

We are continually appreciative of the kind comments received regarding Synergy's online newsletter. A number of you have asked how to sign up others for this e-newsletter. You can either forward them this link -- <http://synergyhealthmedical.com/signup/> -- or simply sign them up yourself and consider it a gift of health and wellness.

Comments from James Fox, MD, Medical Editor:

In this month's e-newsletter, I am pleased to introduce two critical articles:

1. Osteoporosis—much more than brittle bones leading to a fractured wrist in your mother. This disease can become life threatening, with fractured ribs affecting breathing or a broken hip and its' subsequent mortality. Yes, this disease takes work and effort to keep under control but it is manageable.
2. Colon cancer—preventable with a simple procedure: colonoscopy. I have asked Dr. Sabine Hazan-Steinberg to share with us her experience in guiding patients through this procedure. While osteoporosis prevention requires a continuous effort, colon cancer prevention comes in the form of a test performed every 3-5 years.

Let's save some lives. Read on...

NO BONES ABOUT IT...

*Tina Schwager, PTA, ATC, Editor
James M. Fox, MD, Medical Editor*

Imagine a healthy young tree...slender, supple, bending and swaying in the breeze regardless of the forces nature applies. Now picture a neglected old oak...once majestic, its dry, brittle branches may snap in a sudden wind. Our bones are similar to the branches of a mighty tree—when young and well tended, they'll withstand substantial stress before breaking and generally heal well. As we age, however, our bones need more care and attention to keep them from becoming brittle like twigs from an age-old oak.

Osteoporosis, or brittle bone disease, is a condition where bones become porous due to lost mass. They structurally deteriorate, rendering them highly susceptible to fracture from very minimal stress. According to the National Osteoporosis Foundation (NOF), osteoporosis threatens over 44 million Americans, or 55% of people age 50 or older (4). In addition, 10 million individuals have the condition (eight million women, two million men), and approximately 34 million more are at risk because of low bone mass (4). Over 1.5 million fractures occur each year due to this disease, most commonly to the hip, spine and wrist (4). Aside from fractures, symptoms that may indicate osteoporosis include severe back pain, loss of height, or spinal deformities such as kyphosis (stooped posture), usually due to collapsed vertebrae (4).



Bone grows and easily regenerates during your 20's and 30's. Some experts believe young women can actually increase their bone mass by as much as 20% through the right kind of exercise and good nutrition (2), creating a "savings account" which your body can draw from in later years. The problem is, the depletion process that naturally occurs taps into that reserve. Women are particularly susceptible after menopause when estrogen, the hormone that protects against bone loss, stops being produced. Hormone replacement therapy and medications are frequently used and should be discussed with your medical practitioner to offset this process. If you're not sure whom to see, ask a Synergy staff member for a referral.

Since osteoporosis primarily affects older adults, "wellness and exercise programs designed especially for older adults are becoming an increasingly important part of many seniors' lives and many facilities offerings (1)." Of primary importance is education. Gina Boyd, PTA, leader of senior exercise classes at Owatonna Hospital's Center for Rehab and Wellness in Minnesota, explains that such programs "...help older adults understand their bodies capabilities and limitations, as well as explain the importance of flexibility, strength and aerobic fitness (1)." A comprehensive approach for older adults includes emphasis on balance and body awareness exercises, the goal of which is to prevent falls that may lead to fractures.

Working closely with your primary care physician is the best way to track bone health as you age. Bone Mineral Density (BMD) testing is the most common means of determining the integrity of your bones, establishing a baseline which can be referred to through the years. Calcium and vitamin D3 deficiency have also been topics of significant research

continued on next page

Woodland Hills Location:

22633 Ventura Blvd.
Woodland Hills, CA 91364
Tel: 818.444.5100

Valencia Location:

24515 Town Center
Valencia, CA 91355
Tel: 661.799.1900

Burbank Location:

4111 W. Alameda Ave.
Burbank, CA 91505
Tel: 818.333.1690

Beverly Hills Location:

8670 Wilshire Blvd., Ste 203
Beverly Hills, CA 90211
Tel.: (310) 724-8975

National Osteoporosis Foundation guidelines regarding who should receive BMD testing (4):

- All women age 65 and older, regardless of risk factors
- Younger postmenopausal women with one or more risk factors
- Postmenopausal women who present with fractures
- Estrogen deficient women at clinical risk for osteoporosis
- Individuals with vertebral abnormalities
- Individuals receiving, or planning to receive, long-term glucocorticoid therapy
- Individuals with primary hyperparathyroidism
- Individuals being monitored during approved osteoporosis drug therapy.

