lower the weight down to the starting position; turn your wrist so that your arm is back at the neutral position.
-Exhale as you repeat this with the left hand.
-The body should remain generally still, focusing the attention on the biceps muscle.

Bad Form:

-Slouching posture with eyes downcast.
-Elbow comes forward as you curl the weight.
-Wrist flips backwards on the extension of the arm and flips inward on the contraction.
-Body rolls with each curl.

#6--Triceps

Exercise: Triceps Extensions or “kickbacks”
Primary Muscle Worked: Triceps
Why is this important: Strengthens the arms; stabilizes the joints of the shoulder, wrist and elbow.

Good Form:

-Position will be the same as recommended for the Back exercise above.
-Right arm holds the weight, elbow bent, at the armpit.
-Head is neutral in alignment with the spine.
-Shoulders are square with shoulder blades slightly retracted which engages the back muscles.
-Abdominal muscles are tight, lower back will have slight curve (slightly concave).
-Exhale and straighten the elbow so that the weight is now at the butt and hips.
-Shoulder will remain stable and not roll; back will stay flat and parallel to the floor.
-Inhale and return weight to the start position.

Bad Form:

-Shoulders are round; head is drooping with chin on chest.
-Lower back is rounded (convex) with tailbone tucked.
-Elbow drops and rises with each repetition

#7—Abdominals

Exercise: Crunch
Primary Muscles worked: Rectus Abdominis
Why is this important: Strengthens the core muscles and stabilizes the body for nearly all activity.

Good Form:

-Lie face up on the floor, knees bent, feet flat, about shoulder width.
-Arms will either be across the chest or behind the head, elbows out to the side, with fingers only supporting the head.
-Head will remain neutral throughout the entire range of motion.
-Exhale and imagine pulling your naval into the floor as you lift your head, neck, and shoulder blades off the floor, moving your sternum towards your pelvis.
-The back will be slightly rounded, lower back and butt will remain on the floor.
-Hold for a count of three, squeezing the abdominal muscles.
-Inhale and return to the starting position.

Bad Form:

-Fingers are laced behind the head or, worse, on the neck.
-Chin is pointing towards the ceiling or tucked into the collarbones.
-Arms jerk the head and shoulders towards the knees.
-Head flops back and forth with each repetition.

RESOURCES:

"Strength Band Training," Phillip Page, Todd S. Ellenbecker, Human Kinetics, 2005, $18.95

"Weight Training for Dummies", Liz Neporent, Suzanne Schlosberg, John Wiley and Sons, 2006, $21.99.

"Weight Training Steps to Success," Thomas Baechle and Roger Earle, Human Kinetics, 2005, $17.95

"Dumbbell Training for Strength And Fitness," Matt Brzycki and Fred Fornicola, Cardinal, 2006, $14.95

"Anatomy for Strength and Fitness Training," Mark Vella, McGraw-Hill, 2006, $19.95

"Strength Training For Women," Joan Pagano, Dk Publishing, 2005, $15.00

Web Sites:

Georgia State University, from the Department of Kinisiology and Health:
gsu.edu/~wwwfit/strength.html

University of Michigan Health System:

http://www.med.umich.edu/1libr/sma/sma_strength_sma.htm

Mayo Clinic:

mayoclinic.com/health/weight-training/SM00028

American Council on Exercise:

acefitness.org (click on "Health and Fitness Info")

LINDA J. BUCH –December 17, 2007
BALANCE

Balance is a challenge to toddlers (hence the "toddler" designation) as they learn to take their first steps. The next time balance is tested is when the training wheels come off of the bicycle. Once balance is learned, it becomes an innate part of our physical being and something we take for granted regardless of whether we are walking, running, riding, or climbing. And then, decades later and seemingly out of the blue, we are shocked by a fall, stumble, or wobble. Suddenly, we are blown back to an age where first steps were tenuous and scary.

Balance is about perception of body orientation that involves not only our eyes and inner ear but also the body's total sense of where it is in space (called proprioception). All this information feeds into the brain, nature's gyroscope, and keeps us securely on our feet. When one of these systems goes out of kilter--perhaps from an ear infection, medication, low blood pressure, or a stroke--the sense of balance can be jeopardized and the chance of falling skyrockets.

Falling is a primary fear among older adults, with good reason. According to a 2006 report from the Centers for Disease Control and Prevention (CDC), one-third of people over 65 are either injured or die as the result of a fall. If the fall results in hip fracture, 50 percent cannot live independently again.

It is often the simple things that lead to a fall such as tripping on a step or uneven pavement, slipping while getting out of the shower, or losing footing under ice or snow. In a vicious "Catch-22," it is the fear of falling that often causes the fall in the first place. This fear focuses the eyes downward instead of ahead, which causes a shuffling gait and bent over posture, which throws the center of gravity forward, which sets up the potential for a fall.

The number one way to break this cycle, or not get into it in the first place, is exercise. As the saying goes, "use it or lose it," which applies to both muscle strength and balancing skills. Strengthening the muscles (particularly the core muscles of the abdominals, gluteus, and lower back), testing balance skills, and improving posture and flexibility are all part of maintaining the physical ability to prevent falls from happening.

Many recreation and fitness centers, private gyms, and retirement communities offer classes designed to improve balance, posture, and muscle strength. Jane Hastings, owner of "Mad About Fitness," 2626 E. Louisiana Avenue, Denver, teaches balance workshops at senior centers around town as well as at her own facility. "Physical activity, muscle strength, flexibility, and challenging the nervous system all contribute to improved balance," says Hastings. "Hip and knee replacements, diabetes, heart and blood pressure issues all make older people nervous about falling."

Hastings uses a combination of easy, modified yoga poses such as "The Tree." A beginner would start by standing on one leg while holding onto a chair or putting their

hand on a wall. At the intermediate level, they would stand on one leg without assistance; a more advanced student would be able to stand on one leg while resting the foot of the other leg against the inner thigh of the support leg.

She also uses equipment designed to challenge balance and core muscle strength such as stability balls, small trampoline, wobble boards, inflated cushions and Bosu balls. “It is important that people progress at their own speed and confidence level,” reminds Hastings. “This is about maintaining a quality independent life.”

Rosie Mahoney, 72 and an independent manufacturing representative, was always tripping and falling down until she started working with Hastings. “I’m much stronger—not skinnier—but definitely have more energy and much better balance,” says Mahoney. “After seven years of not being able to ski because of being out of shape and my tendency to fall, I was able to start skiing again last year.” Working with weights and doing Pilates has strengthened the core muscles and improved her balancing skills. “I have not had a fall since starting this program.”

Improving strength—especially core strength—and balance has made Property Inspector, Don Guizzetti’s job a lot easier. “At least once a day I realize I am able to do something physically I could not do before, like stand on and eight-inch wide steel beam two and a half stories above the ground, turn in all directions and take pictures.”

The Holly Creek Retirement Community in Centennial (5500 E. Peakview Avenue) has on-site instructor-led fitness classes six days a week, an important amenity available to residents. “Life Moves” is offered on Monday, Wednesday, and Friday; indoor water aerobics Tuesday and Thursday; and Tai chi on Saturday. Holly Creek also has a fitness room for those seniors who want to weight or cardio train on their own.

Rhonda Wolffis, the Holly Creek Fitness Coordinator, teaches the “Life Moves” classes that are custom-tailored to meet the needs of seniors. “We work on walking patterns, balance, and coordination by using light weights, resistance tubes, and small, soft exercise balls,” says Wolffis. “Core muscle strength, posture, breathing, and stretching are all part of the program.” The class is designed to improve and facilitate everyday moves, like getting in and out of the car, grocery shopping, and getting up and down from a chair. Therefore, a chair and resistance equipment is all that is used. “We play great music and keep the atmosphere fun and upbeat,” Wolffis points out.

Shirley James and Gail Butts have both been taking the classes for about two years. “I have had bad balance for a number of years, especially since breaking my foot last January,” says James. “Because of my balance problems I broke three ribs, and slipped by the pool and hit my head. Since taking this class, I now can catch myself and recover if I feel like I might fall.”

Butts added, “Because of peripheral neuropathy in my feet [which is caused by damage to the body’s peripheral nerves] I can’t do most of the exercises without holding onto something but my posture, breathing, and muscle strength have definitely improved.”

Kent Fretwell, a retired Cardiac Cath Lab Technician from California, began taking the classes a few months ago after being diagnosed with Parkinson's disease. "I was looking for something to slow down the Parkinson's," says Fretwell. "I noticed improved muscle strength, gait, and balance in only a few months of taking classes."

*Other Options

Tai chi is a Chinese martial art that involves balance, strength, and flexibility. According to a recent study from the Journal of the American Geriatric Society, "Tai chi can help reduce the risk of falling among older people." According to the study, those who took the class once a week for four months had one-third fewer falls than those who did not, and the benefits had a positive residual effect for two months after the class ended. Qigong, another Chinese mind and body discipline, is also recommended.

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SIDE BOXES:

Simple balancing exercises that can be done in the home without equipment include:

1. "Tight-rope walk" (or "Walking the Plank")-
Walk heel-to-toe along an imaginary line. Take 10-20 steps forward then walk backward along the same line. Challenge your posture by putting a paper plate on your head.
2. "Balanced Stand"-
Stand on one foot for 30 seconds then switch feet. Try this while brushing your teeth or when standing in the grocery checkout line.
3. "Sit and Stand"-
Get up from a chair and sit back down without using the armrests. Challenge your posture by putting a paper plate on your head.
[SOURCE: the AARP}

****

The National Center for Injury Prevention and Control, Division of Unintentional Injury Prevention suggests the following for preventing falls:

1. Exercise regularly; exercise programs like Tai Chi that increase strength and improve balance are especially good.
2. Ask their doctor or pharmacist to review their medicines, both prescription and over-the counter, to reduce side effects and interactions.
3. Have their eyes checked by an eye doctor at least once a year.
4. Improve the lighting in their home.
5. Reduce hazards in their home that can lead to falls.

****

To keep your balance and prevent falls, the AARP recommends the following to “Fall-Proof” the living environment:

1. Remove the clutter, pick up papers or clothes from the ground; move garbage bins under cabinets.
2. Keep your area well lit.
3. Be aware of your surroundings, know where your furniture is placed and any stairs or change of entry levels.
4. Clean up any spills.
5. Be sure your furniture is stable
6. Use non-slip mats in the bathtub and on shower floors
7. Secure loose area rugs with double-faced tape, tacks, or slip-resistant backing.
8. Make sure you don't have obstacles on the ground or around your walking paths.

*Other class resources:

AARP, 1-866-554-5376, aarp.org

Taoist Tai Chi Society, 1060 Bannock Street, Denver, 303-623-5163

The Tai Chi Project, 303-744-7676, Taichidenver.com

Colorado School of Traditional Chinese Medicine, 303-329-6355, CSTCM.edu

Books:

"How To Prevent Falls," Betty Perkins-Carpenter, PhD, Senior Fitness Productions, 2006, $16.95.

“Strong Women, Strong Bones,” Miriam Nelson, PhD, Perigee, 2006, $14.95.

“Sunrise Tai Chi: Simplified Tai Chi For Health & Longevity,” Rones, Silver, Nelson, YMAA Publication Center, 2007, $16.95.

*Exercise Tools:

“Ball Dynamics,” 1-800-752-2255, BallDynamics.com.

“Perform Better!,” 1-888-556-7464, PerformBetter.com

LINDA J. BUCH –April 16, 2007
HOW TO TRAIN FOR A 14-ER

The hills may be "alive with the sound of music" but if preparation is not taken seriously, the only sounds you hear will be your own moans and whimpers.

Hiking at high altitudes is more than just slipping on some hiking boots, and grabbing a bottle of water while stuffing a granola bar in your pocket. Properly preparing the body for climbing UP as well as DOWN is crucial. Appropriate gear, water, and food are all critical.

TRAINING FOR THE TREK

Mountain hiking is a total body experience, so leave no rock untread in preparing for an adventure that we in Colorado are fortunate to have in enviable proximity. The basic areas for physical training include cardiovascular, strength, and flexibility. But, as in most things, the best way to train for the hike is to actually do some hiking.

