



## A MONTHLY NEWSLETTER FOR OUR HIGHLY VALUED CENEGENICS PATIENTS.



### INFLAMMATION ACCELERATES AGING : WHAT YOU NEED TO KNOW

The inflammatory system goes into battle, helping shield us from invaders. Collateral damage results from the fight. Literature is beginning to mount on how silent inflammation is the underlying cause of most chronic diseases, such as obesity, heart disease, cancer and Alzheimer's.

According to a *Discover* magazine article by Kathleen McGowan—entitled “Can We Cure Aging?”—gerontologists in recent years “have overturned much of the conventional wisdom about getting old.” They now realize that aging “is actually something our own bodies create, a side effect of the essential inflammatory system that protects us against infectious disease . . . as we fight off invaders, we inflict massive collateral damage on ourselves, poisoning our own organs and breaking down our own tissues. We are our own worst enemy.”

The question now becomes whether we wish to manage our aging by controlling our inflammatory system to live better or ignore it and reap the consequences.

**Prevention through prediction.** The focus is rethinking our views on diseases, what they are and where they come from. The fact is that left unchecked, the inflammatory system eventually “runs out of bounds and damages organs throughout the body.”

“Inflammatory factors predict virtually all bad outcomes in humans,” Russell Tracy said in the *Discover* article. Tracy is a professor of pathology and biochemistry at the University of Vermont College of Medicine. His pioneering research demonstrated the link between inflammation and heart disease. He says inflammation “predicts having heart attacks, having heart failure, becoming diabetic; predicts becoming fragile in old age; predicts cognitive function decline, even cancer to a certain extent.”

Physicians are determining ways to decrease the ravages of silent inflammation—using different markers for inflammation such as C-reactive protein (CRP)—to promote healthier aging and reverse chronic disease. CRP is a plasma protein that helps regulate acellular activity and functioning in the immune system. As an acute phase protein, CRP rises during systemic inflammation.

In the late 90s, Tracy and his colleagues showed that CRP is an “amazingly accurate predictor of a future heart attack—as good or better than high blood pressure or high cholesterol.”

In 2003, after reviewing evidence linking inflammatory markers such as CRP with coronary heart disease and stroke,

the American Heart Association and Centers for Disease Control and Prevention published a joint scientific statement regarding the use of inflammatory markers in clinical and public health practice. According to the American Heart Association's site . . .

- A growing number of studies have examined whether hs-CRP (high sensitivity CRP) can predict recurrent cardiovascular disease, stroke and death in different settings.
- High levels of hs-CRP consistently predict recurrent coronary events in patients with unstable angina and acute myocardial infarction (heart attack).
- Higher hs-CRP levels also are associated with lower survival rates in these patients.
- Many studies have suggested that after adjusting for other prognostic factors, hs-CRP is useful as a risk predictor.
- Studies also suggest that higher levels of hs-CRP may increase the risk that an artery will reclose after it's been opened by balloon angioplasty.
- High levels of hs-CRP in the blood also seem to predict prognosis and recurrent events in patients with stroke or peripheral arterial disease.

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## HAVE A DELICIOUS, LOW-GLYCEMIC RECIPE?

It's not uncommon. When patients adjust to a new nutritional protocol—such as the Cenegenics® Nutrition Plan—they often identify a few favorite foods as “safe” or “good” . . . then eat them monotonously until no longer palatable. The result? Decreased motivation, bingeing, excessive “cheating” and complete lack of compliance with their program.

The key is variety. Your healthy food choices can—and should—be diverse to ensure a well-rounded diet and offset boredom.

Helping you achieve your health goals is one of Cenegenics' top priorities. That's why we're helping you stay on your nutrition plan by creating a cookbook for our patients, by our patients.

Join us in this exciting project. Please send your favorite low-glycemic/Paleolithic recipes, quick-fix snacks and restaurant menu options to [cvalenti@cenegenics.com](mailto:cvalenti@cenegenics.com). We'll compile the best ones and distribute them to our valued Cenegenics patients to enjoy.

**Cenegenics® helps you decrease silent inflammation.** As a Cenegenics patient, you know firsthand that our leading-edge protocols promote healthy aging. An important part of what we do is identify and meet criteria, like those for silent inflammation, to place you in the lowest possible risk category for disease.

Periodic lab evaluations and consults with your Cenegenics medical team to monitor your progress keep you staying the course for optimal health. We are here for you: Our teams are available Monday through Friday, 6 am to 6 pm PST, by calling 866.953.1510.

**IT'S NO SECRET: INFLAMMATION INCREASES WITH AGE.** While many relentlessly pursue the secret to living longer, the real secret is learning how to age well.

McGowan's article looked at what the word “aging” means to most us. “If you talk to many old people, what they are really desperate about is not that fact that they're going to die, but that they are going to be sick, dependent and have to rely on others,” said Luigi Ferrucci, chief of the Longitudinal Study of Aging.

As the *Discover* article points out, many prominent gerontologists now see aging as a “consequence of inflammation.” Clearly, silent inflammation accelerates the clock. It's similar to “little waves lapping on the shore. It's a relatively low level of activity, one that sustained over time wears away at the beach and stimulates other bad events,” Harvey Jay Cohen said. Cohen is chairman of the department of medicine and director of the Center for the Study of Aging at Duke University Medical Center.

