CENEGENICS®
medical institute

VOLUME 1
ISSUE 9
OCT 2008

A MONTHLY NEWSLETTER FOR OUR HIGHLY VALUED CENEGENICS PATIENTS

The Fat and Skinny on Your Weight and Health

The obesity epidemic continues to rage on, but should we make weight our single focus? According to mounting research, the answer is a simple "no."

True, being overweight or obese has been shown to put you in a higher-risk category for chronic conditions, from insulin resistance, Type-2 diabetes, high blood pressure, high cholesterol, stroke, heart attack, congestive heart failure, gallstones, gout, osteoarthritis, sleep apnea and a liver disease called nonalcoholic fatty liver disease (NAFLD). Not to mention a relatively recent landmark study that linked being overweight with higher cancer risk.

But does that mean being skinny equates to being healthy? A study called "The Obese Without Cardiometabolic Risk Factor Clustering and the Normal Weight With Cardiometabolic Risk Factor Clustering" appeared in the August 11 issue of *Archives of Internal Medicine*. The study looked at weight and cardiovascular risk factors in normal weight, overweight and obese individuals to determine the prevalence and correlates of recognized phenotypes for disease risks.

Per the study's introduction, recent research indicates that an individual's cardiovascular risk "may depend jointly on body size and metabolic profile," which means the disease risk linked to obesity may not be the same across the board.

That resulted in further investigation into body size phenotypes, such as the metabolically healthy but obese person and the normal weight person having cardiometabolic abnormalities associated with being overweight or obese.

Lead investigator Rachel P. Wildman, PhD and her research team examined these skinny vs. fat health issues in three main areas: (1) the prevalence of each of six body phenotypes, (2) the demographic and behavioral correlates of clustered cardiometabolic abnormalities if normal weight and (3) the demographic and behavioral correlates of being metabolically healthy if overweight or obese.

Assessing a cross-sectional sample of 5,440 participants (a representative sample of US adults 20 years and older) from the 1999-2004 National Health and Nutrition Examination Surveys (NHANES), Wildman defined normal weight as having a body mass index of <25, overweight as 25.0-29.9 and obese as ≥30.0.

Researchers established two cardiometabolic groups: metabolically healthy (0 or 1 cardiometabolic abnormalities) and metabolically abnormal (≥ 2 cardiometabolic abnormalities). Per the study, the cardiometabolic abnormalities included elevations of blood pressure, triglycerides, fasting plasma glucose, high-sensitivity C-reactive protein along with insulin resistance value and reduced low-density lipoprotein cholesterol (HDL-C) level.

continued on page 2

IN THIS ISSUE

Results: Potentially new definition of how to measure "healthy and fit."

- The metabolically abnormal phenotype was associated with older age, smoking and larger waist circumference—while the metabolically healthy phenotype was associated with moderate alcohol intake and leisure-time physical activity.
- Per the study, the data showed a considerable proportion of overweight and obese US adults are metabolically healthy—but a considerable proportion of normal-weight individuals express a clustering of cardiometabolic abnormalities.
- In the BMI group, 23.5% of the normal-weight study subjects were metabolically abnormal—while 51.3% of the overweight and 31.7% of the obese individuals were metabolically healthy.
- Among US adults, 29.2% of obese men and 35.4% of obese women (19.5 million adults, approximately) had a healthy profile in regards to the standard cardiometabolic risk factors—conversely, 30.1% of normal-weight men and 21.1% of normal-weight women (16.3 million adults, approximately) showed a clustering of cardiometabolic abnormalities.
- Among individuals with two or more metabolic abnormalities, the most common risk factor combinations within all body size groupings were high triglyceride level/low HDL-C level and high blood pressure/high glucose level.

Researchers stated that more study needed to be done into the physiologic mechanisms underlying the different phenotypes and their impact on health.

Body mass index or fitness level?

Rather than focusing on weight and body mass index, a better performer to measuring and maintaining good health may be fitness level. A study published in the December 5, 2007 *Journal of the American Medical Association* (JAMA), Volume 298, No. 21, revealed that fitness is a "strong mortality predictor in older adults" even if they have abdominal adiposity (fat stored around and inside the tummy and waist).

According to the study . . .

- Whether normal weight, overweight or obese, older adults (men/women) who were fit demonstrated a lower mortality risk than unfit adults having normal weight.
- Study subjects in the low fitness group had a four-times higher death rate than those in the higher-fit level.
- Clinicians should consider the importance of preserving functional capacity by recommending regular physical activity for older individuals, normal-weight and overweight alike.

In a December 4, 2007 article released by Reuters (Washington) about the fat-and-fit study—"Fitness trumps fatness in longevity study" by Will Dunham—exercise expert Steven Blair discussed the need to make a lifestyle shift.