REI supervisor, Mark DiMartino, is an avid hiker and recommends four weeks (for well-conditioned/experienced) to eight weeks (for the beginner) of both conditioning exercise and practical hiking experience before tackling a fourteener. "Ascending from 5,000 feet to 14000 feet in one day is dangerous," says DiMartino. "If you are not used to hiking do several weeks of long day hikes at lower altitudes," he recommends, suggesting that many trailheads are accessible along Colorado 93 between Golden and Boulder.

"It is important to adjust to the altitude gradually as well as get a feel for how much water and food you will need. This is also a good time to break in new shoes and try out gear," DiMartino suggests. An experienced hiker may be OK venturing out in early spring but an inexperienced person should wait until mid to late June so that the snow is gone and the weather is better.

Also, there is no shame in turning back if the weather becomes bad or if you physically feel ill. Training is no guarantee of how your body will respond or react at high altitudes.

Training at Low Altitude

On the days when you are not performing your training hikes, working out with weights, stretching or yoga, and additional cardiovascular exercise is advised.

Strength Training

Strength exercise is necessary because the muscles—particularly those of the legs, and core--are used extensively on the trip up. (The joints--knees and hips--get the workout on the trip down.) Circuit training, with particular emphasis on legs, calves, ankles, and core muscles is particularly helpful.

Certified Strength and Conditioning Specialist, Courtenay Schurman co-owner of Body

Results, Inc. (bodyresults.com) in Seattle WA, specializes in training climbers and believes in muscle balance. “Training should include strength training for the opposing muscle groups – and don’t only work the muscles that you can see, as that can lead to muscle imbalances and eventually injury.”

Cardiovascular

Aerobic (“the presence of oxygen ” where there is sufficient supply to metabolize carbohydrate energy sources) and anaerobic (“without oxygen” where exercise is so intense that exhaustion ensues after about two minutes because the body cannot metabolize enough fuel to sustain the activity any longer) cardiovascular training will be necessary. Hiking up hills and mountains is not performed non-stop. There will times where the hike progresses smoothly for 20-30 minutes before a break is necessary, along with periods when more frequent breaks occur--especially as the trails get steeper and the altitude gets higher.

Remember: You will be carrying a pack that could weigh anywhere from 12 to 20 pounds. Whenever possible, add weight to your cardiovascular workouts as an added training component.

“Power Walking,” where you vigorously use your arms and maintain a faster gait with the legs, is most beneficial. Swimming, cycling, and jogging are also recommended.

Suggested equipment: A weighted vest with about four to six pounds in the pockets is a good place to start (walkvest.com).

Flexibility

A good stretching program is important and should be performed daily. Many find yoga and Pilates classes to be beneficial.

Water

Hydration and calories sufficient for the task are crucial. About 100 ounces of water should be carried for the day in either a “CamelBak” water and pack system or as three 30-0unce “Nalgene” bottles. DiMartino reminds us, “Hydration starts at the beginning of the four to eight week training period, not the day of the hike.” He suggests getting into drinking water regularly throughout the day during your training. A small caffeinated drink can also be helpful during the hike in case you experience headaches at high altitude.

Food

You will be gone for an entire day so pack the same number of calories (or more) that you would normally eat in a day. DiMartino suggests taking real food, not just trail mix and energy bars. Hiking a fourteener is not the day to restrict calories! Food and water keep the core warm; calorie deficit suck heat and energy from the extremities.

Shoes

A light, low to mid-top shoe, weighing about 3-1/2 pounds, is recommended. Check out "Lowa," "Vask," "Asolo," and 'REI" brands for comfort and fit.

Trekking Poles

These are always a good idea. They will help you with power and stability up the mountain and with wear and tear on the joints when coming back down. Also, they can be used as tent poles for your poncho if you need to make a tent for rain protection.

WEEKS ONE and TWO

Cardiovascular: Two times per week minimum. Start with 30 minutes and build to 45 minutes this week. Start slow! You will want to save some energy for your training hikes! If you are new to cardiovascular workouts, start adding 15 minute walking breaks to your workday; take the stairs instead of the elevator.

Treadmill: Use if walking outdoors is not possible. Wear a weighted vest or back pack and walk briskly. Every five minutes, add one minute of a three to four-degree elevation.

Strength Training: Weights will be light, allowing for 15 to 20 repetitions to fatigue for one set of each exercise. Perform one set of each exercise without stopping. Allow two full days between strength workouts:

1. Squats
2. Step-ups (15-20 repetitions per leg, stepping up at least 12 inches)
3. Dumbbell Press
4. Lat Pulldowns
5. Biceps curls with dumbbells
6. Triceps Extension
7. Low Back Extension
8. Abdominal Crunches
9. Forearm Curls (Palms up and Palms down)
10. Calf Raises

Practice Hikes: Do one to three hikes a week in the lower front range, hiking for at least three or four hours at altitudes around 8,000 to 9,000 feet.

WEEKS THREE and FOUR

Cardiovascular: Two times per week minimum. Plan for 45 minutes to an hour of weighted walking. This is a good time to practice with your pack. Begin adding interval training this week, mixing so short, intense bursts of speed to your power walk.

Treadmill: With treadmill training you can add hills with the push of a button. Start increasing the inclines by one-two degrees for two minutes out of every five minutes walking.

Strength Training: Add exercises that will be more functional (involving more core muscles and joints in more planes than in weeks one and two) with slightly heavier weights for 12-15 repetitions. Multi-directional leg and core exercises start to dominate the focus. Again, this is a one-set per exercise circuit, but two sets is certainly permissible:

1. Forward Reaching Lunges (12-15 per leg, reaching forward with arms)
2. Step-Ups (Increase height to at least 15 inches)
3. Leg Presses
4. Step-Back "Curtsy" Lunges
5. Assisted Chin-Ups
6. Seated Rows
7. Overhead Dumbbell Press (alternating arms)
8. Assisted Dips
9. Twisting Crunches or Chops with a medicine ball
10. Calf Raises

Practice Hikes: Do one-three hikes a week, in the four to six hour range, in areas like Rocky Mountain National Park or the Mt. Evans area. You are now at 10,000 to 12,000 feet.

WEEKS FIVE and SIX

Cardiovascular: Since your training hikes are getting more difficult, it is time to add more interval training. If walking outdoors, find some stairs to train on (at Red Rock amphitheater, for example). At least once a week, perform 30-minutes of walking up and down the stairs with a 10-pound pack. Use the shoes or boots you will be wearing for the fourteener to be sure there is no problems with fit. The idea is to get your heart rate about 15 to 20 beats per minute above normal for a couple of minutes and then slow down enough to allow it to drop back to normal.

Strength Training: The sets performed during these weeks will start to emphasize slower extension of the muscles (after flexing the muscle, return to the starting position to a count of eight to 10 seconds). Therefore, the weights will remain about the same but the number of repetitions will drop to 10-12 per set.

1. Staggered-Stance Squats
2. Step-Ups (This time pulsing without straightening the knee)
3. Lunge or Stepping Matrix (i.e. multi-directional lunges around a "clock dial," stepping towards all of the "numbers")
4. Incline Dumbbell Press

5. Lateral Raises
6. Assisted Chin-Up
7. Assisted Dips
8. Low-Back Extensions
9. Weighted Abdominal Crunches
10.Calf Raises and Shin "Crunches" (Lift and lower the toes)

Practice Hikes: Time to try a thirteener. Do at least one six to eight hour hike. (13ers.com)

WEEKS SEVEN and EIGHT

Cardiovascular: Continue with interval training but, one time a week, add more weight to your pack (try a total of 12-pounds). This will give you more of the breathless feeling that will occur at higher altitudes and help your body cope with that feeling of exhaustion and recovery.

Strength Training: Strength and endurance all come together in these weeks. See if you can make it around this circuit twice without stopping to rest. Repetitions will be in the eight to 12 range and weights should be easy to control yet allow you to feel fatigued by the end of the set.

1. Alternating Lunges in all directions, this time with more speed. (Called a "matrix" this is not just stepping forward or backward, but diagonally as well.)
2. Step-Ups with a "flamingo" balance on the lifting leg for three seconds again, more of a pulsing rhythm-never locking out the knee joint).
3. Squats
4. Lat Pulldowns
5. Triceps Extension (One dumbbell/two hands behind the head)
6. Shoulder press and Biceps curl combination (with dumbbells)
7. Pushups
8. Abdominal Crunches
9. Calf Raises and Shin "Crunches"

Note: Do not lift weights three or four days before the fourteener; perform only easy cardiovascular three or four days before.

Practice Hikes: Hike up to 12,000 early in the week; at the end of the week, you are ready to do a "fourteener" with some comfort and confidence. "You should allot 10 hours for a fourteener to allow time for rest, altitude adjustment, and even shelter from storms that occur."

REI FREE CLINIC

How to Climb a 14er/High Altitude Hikes
Boulder & Lakewood
Wed 6/13/07, 7:00 PM

Colorado Springs, Ft. Collins, Englewood, Denver Flagship

Thu 6/14/07, 7:00 PM

Join REI as we give you the basic essentials and know-how to tackle the Colorado giants. You'll learn about food, equipment, training, weather and safety considerations. For additional information on the Colorado 14ers, visit: www.14ers.org

EVENT

Fiesta for the Peaks for the Colorado Fourteeners Initiative *American Mountaineering Center, 710 10th St., Golden, CO Fri 5/4/07, 6:00 PM.* The evening begins with a silent auction of mountain photography and outdoor gear, music, good food, and drinks until 7:30 PM. At 8:00 PM, the feature presentation is by Chris Davenport, who skied Colorado's 54 Fourteeners in less than one year. Chris will be introduced by ski mountaineering legend, Lou Dawson. General Admission tickets: $30, available at REI Boulder and Denver Flagship beginning April 3, until 4:00 PM on May 4. Tickets are $45 at the door. For premium admission with reserved seats ($54), call (303) 996-2757. For additional information, visit www.14ers.org.

LINDA J. BUCH –October 15, 2007

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The fact is, for the untrained, under trained, or the I-only-trained-for-skiing-with-a-six-week-class athlete the risk for injury when skiing increases, especially with pulled muscles, muscle cramps, joint injuries, heart attacks, and other cardiac problems.

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Core strength is crucial to skiing because the lower back, gluteus, and abdominal muscles are all vital to the control needed with modern equipment. "The ability of the back to maintain position as your spine is twisted in different directions against the hips and legs is paramount to core strength," says Wolkodoff.

The need for balance and agility is a given for all skiers, especially if you have ever lost yours when another skier crosses your path unexpectedly. This is where the core training really pays off, along with work on something called "proprioception," a scientific term for knowing where you are in space and time. When zooming down a mountain, moving in many directions at once, improving your own awareness and ability to respond quickly can mean the difference between enjoyment and injury.

Cardiovascular endurance is very important, especially at higher altitudes, because heart and lung conditioning means better endurance and mental alertness, both of which are essential for avoiding injury. For skiers, this means training for the long runs as well as for the short, intense moments. Again, with the quicker rides back up to the top of the mountain reduce recovery time. Training to fight that fatigue will make for a safer experience as well as a better level of performance. Cardiovascular conditioning, both aerobic ("in the presence of oxygen" where muscles are getting plenty of fuel during a period of non-stop activity) and anaerobic ("without oxygen" which usually occurs during short, explosive bouts of activity) is important throughout the entire season, not just in the preseason.

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LINDA J. BUCH –August 13, 2007
BIONIC BOOMERS

Baby Boomers got 'game.' They've also got sore shoulders, injured knees, painful hips, aching feet, twitchy elbows, stiff fingers, and gnarly backs, often from trying to stay IN the game--sometimes beyond when they should have explored other options for physical activity.

Nicholas DiNubile, M.D., an orthopaedic surgeon specializing in sports medicine in private practice in Havertown, Pennsylvania, is an author, Clinical Assistant Professor of the Department of Orthopaedic Surgery at the Hospital of the University of Pennsylvania, and the spokesperson for the American Academy of Orthopaedic Surgeons (AAOS). But he may be best known for coining the term 'Boomeritis.' "I began to use the word "Boomeritis" to describe the tendonitis, bursitis, arthritis, and most importantly, "Fix-Me-Itis" that I was seeing on a regular basis--and the term stuck," says Dr. DiNubile. "Science has done a great job extending our life span. But," Dr. DiNubile warns, "We have not extended the warranty on our frame or musculoskeletal system and things breakdown."

