

Dr. Stephen Sinatra's

HEART, HEALTH & NUTRITION

A Cardiologist's Guide to Total Wellness

JANUARY 2012



STEPHEN SINATRA, MD

Dear Reader,

I can't tell you how happy I am to be writing this newsletter for yet another year. But as our current "information age" exponentially accelerates the pace at which important medical news is generated, I'm finding that I simply can't provide you with all the cutting-edge health and nutrition advice you need for optimal cardiovascular health in these eight print pages alone. The bottom line?

If this newsletter is your only source of contact with me and my medical advice, you're missing out on a ton of useful information that I've started offering through a wide variety of digital mediums.

Let me use my website as an example. Over the past year, I've published over 500 pages of heart-health content on drsinatra.com, all of which you can instantly access 24/7 with the click of a mouse. And the range of this content is vast. It includes hundreds of articles on the most important heart-related topics, all organized in over a dozen different Health Centers. Then there's my recipe archive, which houses more than 100 heart-healthy recipes for you to search through and print out.

Also on drsinatra.com, you can view my ever-growing bank of videos in order to receive my advice "straight from the horse's mouth," so to speak. And for those of you who love the Q&A section of this newsletter, I've compiled a substantial Q&A archive of the most common and relevant questions and answers I've addressed over the years—all online for you to peruse at your leisure.

My website is just the tip of my online information iceberg. As you can see in the "Get More of Dr. Sinatra" box to the right, I deliver additional heart, health, and nutrition advice on my blog, in my eletter, and through my presence on Facebook and Twitter. One of the best things about all of these online forms of communication is that I can use them as frequently as necessary to inform you of relevant breaking health news. You can also, in turn, use these online platforms to contact me directly with your questions. Consequently, I highly encourage you to regularly visit my blog (blog.drsinatra.com) and engage with me on Facebook (facebook.com/SinatraMD) and Twitter (twitter.com/SinatraMD). In addition, if you're not currently receiving my free eletter, sign up today at drsinatra.com.

So how about making a New Year's resolution to become a new you—a new you *online*? Your heart health really depends on it, since reading only print media these days means you're denying yourself a whole wide world of wellness.

Stephen Sinatra M.D.

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- Healthy Comfort Foods
- Increase Your Energy

In Upcoming Eletters

- 5 Ways to Detox Your Body
- Foods That Lower Your Blood Pressure

Earthing/Hypertension Trial

I'm conducting a study with Dr. Howard Elkin on how Earthing affects blood pressure. If you are hypertensive, between the ages of 30 and 80, and live near Los Angeles, contact Dr. Elkin (at 562-945-3753 or heartwise.com) to be considered for participation.

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Stephen Sinatra, MD, FACC, FACN, CNS is a board-certified cardiologist and certified bioenergetic analyst with more than 30 years of experience in helping patients prevent and reverse heart disease. Dr. Sinatra integrates the best conventional medical treatments with complementary nutritional and psychological therapies.

Dr. Sinatra is an Assistant Clinical Professor at the University of Connecticut School of Medicine and is author of numerous books including *Lower Your Blood Pressure in Eight Weeks*, *Heart Sense for Women*, *Reverse Heart Disease Now*, and *Earthing*. He is a Fellow of the American College of Cardiology; Fellow of the American College of Nutrition; board certified in internal medicine and cardiology; and certified in anti-aging medicine, clinical nutrition, and bioenergetic analysis.

VITAMIN D DOWNLOAD

Winter's upon us again, which means less sunlight and less vitamin D, particularly for those of us living in the gray Northeast. That's because vitamin D is made in the skin by the action of sunlight on a type of cholesterol compound. Actually, it's not so much a vitamin that emerges from this chemical reaction but a hormone-like substance that's central to the development, growth, and maintenance of a healthy body. Just for starters, vitamin D is important for immunity, calcium absorption and utilization, insulin secretion, blood pressure, and heart muscle function and structure.