Five steps to optimal bone health (4):

1. A balanced diet rich in calcium and vitamin D
2. Weight-bearing and resistance-training exercises
3. A healthy lifestyle with no smoking or excessive alcohol intake
4. Talking to one's healthcare professional about bone health
5. Bone density testing and medication when appropriate

and professional debate as they relate to bone loss and osteoporosis. The consensus among leading experts at the National Osteoporosis Foundation is that daily calcium and vitamin D3 intake should be 1200 mg of calcium/day for adults 50 and older and 800 – 1,000 I.U. of vitamin D3/day for adults 50 and older (4).

Weight loss is another factor to be considered in bone health. Lessening the load of excess weight definitely reduces overall stress on the bones. But calorie restriction, obviously essential to weight loss, can rob bones of precious calcium needed to maintain mineral density and structural integrity. A study performed at Washington University and reported in the Archives of Internal Medicine reported that, over a 12-month period, calorie restriction led to decreases in bone mineral density for the subjects (3). During the yearlong study, significant decreases in bone-mineral density was found in the lumbar spine (2.2%), total hip (2.2%) and intertrochanter (2.2%) regions, all measurably significant when considering fracture risk (3). In assessing the affect exercise has on limiting mineral loss triggered by caloric restriction, the study indicated “exercise should be an important component of weight-loss programs to offset adverse effects of calorie restriction on bone (3).” While the study was small and didn’t provide data about bone quality (or micro-architecture), the findings are still helpful in stressing the importance of applying controlled stresses to bones during a weight loss regimen. Researchers felt that “exercise tricks the body into making more bone as muscles pull on the skeleton, producing strains that are perceived by ones cells as osteogenic (3).”

In emphasizing the importance of exercise in preventing brittle-bone disease, experts at the American Orthopedic Society for Sports Medicine (AOSSM) apply the old adage, “Use it or lose it”– being inactive causes bones to lose density and become more susceptible to breaking. Exercise, however, “...can help you maintain bone mass and reduce age-related bone loss (2).” Just like muscles, bones become stronger through the application of controlled forces. The cellular architecture within the bone itself becomes denser and the calcium content increases in response to appropriate physical activity (2). Ultimately, this improved structural integrity translates into stronger bones.

So in trying to toughen up those old bones, what is best? While weight-bearing exercise is essential, numerous possibilities exist beyond walking or jogging. Consider hiking, stair climbing, yard work, or better yet, a combination of them all. Using a variety of activities will improve your bone health and spice up your fitness routine at the same time. Variety keeps your program fresh and interesting, and is a great way to “cross train” by applying different stimuli to keep your muscles responding.

According to the AOSSM, 30 minutes of weight bearing exercise 3 or 4 times a week is best (2). If your main focus is bone health, the activity doesn’t even have to be continuous to be beneficial; you can do brief increments throughout the day. But if your goals include cardiovascular health or weight loss, remember to exercise for longer durations to see that benefit.

Strength exercises performed with resistance are essential for bone health, too. Two to 3 times a week is AOSSM’s recommendation, but that doesn’t necessarily mean major weight lifting. Light free weights, machines or even elastic tubing exercises targeted at the major muscles groups in the arms, legs and trunk are enough (2). Try to schedule a day of rest between resistance workouts, since the recovery time between sessions is when microscopic repair within the muscle fibers occurs which actually results in strength gain. Work with your Synergy trainer to develop a program good for bone health as well as overall fitness.

The medical community has done it’s part to determine how we, as individuals can prevent declining bone integrity. Pharmaceutical companies have developed medications to further aid the fight. And by pursuing your wellness goals with the Synergy family, you’re on track to long-term bone health. It’s important to be aware of just how integral your health and fitness routine is to maintaining the strength of your bones, and what more you can do to prevent the onset of this disease.

REFERENCES: 1. Marchesani, Emily. Strong and Successful. Advance for Physical Therapists and PT Assistants, January 1, 2007. 2. Exercising for Bone Health. AOSSM Sports Tips, 2006. 3. Phend, Crystal. Exercise Complements Calorie Cutting for Healthy Bones. MedPage Today, December 12, 2006. 4. <http://www.nof.org/osteoporosis/diseasefacts.htm>.

COLORECTAL CANCER: INFORMATION IS POWER

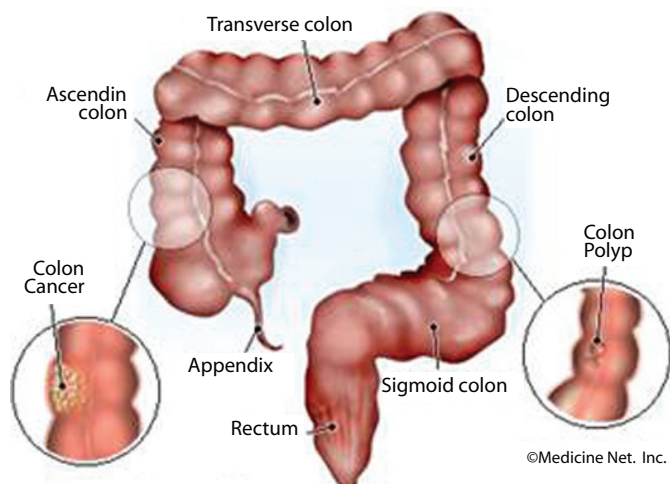
By Dr Sabine Hazan-Steinberg

Diplomate of the American Board of Internal Medicine in Gastroenterology.