Boomeritis is more about the vulnerabilities than the injuries," explains Dr. DiNubile. "Boomers are the first generation that are trying to stay active, in droves, on aging frames. We can see graying hair but we can't see what is under the radar—the thinning cartilage and weakening connective tissues. They all go through predictable wear and degeneration with aging."

Colorado is blessed with the potential for year-round activity. So for those Colorado Boomers who love to be active, it is difficult to stop if a chronic ache or pain crops up in one of those aging joints. Upper extremity orthopaedic surgeon, Jan Leo, M.D, notes that, "Years of pounding sports like running, basketball, aggressive skiing, and soccer break down cartilage, making it thinner and thinner until you are bone-on-bone; then arthritis sets in as a result."

Rob Phillipe, 57, a commercial real estate developer living in Frisco, is one of those people whose intense activity level over the decades put to test a surgery that was performed on his femur when he was six years old. Over time his high activity level precipitated pain and arthritis in his hip, pain he suppressed with painkillers. Finally, at age 54, when an hour of skiing or bicycling was too painful--and when he realized that his pain medication was increasing as his activity level was decreasing--he had his hip replaced.

"Now I am a walking, skiing, and biking miracle," exclaimed Phillipe. "This was a really big lifestyle changing surgery for me." While rehabilitation was largely on his own via a series of strengthening exercises from a physical therapist, he had no problem with being in crutches for a month of non-weight bearing, followed by another month of crutches with gradual weight bearing. "Lack of pain was my rehab. Suddenly I can do what I want again!"

Orthopaedic Surgeon Ted Parks, M.D. who is fellowship trained in Sports Medicine with a specialty interest in joint replacement, understands that Baby Boomers grew up during the fitness craze of the 1960's and 1970's, acquiring an athletic mindset in the process. "Now that these same people are in their 50's and 60's, there is a mismatch between what the mind wants to do and what the body can do," Dr. Parks explains. "Unfortunately, our bodies cannot always keep pace with our ambitions as we get older. As athletes age, they find it harder and harder for their bodies to achieve the goals they set with their minds," explains Dr. Parks.

But what if you just want to stay active no matter what the cost? Sometimes, patients just have to stick to those proverbial "guns" and live life on their own terms, regardless of the extra work and dedication necessary to make it happen.

Bar Chadwick, 56, Project Manager for the City of Denver who, after a knee injury in 1999, was one of those Boomers who was not encouraged to maintain her active lifestyle. She was asked by her doctor, "Why don't you just stop?" Chadwick, a triple-black diamond skier, competitive USTA tennis player and avid golfer, did not appreciate the advice. "I told them I did not want to stop. I wanted it fixed."

After eight weeks of rehab from the ACL surgery, she was back at full activity. A second surgery was required in June 2006; and, even though once again encouraged to slow down her activity level, chose to push herself through a painful 11 months of rehabilitation (done largely on her own after two weeks with a professional). "I had to straighten the doctor out on what I wanted to do after surgery," emphasizes Chadwick. After the 11 months of personal focus and perseverance her knee is stronger but she still feels the pain. "Arthritis in that knee is a given but as long as I keep exercising consistently it will stay strong."

Ft. Collins helicopter pilot, Doug Hahn, age 52, was told that at age 32 he would need a hip replacement because of all his injuries and falls from rock climbing and long distance running. "I put it off ten years because I thought I was indestructible," says Hahn. I"I had the first hip replaced in 1998 and the second hip in 2000; Dr. Ken Kindffater gave me my life back." Whereas before surgery he was barely able to walk, Hahn has resumed an active life of kayaking, skiing, and climbing.

Advancements and Improvements

"There have been great advances in the technology of joint replacement, and we are able to push the limits farther than we have ever been able to before," says Dr. DiNubile, "but these devices still have serious limitations when it comes to high impact activities such as running regularly on hard surfaces. "

Dr. Parks also sounds a cautionary note to people who expect that the replacement knees and hips will be just as good as the ones Mother Nature gave us. "People can regain activities," says Dr. Parks, "but we are still at science, not fiction. The current technology

is high tech enough to allow patients to still be active; it just may be better to cycle or swim instead of running marathons."

Former Public Defender, and now civil medical malpractice lawyer, Hollynd Hoskins, 42, is one of those who sits on the cusp of official "Boomerness" (she missed it by a year) but has experienced the technological changes and advancements in surgical technique.

"I first tore my knee out playing a soccer tournament," said Hoskins. "Surgery in 1982 meant the big zippers (before arthroscopic techniques, most of the leg had to be cut open), five-day hospitalization and morphine." Nine months after her first surgery, she tore her knee out for the second time and became Colorado's first recipient of a cadaver anterior cruciate ligament (ACL) graft. Hoskins tore the knee yet again playing rugby in 1989; the knee was reconstructed a third time, but this time with a patella tendon graft for the ACL.

"So far, so good," says Hoskins hopefully. So good that she continued to play competitive soccer and rugby, and even played women's professional football with the Colorado Valkyaries as a wide receiver. "It is both a blessing and a curse to have a high pain tolerance," quips Hoskins.

But the compensating load put on the "good" knee meant that the cartilage in it was now completely worn down. After a cartilage transplant on that knee and four months in crutches due to the non-weight bearing requirement for healing it, she decided to change to less ballistic sports, settling on bicycling and weight lifting. "I have done four "Ride the Rockies" and this year, did the "Bicycle Tour Colorado. I am trying to hold off on knee replacement with joint lubrication injections and strengthening exercises."

Susan Jensen, 54, Executive Director of Downtown Aurora Visual Arts, had to deal with osteomyelitis (bone infection) at age 34, which meant she had one of the original hip replacements with a leader in the field, Charles Engh, MD, who pioneered the development of the porous-coated cementless implant for hips, an innovation that changed the nature of joint replacement surgery.

Her hip replacement allowed her to resume her active lifestyle of cross-country skiing, tennis, dancing, and aerobics classes. Then the replacement wore out. " I had to have two revisions on the original replacement parts. After the most recent revision, where I was in a body brace for six-weeks, I decided to be more protective of the hip." Jenson's activity level is centered on non-impact activities like walking and swimming. "I am most successful when I do not test the boundaries."

The Rehab Experience

Dr. Parks emphasizes the need to either get into or maintain good physical condition, especially before a surgery. "Rehabilitation takes longer the more deconditioned you

are," he says. "Better shape = better response to treatment = a faster rehabilitation = a better and more complete recovery."

Tobi Watson, age 60 and a retired tax accountant, just had knee replacement surgery a year ago. She had never done rehabilitation before but commented that it was almost a full time job. "I really, really worked hard getting myself in shape before the surgery as well as after the replacement," said Watson. I worked out twice a week at the gym with a trainer and worked three times a week with a physical therapist. Now a year after the replacement, I have continued to do something every day, adding twice weekly Pilates to the twice weekly training; and bike riding (or other cardiovascular activity) the other days."

Watson reminds potential replacement candidates that rehabilitation is down to the individual and the amount of work you are willing to do. "The more work done before, the better the result; plus, it gets you in the habit because keeping up with the exercising afterwards keeps the knee working properly."

Prevention… and Preparation

Andrew Robinson, MD, General Internist for Kaiser Permanente, notes that complaints about sore joints account for 10-15 percent of all visits to primary care physicians. "Many of the problems can be initially diagnosed and treated by general internists, often with the help of physical therapists. Treatment with so called conservative measures--such as rest, ice (or in some cases, heat), compression, intermittent elevation, gentle stretching followed by more focused rehabilitative exercises, massage, as well as pain relieving or anti-inflammatory medications--often takes care of problems. Patients can usually return to normal activities anywhere from 1-12 weeks from the onset," says Dr. Robinson.

Dr. Leo reminds us that age can affect the blood supply to the connective tissue, tendons and ligaments, and Boomers need to realize this and train accordingly. "The older we get the more we have to pay attention to getting blood supply to the joints to keep them supple." She suggests lifting weights to strengthen the muscles and the bones. "When you use muscle, the muscle will demand blood supply; this also helps tendons and ligaments get blood supply. Anything that will increase the blood flow without pounding the cartilage is good." She recommends walking, snowshoeing, bicycling and gliding sports (like rollerblading) instead of running and skiing.

All of the physicians interviewed stressed consistent activity rather than "weekend warrioring" for optimal joint health.

So, baby Boomers, "Keep on Truckin'…" but remind your body that, even though your brain may think that you are 24 years old, your body is at least twice that age. Keep active but respect the pressure of time on those tissues.

SIDE BOX:

In 2003, according to statistics from the American Association for Orthopaedic Surgeons, baby Boomers (those born between 1946 and 1964) had:
- 20 percent of the 220,000 reported hip replacements
-15 percent of the knee replacements
In General:
-478,00 knee replacements were performed in 2004, compared to 209,000 just ten years earlier;
-In the same ten-year period, shoulder replacements tripled and hip replacements have almost doubled
-Joint transplant surgery has grown to a $10 billion a year industry in the US
-Demand for knee replacements alone is projected to increase more than 600 percent in 25 years.
-Joint ailments and complaints adds up to 15% of our health care dollar (2.4% of the GNP of our nation).

RESOURCES:

"FrameWork- Your 7 Step Program for Healthy Muscles, Bones and Joints," Nicholas DiNubile, M.D., (Rodale Press, 2005, $18.95)
www.DrNick.com

American Academy of Orthopaedic Surgeons
6300 North River Road
Rosemont, IL 60018-4262
1-847-823-7186
www.aaos.ORG

LINDA J. BUCH –June 11, 2007
Tai Chi and Qigong

Travelogs of China often show dozens of people together in a public park performing beautifully choreographed rhythmic movements, one posture flowing gracefully into the next. The people are practicing tai chi and qigong (pronounced "chee goong"), both considered part of ancient Chinese medical arts. The practice of tai chi and qigong have made their ways quietly, as are their nature, into the lives of millions of Americans.

According to the latest Sporting Goods Manufacturers Association fitness participation report, from2000-2006, American participation in yoga/tai chi increased 136 percent; from 2005 to 2006 participation increased by 19 percent.

Tai chi is a martial art; qigong is considered a healing art. Both involve beautiful, slow, methodical movements that are designed to improve physical wellbeing, balance, muscle strength, stress reduction and inner peacefulness. In China they are blended together in their practice and not separated as often done in this country.

Tai chi and qigong are key components of Chinese medicine where the mind and body work together to channel and focus the energy in the body for healing purposes. Chinese medical traditions are involved with both tai chi and qigong, teaching that our life force energy (qi) must flow through us smoothly and without obstruction in order to have good health.

"Qi" (or chi) means air, breath or essence; "Gong" means discipline and achievement; together they mean vital life force energy. The different breathing patterns, postures and movements are employed primarily for maintaining and improving ones own health. Qigong is the connection to nature, and is used primarily to heal the body from disease.

Tai chi means "supreme ultimate fist" and is a soft-style martial art sometime described as meditation in motion. "This is more than calisthenics with a Chinese name," quips Jacqui Shumway who has been teaching the Tai Chi Project at Botanic Gardens for eight years. "Tai chi and qigong exercises often work together to create a complete flow of the system," she explains. "The same exercises that teach us how to fight disease also teach us how to fight an opponent."

While it is considered a martial art, tai chi is more about using a flowing, steady rhythm of smooth and relaxed movements as opposed to the kicks, spins, and punches usually associated with this genre. This means that all individuals--regardless of age, fitness level, disability or health challenge--can participate, feel enjoyment and experience some success.

Shumway, who has a master's degree in kinesiology and physical education from the University of Northern Colorado, has been a specialist in preventive and rehabilitative exercise through physical education for over 20 years. Through their many tai chi classes all over the Denver Metro area, her husband Joseph Brady (who is a Traditional Chinese

Medicine Doctor) and she promote the combining of both eastern and western approaches to good health.

One of their most successful programs for all ages is the "Sunrise Tai Chi and Fitness Walk" at the Denver Botanic Gardens on Tuesday mornings throughout summer. The program was featured in 2006 as a model program for the Oxford Roundtable in England. Offered free and open to the public, the program has typically 250-300 people doing Tai Chi together at the Gardens.