Ferrucci's research revealed “inflammatory activity breaks down skeletal muscle, which leads to the loss of lean muscle mass.”

Per the article, people who suffer from Alzheimer's “bristle with inflammatory cells and cytokines” where the brain is clogged with senility-associated plaques. Research has shown that cytokines block memory formation.

But now we're seeing silent inflammation as treatable. And that may mean the chronic diseases linked to inflammation may be treatable as well, from diabetes, dementia and heart disease to even cancer. As McGowan writes, “It would almost surely allow us to live better, increasing the odds that we could all spend our old age feeling . . . healthy, vibrant and vital.”

**How can you reduce inflammation?** The inflammatory response can be “sharply inhibited” through dietary restriction and lifestyle changes—which subsequently promote better health.

- Stay clear of polyunsaturated oils and trans fats.
- Increase vegetable intake, which gives you more antioxidants.
- Opt for low-glycemic nutrition.
- Exercise regularly and maintain a healthy weight—fat cells generate more inflammation.
- Take a baby aspirin daily, if over 45.
- Augment your diet with omega-3 fatty acids that help the immune system modulate response, curcumin, garlic, ginger, pomegranate, luteolin, lipoic acid, 5-Loxin, vitamin K and vitamin E.
- Have your hs-CRP levels tested.

If premenopausal women—up to their mid 30s—are menstruating on a regular basis, we can be fairly certain the estrogen and progesterone cycles are intact. However, the testosterone and DHEA levels may be waning and contributing to early bone loss, decreased libido, decreasing energy and changing body composition.

In peri and postmenopausal women, these issues get even worse, opening the door for a host of other symptoms to rear their ugly heads: hot flashes, night sweats, insomnia, mood swings and depression usually with anxiety, weight gain around the middle, skin changes, vaginal dryness and urinary incontinence. And that can mean a reduced quality of life and difficulty functioning.

Add to that the probability that their husbands are going through hormonal changes. Many of us have seen our mothers and loved ones go through it—and merely accepted it. The hormone replacement therapies used for years didn't help. They were one size fits all, synthetic and given by routes that cause an increased risk for complications. When the Women's Health Initiative was released several years ago, the traditional medical establishment panicked and women across the world were taken off hormonal therapies and left to suffer.

We won't even begin to touch on all the problems and flaws of the study and the conclusions they came to, but suffice to say, recent studies looking at more natural forms have provided symptomatic relief—as well as reduced risk of various diseases, i.e. osteoporosis, colon cancer, etc.

By optimizing hormone values to levels that protect us from the symptoms of hormonal decline and the diseases associated with this decline, we hope to live better longer.

In future newsletters, we will discuss the various studies that delineate the myths and realities of hormone replacement therapies and how to use this knowledge to your advantage.

During midlife, females undergo profound changes in their physiology. No one disputes these changes result in a variety of negative symptoms. But most middle-aged men will admit they also are experiencing the same “slow down” symptoms, which include (but are not limited to) weight gain, loss of energy, memory issues, loss of focus or clarity of thought, mood changes and overall decrease in sense of well-being.

Until recently, we simply didn't address these issues in males. The good news is that the days of simply turning a blind eye to the ravages of time may soon be a thing of the past. More and more the medical literature is looking at the issues of declining hormones in men. While conservative estimates put the incidence of testosterone deficiency at between 4 to 5 million men, only 5% to 10% of these individuals are currently being treated.

Testosterone is more than just the male “sex hormone.” It modulates metabolic function in a number of diverse tissues and organs. Testosterone's target organs include the brain, effecting mood cognition and libido; muscles, increasing strength and muscle mass; bones, improving bone density; bone marrow, stimulating stem cells; kidneys, producing more red blood cells; male sex organs, responsible for libido and sexual performance; and the liver, which synthesizes serum proteins in response to testosterone.

Evidence clearly indicates that men with declining testosterone levels are at greater risk for a number of chronic diseases and have an increased risk of mortality as a result. A study funded by the National Institute on Aging and the American Heart Association and presented in June 2007—“Androgen Deficiency and All-Cause Mortality in Older Men: The Rancho Bernardo Study”—showed that men older than 50 with androgen (testosterone) deficiency are at a greater risk for all-cause mortality than their peers with age-appropriate testosterone levels.

The good news is that even low-dose testosterone replacement therapy is being shown to be beneficial. A study presented by Dr. Christopher J. Malkin at the joint congress of the European Society of Cardiology and World Health Federation 2006 was the largest prospective study to date on testosterone replacement in heart failure patients. It showed there were significant functional and symptomatic improvements in patients with moderate chronic heart failure. Testosterone—once thought to be detrimental to the heart—is now being shown to be protective. Androgens actually have anti-inflammatory effects and help to vasodilate (open up) the coronary arteries.

Other more obvious potential benefits for the general population include improvement in libido and erectile function in men, improved mood and decreased depression, increase in muscle strength and size, increase in bone mineral density (leading to a decreased risk of fracture).

Cenegenics believes that when testosterone therapy is administered properly to a deficient individual, it is a safe and effective means of improving overall quality of life and sense of well-being.

In future issues of our patient newsletter, we will examine the evidence that is being published in the medical literature on these various subjects.



Call 1.866.953.1510.

Your Cenegenics® medical team is dedicated to helping you live a fuller, healthier life.