But multiple population studies now document widespread vitamin D deficiency, and not just during the winter months in the darker northern latitudes. I've seen estimates that as much as half of the world's population is D deficient. Even in sun-drenched Miami, according to one study, fully one-quarter of the population comes up short for this nutrient.

My primary interest in vitamin D is, of course, its role in heart health. Evidence suggests that D deficiency is indeed associated with cardiovascular disease (see *D Deficiency and Heart Health*, page 3). Yet while vitamin D may play a role in heart health, just how substantial that role is, and how much vitamin D is necessary for cardiovascular protection, is not clear. For that reason I decided to interview Michael F. Holick, M.D., Ph.D., director of the Vitamin D, Skin and Bone Research Laboratory at Boston University Medical Center and one of the world's leading medical experts on vitamin D.

Note that throughout the following interview Dr. Holick repeatedly mentions blood vitamin D levels, which are measured as nanograms per milliliter of serum 25-hydroxyvitamin D by a standard blood test available through doctors.

Sinatra: Does research tell us conclusively about the importance of vitamin D for heart health?

Holick: The published research is mostly diet data and associations that show things like peripheral vascular disease being reduced by 80 percent in people who have blood levels greater than 29 ng/mL, or that vitamin D may have a significant role in reducing atherosclerotic plaque formation. One study shows that the farther you live from the equator the higher your blood pressure. Lots of pieces of information point in a positive direction, but we still need controlled studies looking at cardiovascular risk.

Sinatra: There has been some controversy about vitamin D and calcium actually *increasing* the incidence of cardiovascular disease.

Holick: One study, done with obese, African-American men and women, suggested that the higher the blood levels of vitamin D, the higher the association with cardiovascular disease. But pretty much 100 percent of those in the study were basically vitamin D deficient and practically no one was taking vitamin D. They were all obese with lots of diabetes. Trying to make sense out of this was a statistical quirk and nothing else. In terms of calcium, however, that is a different issue. There is some evidence that women taking more than 1,200 mg a day are at an increased risk for vascular calcification.

Sinatra: I've written about that and, therefore, do not recommend more than 750 mg a day of calcium.

Holick: There was a nice study several years ago showing that if you have a higher intake of vitamin D you need less calcium to impact your bones positively.

Sinatra: Years ago I attended a medical conference where you talked about how rampant vitamin D deficiency was. You mentioned that even medical students in Boston, where you are located, were deficient.

Holick: That's still true today, and the main reason is they aren't taking any supplements and there is pretty much no vitamin D in the diet. Plus, they aren't getting any sunlight. People are being taught that you should only be going out in the early

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PA 17604-9915, or send e-mail to feedback@drs Sinatra.com. He maintains a website with additional information and services at www.drSinatra.com.

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morning or late afternoon because the sun is less damaging to your skin, and you will still get your vitamin D. But we have shown that you make no vitamin D before about 10 a.m., even in the summertime, and essentially none after 3 p.m. as well.

Sinatra: What represents a vitamin D deficiency?

Holick: Deficiency is below 20 ng/mL and is common in both children and adults worldwide. Most of the population of the world is deficient. The major cause globally is an under-appreciation of sunlight's role in providing humans with their vitamin D requirement. Very few foods naturally contain vitamin D, and those that do have very variable vitamin D content.

Sinatra: What do you think about getting 15 minutes to a half-hour of midday sunlight?

Holick: While it depends on time of day, season, and latitude, 30 minutes in a bathing suit is equivalent to taking about 15,000 to 20,000 IUs of D. I do tell people to protect their face. It is only 9 percent of one's body surface but is the most sun-exposed and sun-damaged. So there is no reason to overexpose your face—but arms, legs, abdomen, and back, that's perfectly fine.

Sinatra: Do people need to check their vitamin D levels by getting a blood test?