John Plessinger, age 60, a small business owner and artist, began tai chi with them in January, taking classes three times a week. “I have never been exposed to anything like this before. My balance is so much better it is not even comparable,” says Plessinger. “I am a golfer and tai chi has really improved my golf swing. Because the forms are about transferring weight from one foot to another, my concentration and feel for the club has vastly improved.”

Carol Martin, 61-year old homemaker, has been enjoying the classes at the Botanic Gardens for five years in addition to other tai chi classes during the week. “The Garden is such a pretty place; a good place to go and meet new people.” She says she has kept up with tai chi to maintain her already good health. “I am in even better health now than ever,” says Martin. “My doctor says so, too.”

Edith Kern, who started with tai chi to help heal her back, has been taking classes from Joe and Jacqui for 12 years. “They are excellent teachers. Very patient and answer questions,” says Kern.

Tom Trujillo, 54, a teacher and artist, had his first tai chi experience at the Denver Botanic Gardens four years ago. “There is nothing like getting a hundred or more people together for tai chi in one of the most gorgeous places in Denver,” says Trujillo, who used to practice taekwondo in the military and college. “I suffered a very serious illness a few years ago but after a few tai chi classes my recovery seemed to accelerate. I feel I am better at dealing with the world and my recovery. My body, brain and attitude feel more centered.”

Qigong also heads to the outdoors in the summer. Marty Chapman, PPC, certified Qigong instructor and Corporate Wellness Coach, practices outdoors on Wednesdays at 6:00 pm, weather permitting, in Washington Park, behind the Hamilton wing of the Denver Art Museum or the Highline Canal (call for location). “People practicing qigong may vary in lifestyle, age, gender and occupation,” says Chapman, “but commonly they are all looking for a more effective way to heal the body, add emotional balance and feel a moving meditation for internal awareness.

Anita Beilhart, 47, started qigong only two weeks ago at the recommendation of her acupuncturist. “I have increased energy, better relaxation, improved muscle tone and strength, and noticeable improvement in my balance and coordination,” raves Beilhart.

Douglas Brady, 55, a Psychotherapist, has always been an avid athlete and yoga practitioner. Last year he had open heart surgery and was advised to add Qigong to his daily routine. As Brady remarked while hiking last week, “as part of my rehabilitation, qigong has made the recovery much easier than I expected. My morning practice gives me a special gratitude for living and I appreciate the gift qigong offers the healing process.”

While acupuncturists study qigong as part of their curriculum training, hospitals with an eye to improving health care options for patients, are opening up to the possibilities offered by this five thousand year old healing technique. Holly Ice, RD, LD, a Senior Clinical Dietitian-Stress Reduction Instructor for the Seton Family of Hospitals in Austin, Texas, has been teaching qigong classes for pulmonary, cancer, and cardiac rehabilitation. With the pulmonary patients she has noted a decrease in depression, improved blood pressure, and less oxygen use. With the cancer patients, less fatigue, fewer medications, less dry mouth and an increase in hope. The 8 weekly classes have been very successful for the hospital's standard rehabilitation outpatient program.

Side Boxes:

The Denver Botanic Gardens (1005 York Street) in Denver offer free morning AARP Fitness Walks (7-9 am) and tai chi classes (7:15-8:15 am) on Tuesdays June through August. No class will be held on July 3rd because of the holiday. 720-865-3500, botanicgardens.org.

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The Tai Chi Project
303-744-7676
Taichidenver.com

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Marty Chapman, Senior Qigong Instructor
The Life Council
thelifecouncil.com
303-691-0093

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The Mayo Clinic, The National Center on Physical Activity and Disability (ncpad@uic.edu), AARP (AARP.org), and Arthritis Foundation (arthritis.org) have been recommending the gentle martial art of tai chi because of the following positive effects on health:

-Promotion of relaxation and reduction of stress.
-Improved lung capacity.
-Improved function of the digestive system.
-Enhancement of cardiovascular and respiratory function.
-Improved balance and posture.
-Prevention of falls.
-Increased flexibility and range of motion of joints.
-Reduction of pain.
-Reduced blood pressure.
-Improved coordination.
-Increased muscle strength.
-Increased physical confidence.
-Improved sleep.

LINDA J. BUCH –July 9, 2007

Disc Golf and other Inexpensive Park Activities

*Disc Golf

"Golf is a good walk spoiled," said the irascible Mark Twain. Golf is also expensive and, with its continuing popularity, becoming a crowded venue. On many golf courses electric carts are often required in order to speed the flow of people around the links. So much for that "walk." Disc golf, on the other hand, is a bit more physical (no carts--walking from hole to hole while carrying equipment is necessary) and a lot less expensive.

Disc golf courses are springing up all over the world and in 1976, even developed into a professional sport. Courses have become increasingly popular with municipal parks and recreation centers because they are cheaper to install and maintain than tennis courts, and are more inviting to larger segments of the population. What's not to love? You get to walk around a beautiful park, practice and perfect your disc-tossing abilities, and, unless you are signed up for a competition or are using a private course, you can enjoy it for free.

Disc golf provides a gentle level of upper and lower body conditioning and encourages mental concentration. People whose fitness levels are either limited or at nascent stages of improvement can still get into the game and find fun and enjoyment with little risk of physical injury. For the millions who have enjoyed tossing a Frisbee around for the past 50 years, disc golf is a logical progression.

The history of this sport goes back decades. In 1964, the late "Steady" Ed Headrick invented a flying disc for the Wham-O Toy Company we all know as the "Frisbee." Since Wham-O owns the "Frisbee" name, and since Headrick wanted this sport to be a separate entity, in 1975 he invented the "Disc Pole Hole," a catching devise, consisting of 10 chains hanging in a parabolic shape over an upward opening basket. Disc golf was born.

Today there are almost 1000 Disc Golf Courses in the United States with around 3,000,000 regular players and over 30,000 professional members of the Professional Disc Golf Association (PDGA). In Colorado alone, there are over 70 courses set up in parks, at schools, and in other open spaces designated by municipalities.

The recreational Frisbee is not used in competitive disc golf, where the discs are smaller and generally of an uncomfortable design for catching. Just like with golf clubs, there are multitudes of differently designed discs with specially beveled edges that serve different flight functions.

The "driver" (thinner and more aerodynamically designed), the "mid-range" (thicker and more accurate in short distances), and the "putter" (which flies slower and straighter) are all regulated by size and weight through the PDGA. In addition to these general standards, there are even specific discs for flying straight, to the left and to the right.

Discs can cost anywhere from $7.00 to $15.00 each.

“I usually tell new players to choose a weight that they feel comfortable with,” suggests David Kendrick, President of the Colorado Disc Sports Association (CDSA). “But youngsters and people with less snap tend to need lighter discs. ‘Snap’ is a term we use for how the disc leaves the hand with a sound or a lot of spin.”

Kathy Hardyman, whose motto is, “You wish you threw like a girl,” and who is the current Vice President of the CDSA, went from casual play for exercise in the very late 90’s to playing her first tournament at the end of 2001, to winning Masters at the Amateur World Championships in 2003, to starting a disc golf business that same year. “Since then, I’ve also won Women’s Nationals in Masters in 2005 and Pro Worlds in Grandmaster in 2006; my husband turned pro last year,” says Hardyman. “Obviously, we think this sport is a lot of fun.”

John Bird, who has been playing disc sports since 1972, is the current PDGA State Coordinator and President of the Mile High Disc Golf Club. The club has over 230 active members throughout the Denver metro area. The demographics of disc golf is changing and expanding into young families and the baby boomers. “I would like to get enough sponsorship to hold a “Baby Boomers Classic” disc golf event with players coming into Denver from all over the country,” says Bird. “This event would bring in many legends of the sport and would be a fun event to watch.” John also teaches clinics and private lessons for players of all skill levels.

*Boating and Biking

If being on the water in our parks is more appealing than walking a course, you can rent a paddleboat, canoe or kayak. Denver’s City Park, Washington Park, and most of the reservoirs (Aurora and Chatfield, for example) and state parks offer some sort of boat rental other than the motorized variety. And, they are priced so that families can enjoy an outing without mortgaging the house.

In Denver’s Washington Park you can even rent different sorts of bicycles so that as many as two to four people can cycle around the park together. Wheel Fun Rentals is located in the famous "Boat House" on Smith Lake on the north side of the park.

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SIDE BOXES

From the Disc Golf Association (discgolfassoc.com):

Disc Golf Rules for Recreational Play
General

Disc Golf is played like ball golf using a flying disc. One point is counted each time the disc is thrown and when a penalty is incurred. The object is to acquire the lowest score, (without cheating).

Tee Throws

Tee throws must be completed within or behind the designated tee area. Do not throw until the players in front of you are out of range.

Lie

The spot where the previous throw has landed, mark with a mini disc or turn over the thrown disc, directly towards the hole or dogleg.

Throwing Order

After teeing off, the player whose disc is farthest from the hole always throws first. The player with the least amount of throws on the previous hole is the first to tee off on the next hole.

Fairway Throws

Fairway throws must be made with the foot closest to the hole on the lie. The other foot may be no closer to the hole than the lie. A run-up and normal follow-through, after release, is allowed.

Dog Leg

A dogleg is one or more designated trees or poles in the fairway that must be passed as indicated by arrows. Until the dogleg is passed the closest foot to the dogleg must be on the lie when the disc is released.

Completion of Hole

A disc that comes to rest in the Disc Pole Hole® basket or chains constituted successful completion of that hole.

Un-Playable Lie

Any disc that comes to rest above the ground is considered an un-playable lie. The disc must be thrown from the lie on the ground, directly underneath the un-playable lie. Relocated to avoid damage to the vegetation.

Out of Bounds

If O.B. is visible between the disc and O.B. line. A throw that lands out of bounds, must be played from a point 3 feet in bounds from where the disc went out of bounds, permanent water hazards and public roads are always out of bounds.

Penalties

Recreational players will not be penalized for rule infractions. Other players will keep you honest.

Course Courtesy

Please pick up trash and help new players play by the rules. You are the one that makes it work. By your example, Disc Golf will change your life and theirs too. Remember the most important rule: The one who had the most fun wins! Tee off & fly freely.

Support Organizations:

*Colorado Disc Sports Association (CDSA)
Coloradodisc.com

*Disc Golf Association (DGA)
16 Maher Road Watsonville, CA 95076
831-722-6037, discgolfassoc.com

*Professional Disc Golf Association (PDGA)
Wildwood Park, 3841 Dogwood Lane, Appling, GA 30802
706-261-6342, PDGA.org and PDGA.com

*Disc Life (Online Disc Golf magazine)
1505 W. W. Maple, #3 Walled Lake, Michigan 48390, USA
DiscLife.com

*Mile High Disc Golf
Milehightdiscgolf.org

*Wheel Fun Rentals
820 South Humboldt Street
Denver CO 80209
(720) 254-6612
WheelFunDenver.com

Park Information:

*Colorado State Parks:
1313 Sherman Street, Suite 618 Denver, CO 80203, (303) 866-3437, parks.state.co.us

*Colorado.rockiesguide.com

LINDA J. BUCH –January 8, 2007
ASK THE TRAINER

Since April 2001 I have had the opportunity to write a "Q & A" fitness and health column to help people find the truth and (hopefully) a clearer direction in their quest to become fitter and healthier. The most common questions are in the areas of weight loss, high blood pressure, high cholesterol, and bone loss.

Since, as the Greek philosopher, Epictetus wrote, "Only the educated are free," the following are compilations gleaned from these columns, along with some new information. Education on these subjects can both inspire a change of habit, if it is necessary, and encourage steps toward prevention--because all of these issues are part of our lives in some way or another.

Q: "How do I lose fat along with weight?"

While "I need to lose weight" is the common phraseology, FAT loss is the real key to better health. But is it better to change the diet or to simply ramp up the exercise? Or, does the key lie in doing some of each?

In a study of 52 obese men published in the Annals of Internal Medicine, (July 18, 2000; 133, 2, 92-103), "After three months, both dieters and exercisers lost the same amount of weight - about 16.5 lbs, or eight percent of their body weight. Exercisers, however, lost more abdominal fat (4.2 lbs) than dieters (3.3 lbs). Exercisers also did not lose muscle mass the way dieters did, and got the added benefit of improved cardiovascular fitness."