Colorectal cancer (CRC) is the fourth most commonly diagnosed cancer and the second leading cause of cancer-related deaths in the United States. Each year, approximately 140,000 individuals are diagnosed with colorectal cancer and more than 50,000 will die from this malignancy (1,2).

What is Colon Cancer and What Causes it?

The colon is a muscular, tube shaped organ that measures 4 feet long. It extends from the end of the small bowel to the rectum and includes the appendix. Its function is to digest and absorb nutrients from food as well as serving as a storage organ of fecal material. Most colorectal cancers arise from polyps. These polyps are clusters of abnormal cells in the glands covering the inner wall of the colon. Over time, these abnormal growths can enlarge and ultimately become cancerous (adenocarcinomas). Most cancers develop from adenomatous polyps, and on average it takes 10 years for a <1 cm. polyp to develop into cancer.



Colon Cancer and Polyp

It has long been hypothesized that the longer wastes stay in the colon, the higher the risk of colon cancer. The thought is that wastes are toxic and damage the normal cells of the colon. Once the damage is done, regeneration of the tissue occurs with a transformation that leads to the development of abnormal cells. The other hypothesis is that the cancer's origin is linked to a genetic marker; certainly, people who have a family history of colon cancer are more likely to develop the disease. The risk of colon cancer increases 2-3 times for people with a first-degree relative (parent or sibling) with colon cancer. The risk increases more if you have multiple affected family members, especially if the cancer was diagnosed at a young age.

Other factors that may affect your risk of developing colon cancer include:

- History of Inflammatory bowel disease, such as ulcerative colitis or Crohn's disease.

- History of other cancers, such as ovarian, breast or uterine.
- Diet: Whether diet plays a role in developing colon cancer remains under debate. The belief that a high-fiber, low-fat diet could help prevent colon cancer has been questioned. Studies do indicate that exercise and a diet rich in fruits and vegetables can help prevent colon cancer.
- Obesity: Obesity has been identified as a risk factor.

What are the symptoms of Colon Cancer?

In the early stages, colon cancer has no symptoms. When symptoms do occur, they can present as rectal bleeding or a change in bowel movement from normal consistency to pencil shaped stools. While some patients present with bright red blood in their stools or on the toilet tissue, others may present with just a hidden chronic anemia. Rare symptoms linked to colon cancer have included: fatigue, pale skin, persistent nausea or vomiting, unexplained abdominal distension, unexplained weight loss or abdominal pain.

What tests are available to prevent or diagnose Colon Cancer?

Given the finding that adenomatous polyps are precursors to cancer and that polyps and early cancers are usually asymptomatic, there is a strong rationale to support screening asymptomatic individuals for early cancer detection and prevention. Average risk individuals should be offered screening beginning at age 50; if you're 50 yrs or older and have no other risk factors, you're considered at average risk. In the United States, a person's average lifetime risk of colon cancer is about one in 17. For those at average risk, the consortium generally recommends screening by colonoscopy. Alternative methods for CRC screening include yearly rectal exam looking for occult blood (FOBT), flexible sigmoidoscopy every five years, air contrast barium enema, fecal DNA testing, and virtual colonoscopy.

COLONOSCOPY is the preferred modality for screening. Patients are given a light sedation and generally don't remember the procedure. Both cancers and polyps can be accurately detected by colonoscopy. It offers the advantages of complete visualization of the entire colon, detection and removal of polyps, and removal or diagnostic sampling of cancers. Colonoscopy with polypectomy has been shown to significantly reduce expected incidence of CRC by 76 to 90 %. Colonoscopy is recommended every 10 years for average risk individuals with a normal baseline.

YEARLY FECAL OCCULT BLOOD has a poor sensitivity and should only be included as a screening tool in conjunction with Flexible sigmoidoscopy. If the test is positive for finding microscopic blood in the stools, a colonoscopy needs to be done.

With **FLEXIBLE SIGMOIDOSCOPY**, the endoscope only reaches 1/3 of the proximal colon. No sedation is given during the

continued on next page

procedure. In numerous studies it was shown to decrease CRC by 40 to 60 %. Current guidelines for someone wanting to have a flexible sigmoidoscopy are every 5 years; keeping in mind that 2/3 of the colon is not seen.