Holick: In general, people don't need to take the test. They just need to take vitamin D as a supplement. I routinely recommend 2,000 IUs for adults and 400 to 1,000 IUs for children. There is no downside at such dosages. I aim for a blood level between 40 to 60 ng/mL. I consider 30 ng/mL to be the absolute minimum to reap all the benefits.

Sinatra: Some recommend taking much higher doses of vitamin D than what you recommend.

Holick: I have some of my patients on 5,000 IUs and they have blood levels in the range of 55 to 75 ng/mL. With 10,000 IUs you could definitely reach 90, and maybe 110. I prefer not to do it. There is no evidence for toxicity, nor is there evidence for additional benefits, so I just don't encourage it.

Sinatra: I have been recommending about the same dosage that you do. In your opinion, would there be any benefit to go higher for people with coronary artery disease or heart failure?

Holick: There is no evidence for that. The ideal blood level range is 40 to 60 ng/mL.

Sinatra: Finally, what is the best form of vitamin D? It is available on the market as either D2 or D3.

D Deficiency and Heart Health

Epidemiological studies involving surveys and health databases have repeatedly linked insufficient blood levels of vitamin D to a higher risk of a number of cardiovascular-related issues. To be sure, these are statistical analyses and not direct cause-and-effect studies. But they do suggest a broad influence of vitamin D on the heart and circulatory function. Among the findings related to low blood levels of vitamin D are:

- Increased arterial stiffness and endothelial dysfunction
- Increased carotid atherosclerosis
- Higher blood sugar
- A higher risk of developing diabetes among individuals with pre-diabetic conditions
- More fatal strokes
- A higher risk of heart failure and heart attacks
- A higher risk of fatal cancer among patients with cardiovascular disease
- A higher risk of dementia

Holick: In my opinion, and based on my research, D2 is equally as effective as D3 in maintaining vitamin D status. Just make sure that the supplement comes from a reputable company. I've done analyses on more than a dozen brands and found that the content stated on the label is indeed what you get in the pill.

Take-Away Tips

Perhaps the most important message in Dr. Holick's vitamin D primer is that most of us just don't get enough vitamin D. So keep these simple tips in mind to help keep you out of the ranks of the D deficient:

- Take 2,000–3,000 IUs of vitamin D per day.
- Primary food sources of vitamin D are fortified milk and milk products, as well as fish liver oil.
- Get at least 20 minutes per day of midday sun.
- Avoid the use of sunblocks, which hamper the skin's production of vitamin D (and also contain many suspect and potentially carcinogenic ingredients). If you feel the need to protect your face, just wear a wide-brimmed hat or a special UV sun mask.

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SINATRA'S SUPER FOODS: CINNAMON



Okay, so maybe *technically speaking*, cinnamon is a Super Spice, not a Super Food. But as far as I'm concerned, it's super nonetheless. That's because cinnamon possesses major antioxidant power, which enables it to squelch the free radicals in the body that trigger inflammatory conditions, such as heart disease.

Cinnamon contains not just one but five antioxidants. *Cinnamaldehyde*, the most powerful of cinnamon's antioxidants, has been shown to reduce arterial inflammation as well as blood clots. And researchers have found that cinnamon also stimulates the release of nitric oxide, which causes blood vessels to dilate and increases blood flow and circulation.

In addition to enhancing circulation, cinnamon also enhances the ability of insulin to metabolize glucose. This helps to control blood sugar levels by increasing glucose metabolism (burning calories at a faster rate). One study involving diabetics found that those given cinnamon had blood sugar readings that were, on average, 20 percent lower than those in a control group. And when the

participants stopped taking the cinnamon, their blood sugar readings went back up.

If you're still not sold on cinnamon's superlative qualities, know that the spice has also been shown to keep your brain young and sharp. In one study, participants chewing cinnamon gum performed an array of mental tasks better than those who chewed a different flavor of gum or no gum at all.