While it is true that cutting back on the number of calories consumed promotes faster weight lost than does simple increases in exercise, those who were successful in keeping it off over the LONG TERM engaged in a program of both calorie reduction and increased activity. This is because in the process of regularly exercising we tend to build muscle, which is more metabolically active than fat (each pound of lean body mass—including skeletal muscle—burns anywhere from 10 to 15 calories per day at rest).

It all boils down to something called The Law of Thermodynamics: "Energy in minus energy out is equal to energy stored." Cutting back on the energy **in (**calories) while ramping up the energy **out** (expenditure of calories) will lead to reduced fat stores. Or, as popular radio personality, Ed Schultz, puts it, " Shut down the intake manifold and rev up the canoe."

The best way to begin is to employ the services of a registered dietitian who can both calculate your metabolism and guide you towards a calorically reasonable diet. Weight Watchers is also a good program. As for exercise, it is best to pick activities that you like and WILL DO. It can be a simple as taking a 20-30 minute walk every day or as complex as training for a marathon. Hiring a fitness trainer, even for just a few sessions, is also very helpful.

Resources

Internet:

Weight Watchers:
www.weightwatchers.com

Book:

You: On A Diet: The Owner's Manual for Waist Management,
Mehmet C. Oz, Michael F. Roizen (Editor), Free Press (2006), $25.00

Q: "I have high blood pressure and high cholesterol. Can exercise help?"

Anyone who has been to the doctor for a physical has experienced the joy of having his or her arm squeezed by the anaconda-like blood pressure machine, the sphygmomanometer. Two numbers make up a reading: the top number (the systolic pressure) indicates how much pressure is exerted against the walls of the arteries when the heart beats; the lower number (diastolic pressure) is the pressure against the arteries when the heart is at rest.

High blood pressure has been called "the silent killer" because the ill effects of having it are often not apparent until it is SO high that you feel dizzy, have blurred vision, and headaches or have a stroke or heart attack.

According the National Institutes of Health, about 29 percent of adults (58 million Americans) have high blood pressure (which is now any reading over 120/80). "Controlling blood pressure lowers the risk of stroke by 35 to 40 percent and the risk of heart attack by 20 to 25 percent," says Aram Chobanian, a hypertension expert and acting president of Boston University. In his interview with Bonnie Liebman (NUTRITION ACTION HEALTH LETTER (April 2004, Vol. 31, # 3), he also pointed out that lowering blood pressure reduced the risk of congestive heart failure, kidney disease, and dementia.

Fortunately, lifestyle changes can dramatically improve blood pressure. The National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure recommends the following:

1. LOSE EXCESS WEIGHT. Your systolic pressure drops about one point for every two pounds shed.
2. FOLLOW A DASH DIET. Dietary Approaches to Stop Hypertension means eating a lower fat diet rich in vegetables, fruits, and low-fat dairy foods. This can lower your pressure 8 to 14 points.
3. EXERCISE DAILY. 30 minutes a day of brisk aerobic activity can lower systolic pressure 4 to 9 points.

4. LIMIT SODIUM. By eating no more than 2,400 mg a day (with a goal of only 1,500mg/day) systolic pressure can drop 2 to 8 points.
5. LIMIT ALCOHOL. If you drink, have no more than 2 drinks a day for men, 1 for women. [1 drink = 12 oz beer, 5 oz. wine, or 1.5 oz 80-proof whiskey]. This can lower systolic pressure by 2 to 4 points.

It is never advisable to self-treat hypertension, so other than the lifestyle changes listed above, do maintain medical oversight. Exercise is no exception because it must be employed gradually and gently, increasing in duration and intensity over time.

High cholesterol can be from lifestyle, genetics, or a combination of the two. A lot of numbers are involved with the various parts that make up cholesterol: high-density lipoprotein or HDL (the good), low-density lipoprotein or LDL (the bad), and triglycerides (the ugly). Cholesterol is measured in milligrams per deciliter (mg/dl). The lower the total the better, with less than 200-239 mg/dl being desirable). LDL should be less than 129 mg/dl and HDL should be above 60 mg/dl. Triglycerides should be less than 150 mg/dl.

Weight loss is a key component to improved cholesterol as is food choices in general. Getting into an exercise program and reducing saturated, trans and high cholesterol foods from the diet is essential.
Exercise at a moderate intensity for at least 30 minutes most days of the week. Take a brisk walk on your lunch break or take the stairs instead of the elevator. Little things like this really do add up!

Eat more lean meat and fish, avoid fried foods, switch to skimmed and fat-free dairy items, and bump up the high-fiber foods like fruit, vegetables and grains.

RESOURCES

Books:
THE DASH DIET FOR HYPERTENSION: Lower Your Blood Pressure in 14 Days-Without Drugs, Thomas Moore, M.D. et al (Pocket Books, 2001, $25.00)

Newsletter:

"Nutrition Action Healthletter" from the Center for Science in the Public Interest, (202) 332-9110, www.CSPInet.org

Q: "I was told I am losing bone density-what can I do?"

According to Miriam E. Nelson, Ph.D., School of Nutrition Science and Policy at Tufts University and author of Strong Women, Strong Bones (Perigee), the odds of women in America getting osteoporosis are one-in-three. Since you cannot feel it happening, most people afflicted with the disease don't know they have it until they fall and fracture a

bone. 69% of the fractures happen in the hip, causing the death of one-in-five within a year. Most fall victims also have to forsake their independence for nursing homes or other forms of assisted living.

In order for the bones to remain strong and healthy, they must be stressed. (Unfortunately, the type of stress I am referring to is weight-bearing exercise, not project deadlines and traffic jams.) Bones love walking, jogging, dancing, working out on weightlifting equipment and lifting free weights.

Most of these activities can be done in or from the home and do not involve the investment of much money. For walking, be sure to purchase good shoes. You may also want to increase the energy output of your walk by scattering small weights (like fishing sinkers) in your pockets (inexpensive) or purchasing a specially designed weighted vest (more expensive, about $60-100.00).

When weightlifting, learn proper form and start with easy weights which allow you two sets of 12-15 repetitions before tiring. This will give your connective tissue (especially around your joints) a chance to adapt to your new activity. 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 two sets of 8 repetitions is all you can do (and still maintain proper form). If you already have osteoporosis, increase your weights slowly. Also, cans of soup and bags of beans, while convenient and can be used in a pinch, are not really designed for the task. Dumbbells are inexpensive and are often available very cheaply at garage sales, flea markets, Target, and so forth.

NEW YORK TIMES columnist Jane Brody reported, "University of Wisconsin researchers showed that women in their 80's who worked out by holding onto the back of a chair and stomping their feet were able to increase bone mass in their hips and thighs." Another good thing to work on while standing behind the chair is BALANCE. Try standing on one foot then the other, each for a count of ten. Falls can be deadly. Improving balance can save your life.

High protein diets do not bode well for bones. Neither do diets high in "garbage-ohydrates" like processed foods (which are high in sugar, salt, hydrogenated fats, and white flour) but low in quality carbohydrates like fruits, vegetables, whole grains and beans. In general, most people should go with foods high in vitamin C, dark green vegetables, low-fat dairy products, oily fish, and nuts.

If you drink alcohol, limit drinks to one a day for women, two for men. And, if you smoke, QUIT.

RESOURCE:

Strong Women, Strong Bones, Miriam E. Nelson, Ph.D., Perigee, 2000, $13.95.

Q: "No matter what I do my belly still protrudes. How can I get flatter abdominals?"

According to the National Institutes of Health, National Heart Lung, and Blood Institute, "Obesity substantially increases an individual's risk of suffering from chronic diseases such as hypertension, coronary artery disease, and diabetes. Those with excess fat in the abdominal area are at increased health risk." It behooves us, therefore, to try to deal with this problem seriously.

Sometimes it seems that no matter how hard we work and diet, pockets of fat seem remain in certain spots just to drive us *crazy*. The truly maddening part of all this is that we seem to be designed this way! Fat cells contain fatty acids, which got into the cell in the first place from eating. Eat too many calories, the fat cells fill up; cut back on the calories and bump up the exercise, the fat cells empty out.

On the surface of each fat cell is either a high distribution of alpha or beta-receptors. The alpha-receptors slow down fat utilization; beta-receptors speed it up. These receptors are genetically determined, usually by sex. Surprise, surprise. Women tend to have more alpha-receptors on the lower body, back and legs, men on the midsection and chest area. According to an article printed in the *Journal of Applied Physiology* (January, 2000), the distribution of alpha and beta-receptors on each fat cell explains why certain parts of your body lose fat faster than others. Beta-receptors allow fat to move out more easily than alpha-receptors.

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

It is easy to be persuaded to go the herbal supplement route. Until the FDA banned it (some people taking these products had serious side effects including hemorrhage, hypertension, cardiac arrest and death), ephedra was the most common ingredient in the so-called "metabolism boosters" on the market. As for other supplements (carnatine, chromium picolinate, DHEA, pyruvate, amino acid/protein supplements, yohimbe, etc.), do appropriate due diligence before buying into the "miracle" of money disappearing from your wallet in order to "magically" lose the tummy fat.

In her book, *Fight Fat After Forty*, Pamela Peeke, MD, recommends weight lifting as a way to pummel the "pooch." This suggestion is supported by subsequent studies at the University of Alabama. Doing cardiovascular exercise and crunches is good but nothing builds and maintains muscle mass like good old strength training. There is no such thing as spot reducing so no amount of crunches in any of their many extrapolations or incarnations will ever get rid of belly fat. Increasing total muscle mass, maintaining a

sensible caloric intake, and performing 20-30 minutes of cardiovascular exercising a minimum of four days a week seems to be the best course.

RESOURCE:

Fight Fat After Forty, Pamela Peeke, M.D., Penguin Group, 2000, $14.00

LINDA J. BUCH –May 7, 2007

BOOT CAMP

Boot Camps are no longer just for new military recruits or troubled teens, or Navy SEAL wannabes. Rather, they have become de rigueur for those who want to get to a better level of fitness quickly and efficiently. Today's "battle of the bulge" can be dealt with quite handily in one of the many fitness boot camps that are springing up around the nation.

"One of the reasons boot camps are incredibly popular is because they provide a pretty time-efficient approach to exercise, said Cedric X. Bryant, Ph.D., Chief Exercise Physiologist for the American Council on Exercise. "You work the whole body. You're in and out. For most of us who are time pressured, it's a nice way to fit fitness in."

Health benefits and time efficiency are the primary reasons most participants give for their participation. Muscles and the cardiovascular systems—both aerobic and anaerobic—are pushed in every possible way in a one-hour to 75-minute class. For many, the results are worth the focused, often arduous, intensity.

Genesis Fitness Camps offer a variety of five-week camps for all ages and fitness levels (with indoor facilities at both Denver Downtown and the Denver Tech Center). Their intensity levels escalate from the "Low Impact Camp" (exercises are easily modified to accommodate different skill or capability levels, with less running, jumping and bouncing), to the "Performance Camp" (more focused on improving physical performance with more intense balance, agility, core, and plyometric workouts), to the "Level-10 Boot Camp" (totally no-nonsense and taught by US military fitness professionals….yes, that means Marines).

The participants interviewed all mentioned that they love the camaraderie of the camp experience and marvel at the fact that they used to be out of shape non-exercisers.

"I love it," says Andrea Glass, a stay at home mom who has been involved with the Low Impact camp programs at Genesis Fitness (genesisfitnesscamps.com) for over a year. "It has changed my life. I lost 12 pounds in three months." Rachel Brown, also a mom in the low-impact camp, agrees, adding "I could never begin to push myself the way I am pushed by the instructors."

While boot camp may sound militaristic, both Brown and Glass appreciate that their low-impact camps are supportive and not at all intimidating. "Every day is different," notes Glass, "with each workout combining a good balance between strength training and cardio, as well as indoor and outdoor experiences."

Shelley Roth, a civil engineer who enjoys the Performance Camp, went from being sedentary and overweight to someone who now works out four days a week at boot camp and another two times a week on her own. "I lost 60 pounds over two years," declares Roth, "and now I enjoy fun runs like the recent Muddy Buddy in Boulder."

Small business owner, Mike Johnson, keeps returning to the camps because he gets a better overall workout. “I end up doing things I would not normally do on my own and, when the workout is through, I feel great.”