AIR CONTRAST BARIUM ENEMA is a procedure where patients are awake and barium is used to distend the colon. X rays are taken and the entire colon is seen. Its diagnostic sensitivity is inferior to colonoscopy and it lacks therapeutic capability. As of 2003, it is not a recommended a screening tool but can be an adjunct to Flexible Sigmoidoscopy or incomplete, difficult colonoscopies.

VIRTUAL COLONOSCOPY, also known as CT Colonography, involves CT scanning of the colon after bowel preparation and colonic distention. The test has shown great interest by patients but offers no therapeutic option and is not recommended for CRC screening by multidisciplinary societal guidelines. It is also not covered by Medicare or private insurers.

FECAL DNA TESTING offers hope but is still very much investigational and not recommended as a screening tool.

Genetic testing is recommended along with counseling for individuals with hereditary forms of CRC.

Once Colorectal cancer is found the treatment becomes individualized and can include surgical resection, chemotherapy, radiation or a combination of the three. Treatment is based on the extent of the lesion, appearance of lesions in the lymph nodes or whether the cancer has spread to distant organs. Prognosis ranges from 95% in localized cancers to 10% in metastatic cancers. (3,4)

REFERENCES:

1. ASGE Guideline: Colorectal cancer screening and surveillance. Gastrointestinal endoscopy. 2006;63,546-557

2. Jemal A, Murray T, Ward E, et al. Cancer statistics. CA Cancer J Clin 2005;55:10-30.
3. O'Connell JB, Maggard MA, Ko CY. Colon cancer survival rates with The new American Joint Committee on Cancer sixth edition staging. J Natl Cancer Inst 2004;96:1420-5.
4. Stryker SJ, Wolff BG, Culp CE, et al. Natural history of untreated colonic polyps. Gastroenterology 1987;93:1009-13.

LINKS:

Check these informative websites to learn more about colorectal cancer, complete guidelines for testing, treatment options, diagnostic procedures, signs and symptoms, and tips for prevention:

- www.malibuspecialtycenter.com
- http://www.cancer.org/docroot/CRI/content/CRI_2_2_1X_What_is_colon_and_rectum_cancer_10.asp
- <http://nlm.nih.gov/medlineplus/colorectalcancer.html>
- <http://mayoclinic.com/health/colon-cancer/DS00035>
- www.asge.com.

Nutrition to Support Strength and Fitness in Your Forties and Up – Part 2.

As a continuation of last month's article, our "senior fitness expert" Frank Wilhelmi offers up some valuable information on properly feeding your body. Specifically, he talks about fat. Yes, fat. While those of us focused on a healthy lifestyle cringe at the very thought, fat is indeed an essential nutrient, assuming of course that it is the right type of fat. Click on this link to Frank's website to read his complete article about the nutrient we may loath--but ultimately need--to survive. Link: <http://www.seniorfitness.com/Nutrition.html>

QUICK BITES

HOCKEY: HAZARDOUS TO HEARING?

Part of the allure of hockey is the infectious energy in the crowd at a live game. However, a recent Canadian Medical Association Journal report by University of Alberta Ph.D. candidate William Hodgetts and a colleague points to a very real danger for spectators—potentially permanent hearing damage. Using three games of the 2005 NHL finals in Alberta as a case in point, researchers measured decibel levels (dB A) in the range of 100 to 104.1 dB A over three hours, and levels as high as 120 dB A when the home team, the Edmonton Oilers, scored a goal. This is comparable to the level of a jet airplane taking off! An "average level of 85 dB A for eight hours is generally considered the maximum allowable daily dose of noise." While some type

of hearing protection, even inexpensive earplugs, was found to reduce the sound level by at least 25 to 30 dB (to a relatively normal average daily level), fans seem highly unlikely to wear such protection. And when the decibel level rises above average by as little as 3 dB, the safe exposure time is cut in half. As a result, fans at these particular events got "8,100% of their daily allowable noise dose over the course of the game." The individuals studied reported post-exposure effects including muffling of sounds, mild tinnitus (ringing in the ears), and measurable decreases in hearing thresholds. While these shifts in hearing are generally temporary, disappearing within a few days, the researchers noted that "further noise exposure before full recovery may cause the change to become permanent."

Woodland Hills Location:
22633 Ventura Blvd.
Woodland Hills, CA 91364
Tel: 818.444.5100

Valencia Location:
24515 Town Center
Valencia, CA 91355
Tel: 661.799.1900

Burbank Location:
4111 W. Alameda Ave.
Burbank, CA 91505
Tel: 818.333.1690

Beverly Hills Location:
8670 Wilshire Blvd., Ste 203
Beverly Hills, CA 90211
Tel.: (310) 724-8975