A Sprinkle a Day

Cinnamon is an easy spice to include in your diet as it often brings back childhood memories of holidays and special times. And as it turns out, it doesn't take a lot of cinnamon to produce reductions in blood sugar levels. In fact, researchers estimate that about one-quarter teaspoon of cinnamon taken two to three times daily can yield profound glucose-lowering effects.

So use cinnamon liberally on the old standard comfort foods like oatmeal and toast. Sweeten hot tea, smoothies, salads, cereals, yogurt, fresh fruits, and even vegetables with a few dashes. Use it often when baking, as in the following recipe. And even try cinnamon in unexpected recipes, like chili and tomato sauces. ■

Awesome Apple Crisp

10 organic apples, peeled, cored, and chopped
1½ cups organic apple juice
3 Tbsp. ground cinnamon, divided
1½ tsp. ground nutmeg, divided

4 cups rolled oats
½ cup amaranth flour
1½ cups pure maple syrup
¼ cup walnut oil

Preheat oven to 350° F. Spread apples in a large baking dish and cover with apple juice. Sprinkle with 1 tablespoon cinnamon and ½ teaspoon nutmeg. Place oats in a bowl. Add 2 tablespoons cinnamon, 1 teaspoon nutmeg, and the flour, and toss to mix. Add maple syrup and walnut oil and blend well (mixture should be crumbly). Spread the mixture over the apples. Bake 40 minutes, or until apples are tender and juices are bubbling. Let cool. Serve warm with whipped cream or ice cream. Makes 12 servings.

Nutrition Facts (per serving):

Calories 440, Fat 5 g, Sodium 13 mg, Carbs 82 g, Fiber 10 g, Protein 8 g

For more Sinatra's Super Foods go to drsinatra.com

NUTRIENT SCIENCE—GREEN TEA

After the excesses of the holidays, many people choose this time of year to get serious about losing weight. My general approach to weight loss has always been simple: Eat to the point of satisfaction rather than fullness and make sure you

get enough physical activity on a regular basis. But in addition to this basic advice, I also recommend green tea to dieters—a weight-loss strategy I adopted years ago when I treated patients at a weight-loss clinic in my hospital.

Regular consumption of green tea has long been associated with a reduced risk of coronary heart disease, and, for that reason, I have been a long-time green tea advocate. And one recent study from China, where green tea is widely consumed, indicated that it may be helpful against the inflammation and oxidative stress associated with atrial fibrillation as well. (See my *Heart Beat* item on atrial fibrillation on page 6.)

Heart-health benefits aside, green tea has also been shown to aid weight loss. It's thought that compounds called catechins in green tea and green tea extract generate a thermogenic effect, meaning they are able to enhance fat-burning by increasing the metabolism of fat. This effect takes place even at rest. Studies done in Asia have repeatedly shown weight loss, even significant, from the regular consumption of green tea compounds. What's interesting is that regular or black tea will not do the same thing.

I used to tell my weight-loss patients, as well as my heart patients, to drink two cups of green tea a day. Sometimes I would hear back that patients didn't like the tart taste of green tea, and they didn't want

to sweeten it with sugar. I found that by adding a bit of ribose powder to it, or combining it with ginger tea, you minimize the tartness but still reap the fat-burning effect.

I recently developed a weight-loss supplement and made sure it included green tea. The form I used is a unique green tea extract bound to phosphatidylcholine, which is a natural substance derived from soy lecithin that increases the bioavailability of the catechins in the body. Phosphatidylcholine contributes to healthy elasticity and permeability of cell membranes, including red blood cells and platelets. In a 2009 three-month study, Italian researchers found that adding the extract to a calorie-restrictive diet resulted in significantly greater weight loss than the diet alone.