Jake Herman, research scientist and active Lacrosse player, has been participating in the Level 10 camps five days a week for over a year. The instructors, all active duty Marines, put the campers through workouts similar to those “enjoyed” by recruits. “These sessions definitely bring you out of your comfort zone,” says Herman. “This is the fastest track you can get with lots of team building along with a very plyometric [involves lots of explosive, ballistic moves] workout. My lacrosse, trail running, and snowboarding performances have all improved.”

Garth Heth, a Denver Health trained EMT and former personal trainer with a degree in Exercise Sport Science from Colorado State University, is the momentum and owner of Genesis Fitness Camps. “Exercise is for everyone,” says Heth. All of the camps through Genesis are five weeks instead of four, and are one hour and fifteen minutes rather than one hour. “Our programs are five weeks because the results for the participant are better; our classes are 75 minutes because we feel that is what it takes.”

Their camps have no more than 25 class members with one main instructor for each camp. “We turn away a lot of people because we want the group energy level to be right and, because we do go outside to the parks, we want to be safe,” explains Heth. “We like to keep people motivated so no one knows what is in store for them from day to day.” Everyone is tested at the beginning of each camp; the test is repeated at the end so that everyone can see how they have improved. Experts often make guest appearances to teach kickboxing, yoga, and nutrition, and triathletes and marathoners are brought in to lend their experiences.

“All our instructors are trained by the program and most have several certifications,” emphasizes Heth. “But this sort of participation experience is not for everyone. You need to like the group dynamic. Our job is to help you do things you don’t normally do yourself.”

Boot Camp of the Rockies (BCOR.net) has had nine locations in the Denver metro area since 2001. BCOR offers classes year-round, indoors from November through March via leased facilities and outdoors at local parks April through October. Camps are six weeks long, are all co-ed and meet three days a week at 6:00 am and 6:00 pm.

BCOR welcomes all comers, with classes averaging 20-30 people in the winter and 40-50 in the summer. “Each class begins and ends together with a warm-up and a cool down, explains head BCOR coach, Joshua Futterman. “We then offer three levels of intensity with coaches for each group. People can go to whatever level they want and even switch levels for different activities. We are passionate about helping people change their lives by living healthier and feeling better.”

Adventure Boot Camp, created by John Spencer Ellis, Ph.D. in Orange County, California, is the largest boot camp organization, with official authorized and certified locations all over the USA and around the world (find a camp at bootcampfinder.com).

Andy Alexander became certified through their training program and now runs an Adventure Boot Camp in Parker (ParkerBootCamp.com). Each camp is four weeks long with a three, four, or five day a week participation option. The camp at 5:30 am is for women, and his new camp for men is offered at 6:00 pm.

In the winter he rents a facility but in the summer, it is all out of doors. “What is nice about the boot camp concept is that the activities are more fun and more varied,” explains Alexander. “The camps are all structured so that all skill levels can participate. There are always alternative exercises and many of the exercises are timed rather than counted so anyone who needs to stop or slow down can do so.”

Alexander measures participants for weight and fat loss at the beginning and end of each camp. “Most lost several inches and some dropped five to seven pounds in four weeks,” reports Alexander.
“I like the bonding and the competitiveness,” says Adventure Boot Camp enthusiast and realtor, Lisa Shaw. “After a session I am more relaxed and the day goes better.”

So, if you are ready to challenge yourself or try something new that is a bit more intense, maybe you should become a “recruit”?

*********Side boxes*******

According to Todd Durkin, owner of Fitness Quest 10 in San Diego, CA. (the two-times Personal Trainer of the Year who conducts Boot Camps nationally, (and trains NFL superstars like LaDainian Tomlinson, Drew Brees, Reggie Bush, Carson Palmer, and Alex Smith):

How do you know if boot camp is right for you?

1. Appropriate level for your current condition
2.Instructor is certified and capable of working with any conditions that you may have.
3.The times work with your schedule. For example, many boot camp programs are in the early AM. If you know you will not make those times, make sure there are evening options also.
4.Try it one time first before signing up for a long commitment. This will tell you if you like the instructor's motivational style, the intensity of the class, etc.
5.The program investment fits within your budget.

What types of questions should one ask before attending a boot camp class?

1. Does your class accommodate different levels?

2. Do you travel all over the place or stay in one general area?
3. How long have you been teaching Boot Camp?
4. How many attendees do you typically have in a class or a program?
5. Do you have to sign up for a minimal commitment or is it "pay by the class"
6. How many days per week do you conduct Boot Camp?
7. What if I can't complete a task, drill, or exercise?
8. Are there shower facilities present?
9. Is it inside or outside?
10. Do you have Boot Camp in inclement weather or how do I know if it gets cancelled? (i.e. snow)
11. How do you monitor progress?
Do you have a pre and post-test when starting a Boot Camp program?
12. Are you certified? Are you CPR certified? Do you carry a cell phone on you in case of an emergency?
13. What happens if I travel for a week and miss a week of your program? Do you have a refund policy?
14. How long is each class?
15. Do you provide nutritional information in conjunction with your exercise program?

Full-time Boot Camps

(Many gyms and fitness facilities offer “boot camp” classes along with other programming. Only full-time boot camp operations are mentioned here):

Genesis Fitness Camps, Genesisfitnesscamps.com, 303-837-1234

Boot Camp of the Rockies, BCOR.net, 303-494-4242

Adventure Boot Camp, bootcampfinder.com, 720-339-7059 (Denver); 720-987-7732 (Centennial/Aurora); 719-331-1361(Colorado Springs); 303-805-4504 (Parker).

LINDA J. BUCH –March 5, 2007
TRAINING FOR THE BEACH

The Sports Illustrated swimsuit edition is on the stands, more snow is on the way. Meanwhile, newspaper travel sections are resplendent with tantalizing pictures of sparkling blue water with white sand beaches. If you are one of the thousands who have run to a travel agent or web site screaming "Get me out of here!," consider the additional opportunity to try some fun new activities that you may not be able do here in Colorado.

Many may be unique to the vacation area (let's face it the "surf" is never "up" at Chatfield Reservoir) or just be something that provides a different experience from the ones available at home (biking through a rain forest, golfing by the ocean, kayaking along the beach). Playing on the beach is an opportunity to enjoy activity that happens to be great exercise, such as running in and out of the water, playing Frisbee on the sand, paddling a raft out against the surf (for the great ride in), playing beach football or volleyball, and bicycling on a boardwalk (or on the hard sand).

Trying new things while away from the stress of work is part of the fun but a wee bit of physical preparation might be advised. After all, walking on sand is very different than walking around the park; surfing is much more physically demanding than swimming in a pool.

WALKING IN SAND OR SWIMMING WITH FINS

Walking in the sand, swimming, and doing activities that involve swim fins (snorkeling, SCUBA) creates more range of motion for our calves and shins than most of us are used to. Add these exercises to your routine two to three times a week about a month before vacation:

1. CALF RAISES

BEGINNER:

-Stand and raise your heels off the floor. Your weight is now on the balls of your feet. Hold for a few seconds and return the heels to the floor. You may want to hold onto a stable object (wall, chair) until you are sure of your balance. You can do this anywhere—even when in line at the checkout counter. Start with 10 repetitions and build to 20.

INTERMEDIATE:

-Perform the same exercise as "beginner" but do them one leg at a time rather than both feet. For a more challenging option, raise and lower your heels while standing on a

raised, sturdy object (like a stair step). Start with 12-15 repetitions on each foot. Do two to three sets.

ADVANCED

-Stand with the balls of the right foot on a raised, sturdy object, holding on with the right hand. While holding a weight in the left hand, perform 15 repetitions; switch weight to other hand, switch feet and repeat. Start with one set and progress to three sets.

2. TOE RAISES (for shins)

BEGINNER:

-While seated, alternately raise and lower the balls of your feet and “tap” for about a minute. Progress from 30 seconds to two minutes.

INTERMEDIATE

-While sitting at home watching TV, place a one-pound bag of beans or rice over the toes and instep and perform the same toe tapping as above.

ADVANCED

-Some gyms have pieces of equipment designed for the shin muscles. You can create your own by sitting on a bench with your heels on a raised platform (use a two x four or a 25-pound plate). Place a light dumbbell (three to five pounds) or other object that provides resistance across the toes (or, grip the plate of a dumbbell with both feet) and flex the foot. Range of motion is naturally limited; it is not necessary to push beyond horizontal.

PADDLING

Kayaking, canoeing, and rowing looks very easy but the physicality involved can be surprising. Because you are sitting in a floating structure and propelling yourself against the resistance of water (sometimes with a strong current or surge), you will be using the upper back, shoulders, arms, and core. Be sure to add these exercises to your routine to prepare for these activities:

1. Resistance Training

The muscles of the upper back, neck, and shoulders need endurance training in order to be able to withstand the constant pulling through the density of water. Rotating the torso is also involved so combining core work with the specific muscle groups is a great idea:

With bands:

-Secure a resistance band to an immovable object (wall, door jam, heavy piece of gym equipment). Get a large dowel rod (about four or five feet long and about an inch thick) or light barbell (about three to five pounds) and slip it through the handles.

-Imitate rowing, canoeing, and kayaking moves while sitting on a stability or BOSU ball. Perform both pushing and pulling. Each set should last for 30 seconds, building to at least a minute.

2. Strength Training:

-Pulldowns for the back:

Using equipment designated "Lat Pulldown" and set the weight so that you can perform 15 to 20 repetitions. Work towards performing 30 repetitions using as heavy a weight as you can handle (hint: it will not be very heavy). Once you can do this, go for time rather than repetitions. Perform pulldowns for a minute, again using as heavy a weight as you can handle.

-Standing Rows:

Using either a light barbell, dumbbells, or a bar attached to a cable machine, stand with good posture (spine neutral, core muscles braced, shoulders back) place the hands about six inches apart, take a breath, and exhale while pulling the weight up to the collar bone. Begin with light weight and 15-20 repetitions; progress to timed sets of 30 seconds to one minute per set.

-Triceps Dip

Sit on the edge of a sturdy bench (preferably one that is designed for gym use) and place you hands next to your butt. Legs will either be bent at the knees in a "chair" position with the feet on the floor (beginner), extended straight out in front on the floor (intermediate), or supported by another bench or stability ball (advanced). Slide off the bench about one inch, bend your elbows until your butt drops about four to six inches below the bench then push back to the starting position. Repeat for as many repetitions as you can. Start with one set and progress to four sets. CAUTION: Do not allow yourself to get more than one inch away from the bench and do not overstretch the shoulder joint by dipping too low towards the floor!

3. Training In General:

Pushups rule! These are good for the chest, back, shoulders, arms and core. Begin against a wall and progress to the floor. Start on hands and knees and gradually progress to the regular military pushup from arms and toes.

SURFING

Gidget was no wuss. Successful surfing requires a combination of muscle and core strength, balance, flexibility, and endurance. The reality of surfing is that there is a lot of physical activity prior to the ride. You will be lugging a board into the water and then stroking through the surf. This involves chest, arm, shoulder, back and neck muscles. According to Susanna Howe, writer for *Women's Sports and Fitness*, "Surfing is 48% paddling, 48% waiting, and 4% riding the waves."

Getting physically prepared for this experience, therefore, should involve a wide variety of exercises to strengthen your core area (abdominal, lower and mid-back, and gluteal muscles), posture muscles, explosive upper body strength, range of motion and endurance (especially for your upper body and shoulders).

And then there is balance. You will be standing on a rather small, wobbly board and riding on an undulating aquatic surface. This is difficult in a swimming pool, let alone a body of water inexorably moving toward a beach. Use stability balls, wobble boards and other equipment of this ilk whenever possible.

These exercises and activities (along with those mentioned already in this article) will be very helpful:

-Explosive pushups

Lean into a kitchen counter arms apart in a pushup position, spine straight and aligned, core braced. Lower your chest toward the counter and accelerate you body away explosively. Catch yourself, decelerate and repeat. Once this becomes easy, perform these from the floor.

-Squat Thrusts
From a standing position, crouch down, placing your hands on the floor under the shoulders. Supporting your body with your arms and shoulders, shoot the legs straight behind you, putting yourself in a "pushup" position. Flex the hips and pull the legs back

under the chest. Stand and repeat. Perform 10 repetitions, building to 20 as you get stronger.