Blair, researcher on the study and professor at the Arnold School of Public Health at the University of South Carolina, said, "I believe we have an obesity epidemic. It's a bad sign. We should not ignore obesity . . . But what happens all too often is we focus nearly exclusively on obesity and forget the activity and fitness part. If you're overweight or obese and you're sedentary and unfit and you start taking three 10-minute walks a day and you do that at least five days a week, you're not going to lose an enormous amount of weight . . . But you're going to be much healthier if you do that."

The article also said Blair "stressed the importance of a healthful diet including lots of fruit, vegetables and whole grains."

Better health approach: Cenegenics.

Physical activity and aerobic capacity decline with age—and the prevalence of obesity increases with age. Whether you're normal weight, overweight or obese, you need to take hold of your life and get involved in your health.

As a Cenegenics patient, you have the ability to stay fit and enjoy healthy aging. Our established protocols, based on solid science, help you increase your fitness level while managing your aging process—from reducing body fat and having leaner muscle mass to

Stay the course. Keep fit and lower your mortality risk.
Call your Cenegenics medical team today: 866.953.1510.

Vitamin D: Are you getting enough?

Beth Traylor, MD

We all know about vitamin D—and think we're getting adequate amounts from our diets and supplements, right? Truth be told, most Americans are vitamin D deficient as a result of inadequate dietary intake and lack of exposure to UVB rays.

Vitamin D is actually a steroid hormone derived from the cholesterol molecule. Unlike other steroid hormones, the body has no way of making vitamin D unless you are exposed to sunlight (UVB rays) or ingest it. The skin makes vitamin D when sunlight interacts with a pre-cholesterol molecule. It is then converted in the liver to calcidiol (25-hydroxy vitamin D), representing the storage form of vitamin D and the level we recommend measuring via routine blood testing. From this reservoir, we can synthesize calcitriol (1-alpha 25-dihydroxy cholecalciferol)—an activated form, now a potent steroid hormone, which has long been known for its important role in regulating levels of calcium and phosphorus and in bone mineralization.

More recently, vitamin D receptors have shown to be present in a wide variety of cells and organs: small intestine, colon, bone cells, white blood cells, pancreatic cells, brain, breast, heart, skin, gonads and prostate.

The predominant dietary form of vitamin D is D_2 or ergocalciferol, which is present in egg yolks, fish oil and a number of plants. Natural diets don't contain adequate quantities, so sun exposure or eating foods supplemented with vitamin D is necessary to prevent deficiencies.

The preferred—and much more potent form—of vitamin D is D_3 or cholecalciferol, the type generated by sun exposure. It's also available in an oral supplement form, but be aware that D_2 is the one used more often in supplements and supplemented foods.

In September 2007, an article published in the *Archives of Internal Medicine* reviewed the link between low vitamin D intake and death rates from any cause. The researchers examined and identified studies that included 57,311 patients, following them for an average of 5.7 years. Comparing patients treated with vitamin D supplementation against those not taking supplements, researchers concluded that patients taking vitamin D over an approximate three-year period had an 8% lower risk of death from all causes.

Mechanisms by which vitamin D supplementation would decrease all cause mortality are not entirely clear. The active form acts hormonally to affect calcium metabolism, bone formation, cell growth and division, immune system regulation, endothelium and vessel wall function, as well as the endocrine system.

In adults, vitamin D deficiency has been linked to osteoporosis/fractures, muscle weakness, fibromyalgia, chronic pain, depression, cancers, autoimmune diseases including lupus and rheumatoid arthritis, infectious diseases, diabetes and cardiovascular disease.

Studies have been published linking higher levels of vitamin D with slowing the aging process and preventing age-related deterioration of the end caps of chromosomes called telomeres. A study published in the November 2007 *American Journal of Clinical Nutrition* concluded that the "results demonstrate for the first time that people who have higher levels of vitamin D may age more slowly than people with lower levels of vitamin D." The study went on to state that this could help explain how vitamin D has a protective effect on age-related diseases, such as heart disease and cancer.

Vitamin D deficiency is an unrecognized epidemic among both children and adults in the United States. Periodic monitoring of blood levels in conjunction with sensible sun exposure (5-10 minutes of exposure of the arms and legs or the hands, arms and face, 2-3 times per week) and increased dietary and supplemental vitamin D intakes are reasonable approaches to guarantee adequate levels in most individuals.

For additional information on quality sources of vitamin D, discuss the issue with your Cenegenics Medical Institute physician.

Stay the course. Keep fit and lower your mortality risk.
Call your Cenegenics medical team today: 866.953.1510.