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THE COOKING CARDIOLOGIST

FIGHTING HEART DISEASE FROM THE KITCHEN—ONE RECIPE AT A TIME

Not just an old wives' tale, chicken soup really does soothe colds and the flu. Like most protein foods, chicken contains a natural amino acid called cysteine. A form of this amino acid called N-acetyl cysteine (NAC) is a powerful antioxidant that works in the body to strengthen immunity. It has been one of my favorite winter supplements for years because it's been shown to help alleviate flu symptoms. NAC is also used in pharmaceutical products as a mucus-dissolving agent for respiratory conditions that result in excessive or unusually thick mucus. Add in the blood pressure-lowering benefits of the onions and garlic in this soup and it becomes a handy heart-healthy recipe to rely on throughout cold and flu season.

Chicken, Rice, and Cilantro Soup

3 to 4 quarts water	2 or 3 small red potatoes, unskinned and cut into cubes	1 cup brown rice, prepared according to package directions
3 or 4 carrots, sliced	1 small bunch kale or broccoli, cut into bite-size pieces	¼ tsp. olive oil
3 celery stalks, chopped	2 to 3 organic chicken breasts, with the bone in	¼ tsp. salt
2 cloves garlic, chopped		¼ tsp. pepper
1 small onion, chopped		1 tsp. fresh cilantro, chopped

Stew carrots, celery, garlic, onion, potatoes, kale or broccoli, and chicken for 3 to 4 hours in the water. If you'd like a creamier soup, remove ¾ of vegetables and all the chicken and purée the remaining soup. Stir in the cooked rice just before serving. Add olive oil, salt, pepper, and fresh chopped cilantro. Makes 4 servings.

Nutrition Facts (per serving):

Calories 260, Fat 5 g, Sodium 91 mg, Carbs 39 g, Fiber 3 g, Protein 14 g

For more heart-healthy recipes go to drs Sinatra.com



Possible Drug Alternative for Aortic Stenosis

One of the most common problems I saw in my practice among patients over 65 was calcification of the aortic valve—the valve through which blood is powerfully ejected from the left ventricle into the aorta and the circulatory system. Every year, this problem, known as aortic valve stenosis, causes some 10,000 to 15,000 deaths in North America, and upwards of 80,000 heart surgeries.

Aortic valve stenosis typically presents itself as angina and shortness of breath on exertion, and people can develop heart failure, pulmonary edema, or syncope (passing out). Up until now, the only option to treat a stiff, calcified valve and save lives has been valve replacement surgery. But a recent study from Quebec suggests that a class of drugs called angiotensin-receptor blockers (ARBs), used primarily to treat hypertension, may reduce the wear and tear on aging heart valves and minimize the need for costly surgery.

In their study, researchers at the Quebec Heart & Lung Institute examined calcified aortic valves removed from 208 patients (mean age 69) who underwent valve replacement surgery. They then analyzed the condition of the natural valves and the type of medication the patients had taken previously. They further identified a subgroup of patients with hypertension and who were either on medication (ACE inhibitors or ARBs) or no medication. The researchers found a significantly lower degree of damage and calcification, meaning lesser stenosis, among ARB takers compared to patients on ACE inhibitors or no hypertension medication.

The study raises the hope of a possible drug alternative to treat aortic stenosis. Normally, I would not be excited at such a prospect. But ARBs are very well-tolerated drugs that I have prescribed many times. They lower high blood pressure and also the pressure of the sheer forces going through the valve. So for me, ARBs may be an effective way to avoid surgery for anybody with nonsignificant calcification and a history of high blood pressure.

Reference

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Coumadin Still King for Most with A-Fib

Atrial fibrillation—A-Fib for short—ranks as the most common cardiac arrhythmia, affecting about 2 million Americans. It causes about one-third of strokes over the age of 65. The condition is due to the upper chambers of the heart, the atria, vibrating or quivering instead of neatly contracting. A-Fib patients may feel a fluttering and quivering of the heart, some dizziness, lightheadedness, and even shortness of breath. As scary as those symptoms are, the big danger is pooling of blood and clot formation inside the heart that can lead to a stroke.