-Yoga

The flexibility acquired from yoga in particular is very useful for surfing, especially for the lower back and hip joints.

LINDA J. BUCH –September 3, 2007
GOLF TRAINING

To some, training for *golf* may seem a contradiction in terms. After all, how hard can it be? You smack a ball with a stick, get into a cart, find the ball and hit it a couple more times (for some of us, several more times), get back into the cart and repeat for nine to 18 holes. The cartoon characterization of golf as pudgy pros in plaid pants smoking cigars and drinking brandy as they play the links has, fortunately, changed for the better. After all, golf not only requires a high level of physical endurance (a round of 18-holes can take four to six hours) but mental endurance and focus as well. Today's golfers understand that they must prepare themselves in both arenas in order to better enjoy this sport.

The physical training for golf encompasses many features recommended by health and fitness professionals: flexibility, stability, balance, endurance, posture, strength, and power. All of these aspects come into play regardless of whether you are driving, chipping, or putting.

Golf basically involves skeletal muscle accelerating and decelerating around a stable spine. When you take into account the warm-up swings at each hole and a bucket of balls at the driving range, a golfer can perform as many as 300-400 swings in one day. Therefore, before starting a round, it behooves golfers to spend a few minutes getting the blood and oxygen to the body areas that will be the most stressed during a day on the links.

*Flexibility and Warm-up

Research performed by Andrea J. Fradkin, PhD and her colleagues at the Sports Injury Prevention Research Unit at Deakin University in Victoria, Australia, found that golfers' performances improved significantly when they undertook a golf-specific warm-up program. Primary joints involved in golf are those of the shoulders, hips, elbows, and wrists.

According to Neil Wolkodoff, PhD, of PhysicalGolf (2538 South Colorado Blvd, Denver) most golfers will never get their muscles to a proper temperature before stretching. So, movement-based stretches are best for 2-4 minutes before you hit your first ball. Here are some warm-up calisthenics that should be performed before playing:

Core and back:

1. Swing a club from side-to-side like a baseball bat. Repeat 15 times, gradually extending your swing.
2. Stand with knees flexed, extend your arms upward with a 90 degree bend at the elbows, retract your shoulders, keep your hips stable, and twist your shoulders against stable hips 10 times to each direction.

Shoulders:

Swing your arms in small to large circles, 10-15 times in each direction.

Hips:

Balancing on one leg and using a club in the opposite hand for balance, swing your non-weighted leg forward and back 10 times each direction adding range of motion with each swing, and then repeat the other direction.

*General Conditioning: Now and Off-season

Anyone who has watched a great pro perform a golf swing cannot help but notice that the body coils and uncoils during the execution. It should be evident from this that it is the body that drives the ball, not the club. Therefore, the muscles of the lower back, abdomen, and gluteus, trunk region, shoulders and hips all must work together to create the torque and power needed to propel the ball a few hundred yards on a drive, provide controlled power for a chip shot, and stabilize and balance the body for a putt.

The drive off the tee involves the most power. A great drive is a combination of strength, balance, rotation and flexibility. In one study, there was a 90% correlation between forearm strength and driving distance. In another study done by Wayne Westcott, PhD, a simple Nautilus lifting routine (without any functional training component) increased driving distance by 20 yards just from improving basic strength.

Dr. Wolkodoff, who has been training golfers for over 10 years, notes that both in-season and off-season programs should have a balance between general strength and functional movements. “The research clearly demonstrates that functional movements are never truly effective unless they have a pure-strength basis,” says Wolkodoff. “Many golfers don't develop a proper strength base before moving into advanced progressions. The result is they just don't get the best results and injury rates are much higher without the proper physiological foundation." He further suggests an optimum rotation during the golf season with one basic strength workout per week, balanced with one functional strength workout.

Lana Ortega, Class A member of the LPGA Teaching and Club Professional Division and owner/operator of “Lana Ortega Golf” at the Links Golf Course in Highlands Ranch, has worked with Dr. Wolkodoff, noting that his program understands the difference between men and women and targets specific weaknesses found therein. “What he does is integrate a lot of the golf movements into his strength training routines,” says Ortega. “Cardiovascular output and strength both increase with his program; I have also achieved better posture and more muscle stability.”

Head golf pro at Cherry Hills Country Club, Clayton Cole, pointed out that Tiger Woods’ physical condition and his accompanying success have really put the importance of

fitness for golfers onto the front page. “I tell all of my students—and more are over age 50 than under—that if they are not in a regular conditioning program to get into one.” His experience is that it is the exception to find people who are not in a program. “I experienced it for myself,” says Cole. “I have more stamina for all 18 holes instead of just some of the holes.” Cole also mentioned that some students found tai chi to be helpful because of how it helps balance.

Here are some sample exercises Wolkodoff uses with his amateur and professional golf clients.

-Upper Body

Basic Strength: -Dumbbell Chest Press with rotation
-Lat Pull down with bar
Functional Strength: -Cable Chest Press with torso rotation
-Single arm cable row with external shoulder rotation

-Core

Basic Strength: -Abdominal crunch on stability ball
-Back bridge on stability ball
Functional Strength: -Wood chop/Reverse Wood chop (Use a cable machine, dumbbell or medicine ball)

-Legs/Hips:

Basic Strength: -Leg Press, Squats, Prone leg curl

Functional Strength: -Kettlebell/dumbbell squat swings:

(While holding a kettlebell/dumbbell in front of you with both hands and legs at shoulder width, squat and swing the weight between the legs, then straighten as you swing the weight overhead. Perform 12-15 repetitions.)

-Kettlebell/dumbbell cross over presses:

(Hold weight in right hand, standing erect, feet under shoulders. In one movement, squat while reaching the weight across to the left foot. In one clean movement, push up with the legs and sweep the weight across the body and up over the right shoulder. Repeat 12-15 times then switch to the other leg/arm.)

*Mental Conditioning (and Nutrition)

Kathleen Heiney, LPGA Teaching Professional and owner of LINC Golf and Wellness (1867 S. Lafayette, Denver) knows that physical conditioning is only part of the training. She points out that, from a wellness perspective, golf requires about five hours of focus on one activity—something many of us just do not do with any regularity these days. "Mental focus is huge in golf. There is a level of meditation for every shot, at every hole," says Heiney. "I teach my students to establish a pre-shot routine because every shot has a purpose." Therefore, she explains, golfers must always ask themselves, "What is the purpose of this shot?" and then put all of their focus onto that objective.

Holly Sahud, 36, an individual account consultant for TIAA-CREF, picked up golf on her own with friends and, as a consequence, picked up a few bad habits as well. By working with Heiney on both golf technique and general fitness her game has vastly improved. "Working with Kathleen to improve my core strength and posture was a huge plus for my game," says Sahud. "Her work with me on the mental game—she had me develop my own pre-shot routine-was also a big help."

Because a round of golf is so demanding, nutrition is also part of Heiney's curriculum. She teaches that while strength, balance, and flexibility enhance the game overall nutrition is of equal importance. "No hot dogs and beer at the turn!" she warns. Proper hydration with water (or sport drink during high heat days) and nutritious foods are better for the long game.

Heiney also recommends yoga and Pilates to her students because they help with core strength, balance and flexibility. "But because yoga also requires focus and meditation, I recommend it first over Pilates." This is because yoga poses not only help with strength, endurance, flexibility, and posture, but also help to focus the mind—necessary for those stressful winning putts!

Travel writer (specializing in golf), Larry Olmsted, keeps up with yoga for his golf game because, like yoga, golf requires you to do a lot of "independent yet related motions all at the same time without short-circuiting the brain." Olmsted explains, "All this builds muscle control and balance. [Yoga] also focuses on stabilizing the lower body in most postures. That's why doing yoga on a regular basis is good for golf."

Pilates--a system of mind-body exercise that has evolved from the principles of dance instructor, Joseph Pilates--teaches body awareness, good posture and, improves core strength, flexibility and agility--all important for golfers. By its nature, Pilates also helps to correct muscle imbalances (a key component for injury prevention) making it is a logical addition to anyone's golf fitness program.

Sarah Christensen, founder of the national "Pilates for Golf" program, worked with physical therapists, golf conditioning specialists and Pilates trainers to develop an integrated program that has been tested by both Professional and amateur golfers as well as noted teaching professionals. Along with the "Pilates for Golf" program, she also developed the "Hole in One Pilates" product line. Butch Harmon, Tiger's former coach

and Golf Digest's #1 Golf Instructor four years running, says, "With 'Hole in One Pilates', I am hitting the ball 20-25 yards farther but, best of all, I can tie my shoes without pain."

Wolkodoff, who is also a Pilates instructor, says, "Pilates is not a cure-all for golfers; it is a good supplement in the right situation for core control and certain aspects of flexibility." He also notes there have only been nine research studies performed on the effectiveness of Pilates, none of them on golfers. He urges golfers to work with someone who has a concept of how all these components can best be combined for individual health and performance goals.

*Resources:

"Core Powered Golf," Neil Wolkodoff, Kickpoint Press, 2000, $16.95

"Physical Golf," Neil Wolkodoff, KickPoint Press, 1999, $29.95.

"Functional Flexibility," Stephen Tharrett, Healthy Learning, 2006, $17.95.

"Improve Your Golf With Yoga Techniques," Wahi, Pappas, O'Malley, Princeton Design Group, 2001, $14.95

Katherine Roberts Yoga for Golfers, YogaForGolfers.com, 1-888-313-YOGA (9642)

Pilates for Golf, pilatesforgolf.com, 1-888-430-7220

Strengthen Your Game Physiotherapy Associates, strengthenyourgame.com

Facilities:

LINC Golf and Wellness, Kathleen Heiney, LPGA Teaching Professional, 1867 S. Lafayette St., Denver, Linc2success.com, 303-380-7175

*Equipment:

Ball Dynamics, balldynamics.com, 1-800-752-2255

Balanced Body Pilates Equipment, pilates.com, 1-800-745-2837

LINDA J. BUCH –December 3, 2007
HOLIDAY SURVIVAL

The holidays are here! On the one hand we are joyous and happy, on the other the stress starts to bubble up from our gut to our head and back to the gut again. I say "enough!" Enough worrying about what we eat. Enough about when we eat it. Enough fretting about scheduling workouts. And enough stressing about skipping them. While there is no "Get Out of Jail Free" card for three pieces of pie and four trips back to the buffet, we all need a break from the pressure of perfection. "All things in moderation" is the key. This includes food, drink and, especially, stress.

Holidays (this word is an etymological degradation of "Holy Days," by the way) are for relaxing, enjoying special foods, visiting friends and family, reconnecting, and reassessing the old year while looking forward to the new one, hopefully with some hope. Myths abound about weight gain and the frantic dissolution of our exercise intentions. Don't buy it. Let's look instead at options that are more about the quality of life than the quantity of stuff and stuffing.

We have all heard about the "inevitable" gain of five to six pounds over the holidays. This would mean that every day for four weeks from Thanksgiving to Christmas we all eat an extra 625 calories per day. Unless you are drinking a pint of whipping cream or eating a stick of butter daily, this is simply not the case. According to a study published in the New England Journal of Medicine (March 2000), the usual gain is about 1.06 pounds. The people who tended to gain more are those who are already in the obese category. The big problem is the failure to lose that pound-plus in the New Year. After a decade or two of accumulating a little and letting it stay year after year is where the gain gets its foothold (hip hold?).

**Holiday Health Plan

Wringing our collective hands about food intake is no fun. But, no one wants to be looking at monumental dietary and exercise changes after the first of the year. The number one way to keep creeping weight from moving in permanently is to BE ACTIVE. Not just during the holidays but all year long. Jack Yanovski, MD, PhD, head of the Unit on Growth and Obesity for the National Institutes of Health (NIH), noted in a report issued November, 2007, "People who reported being much more active maintained their weight and even lost weight during the holidays." Those who reported less activity gained the most.

During the busy times of the holiday season, start your day with some simple stretches, get your friends together for a walk around the mall, do pushups and crunches during TV commercials, walk the concourse at the airport, be aware of creeping stress so that mindless eating does not become an established pattern.

Suzanne Schlosberg, freelance fitness writer and author of many books, including The Ultimate Workout Log and Fitness for Dummies, reminds, “Get your sleep. People often turn to food for energy when what they really need is rest.”

**Family Food Sanity

"I am thinking that maybe 4-5 small meals throughout the day is a good plan. Then we won't feel as inclined to eat so much at one sitting, and we can more thoroughly enjoy family and the food at the table," says Tara McLaughlin, President of Strategic Health Initiatives in Denver. Delighting in good company and conversation is part of the fun and much more the reason for the gathering in the first place. By spreading the snacks and meals out over the day, the person doing most of the cooking can have a good time, too. And small meals are a lot easier on the system.

If smaller meals eaten throughout the day are not possible then try small plates, serving spoons, and bowls. This has been proven to cut back on consumption. In a study published September 2006 in the American Journal of Preventative Medicine, “Just doubling the size of someone’s bowl increased how much people took by 31 percent,” said lead author Brian Wansink, a consumer researcher who studies the psychology of food choice. “We also saw that giving people a scoop that was a little bit larger increased things by about 14.5 percent,” said Wansink.

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Activity Suggestions

1. The best solutions are often the simplest. Casual walking is one of the best things to do after a big meal, even if it is only for 15 minutes around the block. Moderately active games like charades or dancing will help with digestion and can stimulate all sorts of new traditions for annual gatherings. Resist the temptation to just plop down in front of the TV.

2. Walking is good even if it does not immediately follow a meal. Put on a pedometer and monitor your steps taken, striving for 10,000 a day. This small and inexpensive tool will keep you focused on moving more and sitting less for the entire holiday and could become a lifelong habit for good health.

3. Try one of the “30-Minute” workout gyms such as the “1-2-3 Fit Circuit”. With five (soon to be six) Colorado locations, this franchise is getting very good marks from professional and scientific reviewers around the country. The American Council on Exercise (ACE), which is a premiere fitness certification, education and training organization worldwide, released a study in April 2007, which showed that 1-2-3 Fit provides an effective 30-minute workout that is easy, safe and efficient.

Other 30-minute workout franchises that also get good professional reviews are “Curves” for women and “Nitro” for men.

4. This is an excellent time to check out Colorado's open spaces available through our city and state parks systems. The Colorado State Parks are having open houses different weekends throughout the month of December. Meet the hawks at Barr Lake State Park on December 8th, take guided hikes at Cheyenne Mountain State Park December 8th or 9th, or count birds at State Forest State Park on December 14th.

5. Add intense, interval training moments to your current cardiovascular routine (See the feature in the Denver Post November 19, 2007, "Take it Slow, and Fast," denverpost.com/search/ci_7492002)

6. Walk the "Wild Lights" at the Denver Zoo or the "Blossoms of Lights" at the Botanic Gardens.

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Strategies for Enjoying the Holidays Without Weight Gain

(Sources: Professional weight loss speaker and author, Michelle May, M.D.; and Cynthia Sass, RD, with BayCare Health System in Clearwater, Fla., and spokeswoman for the American Dietetic Association:

1. Pay attention to your body's signals regarding your own true hunger. Wait about 20 minutes between plates of food to be sure you are really still hungry.

2. Be a food snob. Look for the foods that are fabulous, not the ordinary fare you can get anytime or anywhere.

3. Think of your appetite as an expense account. How much do you want to spend on appetizers? Main entree? Dessert?

4. Pace your eating before the event so that you are hungry but not ravenous. Be careful about eating a full meal prior to an event as a hedge against eating at the event. This rarely works—once you get to the party and see the food, few are resolute enough to resist.

5. Socialize away from the food because just hanging around food while conversing tends to encourage more eating.

6. Delight in the atmosphere, company, entertainment and traditions. Eat slowly and savor every bite.

7. Be aware that alcohol usually increases food intake. Also, special holiday beverages are often higher in calories.

8. This is the time of year when snacks are all over the workplace. Unconscious grazing can really add on the calories. When you eat it, you own it. Decide if the tempting morsel is worth that relationship.

9. Don't feel obliged to eat it just because it is on your plate, regardless of who made it or how much you paid for it. This is why we have "doggie bags."

10. Take every opportunity for physical activity. Walk around the mall, the neighborhood, and the other local attractions and enjoy the lights and decorations.

11. Eat a high protein breakfast. Protein takes longer to digest and you will feel fuller longer.

12. Fix traditional favorites traditionally. Cut fat calories in areas where they are not as noticeable, like putting skim milk into the potatoes and cutting back on the butter in the green bean casserole.
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**Resources

Websites:

SparkPeople.com
WeightWatchers.com

Books:

"Am I Hungry? What To Do When Diets Don't Work," Michelle May, M.D.,Nourish Publishing, 2004, $15.95.

"You: On A Diet: The Owner's Manual for Waist Management,"
Mehmet C. Oz, Michael F. Roizen, Free Press, 2006, $25.00

Activities:

Colorado State Parks: parks.state.co.us
Denver Zoo: 303-376-4800, denverzoo.org
Botanic Gardens: (720) 865-3500, botanicgardens.org
"1-2-3 Fit:" 123fit.com (coed)
"Curves:" curves.com (women)
"Nitro:" Nitrofitnessformen.com (men)

LINDA J. BUCH –April 2, 2007
"NO PAIN, NO GAIN?"

"No pain, no gain," challenged the body builders in the 1980's. "Pain is weakness leaving the body," brags the Marine Corps t-shirt. "No Pain, No Jane," taunts the billboard advertisements for the Mary Jane ski area. "Feel the burn," promised Jane Fonda.

People who exercise know that sometimes muscles seem to burn during hard exercise or feel a little sore over the next day or two (and the mere thought of pain is often enough to keep some people planted on the couch.)

Paradoxically, those already in pain from arthritis are told that exercise can help to relieve it. And then there is pain that stops you right in your tracks midway through a workout. Is pain good? Bad? Ugly? Inevitable? Avoidable?

PAIN FROM EXERCISE: THE GOOD

The "No Pain, No Gain" bromide from bodybuilders still seems to thrive in our consciousness. Since the sport of bodybuilding demands intense training in order to build larger and harder muscles, the shared wisdom of bodybuilding enthusiasts is that muscle soreness is the price of admission for a sterling physique.

While many fitness professionals and sports medicine researchers believe people should "train, not strain," others (particularly body builders who are going for maximum muscle growth) flat out do not buy that advice. Yes, exercise in general (not just weight lifting) can bring on something called "Delayed Onset Muscle Soreness" (DOMS) but the correlation between muscle soreness and bigger muscles is still being debated.

The cause of DOMS is posited to come from two sources: waste products that build up in the muscle and/or the microscopic tears in the muscle tissue that occur when the muscles are pushed harder or more differently than normal. This can come from trying out a new exercise or by increasing the intensity or duration of the activity. For example, if you usually jog one mile a day, then suddenly decide to push yourself to two or three, some soreness is inevitable, is usually mild, and generally disappears after 12-48 hours.

HOW TO AVOID DOMS (Delayed Onset Muscle Soreness)

-Be sure to take the time to warm up and cool down after an activity. Slow, easy stretching can be very beneficial to the joints, and a good 15-minute warm-up is recommended to get your cardiovascular system and lungs working.

-Perform light, easy stretching after exercise.

-When strength training, start with lighter weights and high repetitions (12-15).

Increase the weight lifted over several weeks.

-Try not to make sudden changes in activity. If you do try something new, go easy for a week or two.

-Gradually increase the amount of time spent at the new activity; get some experienced coaching before just diving in.

All bets are off, however, if the snow HAS to be shoveled, the garden HAS to be weeded, or the attic HAS to be cleaned and cleaned NOW!

In that case (or if you ignored the recommendations above):

HOW TO TREAT DOMS

-Mild discomfort should go away after three days at the most.

-If you are already sore, perform some easy, low-impact aerobic exercises in order to increase the blood flow to the affected areas.

-Do some gentle stretching and/or massage on the affected area.

-Try a nonsteroidal anti-inflammatory medication (aspirin or ibuprofen). These will only deal with the soreness, not speed the healing.

- A 2003 study from the University of Georgia showed a significant reduction in post-exercise muscle soreness from moderate doses of caffeine.

PAIN FROM EXERCISE: THE BAD

If you are still in pain after a week, it is time to get a diagnosis from a medical professional. “Bad pain” often feels sharp, comes on suddenly, and stops your activity. The pain could be a pulled muscle, strained or torn ligament or tendon, twisted joint, a dislocated joint, or even a break or fracture of bone. The injured area could swell immediately, a real good sign to stop what you are doing.

HOW TO TREAT BAD PAIN:

-RICE: If possible, IMMEDIATELY employ a technique called “RICE” Rest, Ice, Compression, and Elevation. This means stop what you are doing and sit or lie down

in order to protect the injured area. Put a cold compress wrapped in a thin towel on the injured area for no longer than 20 minutes. This will help reduce the swelling. Wrap the injury securely (not so tight that you feel numb or feel throbbing) in an ACE bandage. Raise the injury above the level of the heart.

-MASSAGE: If the pain or swelling does not go away after 48 hours, get medical attention. If it is a minor sprain or strain, you should see improvement in a couple of days. At that point, light massage of the injury can be helpful in the healing process.

PAIN FROM DISEASE: THE UGLY

Arthritis, fibromyalgia, Paget's Disease (bone), general joint and muscle pain due to aging, heart disease, stress, all of these and many more chronic diseases all carry a certain amount of pain and discomfort on a daily basis. In virtually every case, exercise has been found to be beneficial in minimizing the pain.

But remember:

-A physical therapist should be consulted to learn the type of exercise that will be helpful for your condition. For some, light strength training is helpful, for others water exercise is key. Many people benefit from yoga and Pilates.

-Proper form is crucial. This can also be learned from a physical therapist as well as from a properly certified personal trainer.

-There are many more factors involved with chronic pain including (but not limited to) psychological, social, and emotional issues. Stress relief is also a key component. Take all of this into account as you learn how to cope.

-Painful conditions like arthritis and chronic lower back pain respond better to movement than to immobility.

EXERCISING THROUGH PAIN?

"I will just exercise through the injury until it goes away."

Pain from exercise is the body's messenger. Ignoring the pain and just toughing it out could make the injury worse. Dr. Richard Steadman, Orthopedic Surgeon in Vail and founder of the Steadman Hawkins Research Foundation points out, "There are a lot of different ways to be injured. If there is pain but no swelling, you can continue to exercise BUT you should modify the activity to make it painless." He suggested that, if you experienced some pain after running, to switch to cycling or swimming for a while. "Don't continue with the activity that created the pain in the first place." He feels that with a minor difficulty; leave it for one to three days. If pain reoccurs, continues or

worsens, get help.

Some medical researchers feel that some exercise may be important to the healing process. In an article published in the New York Times, ("When It's O.K. to Run Hurt," Gina Kolata, January 11, 2007), "We want to keep you moving," said Dr. William Roberts, a sports medicine specialist at the University of Minnesota and a past president of the American College of Sports Medicine. "Injured tissue heals better if it's under some sort of stress."

Doctor Stedman generally concurs but "[I] would take a more measured approach to injury. A lot of injuries do well with some exercise but most do not. It is generally not the right thing for everyone to just work through it." Stedman reminds us, "Swelling is a definite negative—always seek medical care in this case."

It is CRUCIAL to be under a physician's care at the initial stages of **exercise re-entry**. Remember: "Nothing Exceeds Like Excess."

So which is it?

Here are some guidelines for exercising through an injury:

-Muscle pulls, sprains and strains need time to heal so follow the doctor's or physical therapist's advice. You may be surprised how exhausting AND how much time it takes to perform all of those rehabilitation exercises!

-Use common sense. Slow down, cut back on the intensity, and don't forget RICE. Use anti-inflammatory medications carefully. They mask pain that could lead to making the injury worse. Inflammation, redness, and swelling that is tender to the touch are a sure indicator that something is very wrong.

-There are always alternatives to your normal exercise choices. If the lower body is injured, find some exercises for the upper body. If you have access to a pool, swim; if you can bicycle, do so. Crosstrain until the pain is gone.

-Sitting around moping is unproductive and will annoy your friends. Take this opportunity to check some books out of the library, organize your desk, or catch up on correspondence and communication.

-If weight gain is a concern, adjust your dietary intake to reflect your temporarily slower lifestyle.

-Avoid forceful, ballistic stretching. Gentle stretching can promote healing.