Traditionally, doctors prescribe the time-tested blood thinner Coumadin (warfarin) to reduce this risk. A new study out of Denmark strongly supports this approach. Researchers at Copenhagen University collected data from more than 146,000 patients registered in several national health registries and found that Coumadin was still the most effective for patients with the highest stroke risk. Coumadin “consistently lowered the risk” of clots compared to aspirin, they said.

During my years of active clinical practice, A-Fib patients constantly begged me to be weaned off of Coumadin. My opinion always was, and still is, that if you have moderate to severe A-Fib, Coumadin is the remedy of choice. There are newer blood thinners on the market (Pradaxa is the best known), but there isn't enough feedback yet to regard them as heirs to the Coumadin throne.

For patients with low-risk A-Fib, however, I put on my integrative hat and opt for natural anticoagulants such as garlic, fish oil, and nattokinase. Earthing is another great blood-thinning option, but I wouldn't use it in connection with Coumadin as the two together have the potential to thin the blood too much.

Reference

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Super Anti-Aging Recipe: Mediterranean Diet + CoQ10

Spanish researchers recently reported on a unique study that showed that a Mediterranean diet along with a CoQ10 supplement resulted in anti-inflammatory benefits beyond that of the diet alone.

Specifically their findings indicate that this diet/CoQ10 combo offers superior prevention and therapeutic benefits against the interior cell activity that leads to the chronic inflammation and oxidative stress involved in cardiovascular and neurodegenerative diseases.

The researchers from the University of Cordoba used 200 mg daily of CoQ10 in their study to supplement a Mediterranean diet, which emphasizes fresh seasonal fruits and vegetables, whole grain pastas and bread, fish, olive oil, and organic flavorings such as basil, oregano, lemon, garlic, mint, and rosemary. Meat and sweets are minimized.

I'd also like to mention a different study out of Taiwan that demonstrated CoQ10's ability to reduce a telltale biochemical indicator of free-radical oxidative stress. Specifically, researchers found a nearly 30 percent reduction of blood malondialdehyde levels at the end of a three-month trial in which 43 subjects with pronounced coronary artery disease (CAD) took either CoQ10 or a placebo on a daily basis. Their study also documented increases in two major antioxidants produced in the body, which are associated with CoQ10 intake.

The researchers concluded that a CoQ10 dose of 150 mg "can decrease oxidative stress and increase antioxidant enzyme activity in patients with CAD." The results are not surprising to me. If I had to choose only one supplement to take, it would be CoQ10.

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Dr. Sinatra's HEALTHY HEART BLOG

The technological age we live in has brought us many amazing devices—microwave ovens, cell phones, and Wi-Fi connections, just to name a few. I am, however, concerned about the serious health dangers that may be associated with these tools of convenience, and I often get questions about the safety of such technologies. That's what prompted me to write the following blog:

My short answer when asked whether microwave ovens are safe is that they are bad news. I shun them because of the electromagnetic radiation (EMR) they emit.

The FDA has regulated the manufacture of these ovens since 1971 and says they're safe to use. A federal standard limits the amount of microwave energy that can leak out of an oven and the FDA says the limit is far below the level known to be harmful and that your level of exposure to microwave energy drops dramatically as you move away from the oven. That hasn't been my experience.

On numerous occasions over the years, I've checked other people's microwaves for leaks

by using an inexpensive, handheld radiation meter. I get the same result every time: The meter goes wild. That's why no matter what the FDA says, it's impossible for me to watch the meter and believe we're safe.

Additional Thoughts

All kinds of electronic toxins, collectively known as electropollution, permeate our air as they are generated by everything from high-tension electrical wires, wiring in the walls of homes and offices, cell phones, wireless networks, and home appliances such as radios, televisions, and, of course, microwaves. Consider the following choices to help minimize your exposure to electropollution:

- Choose corded phones over cordless and cell phones
- Choose speaker phones over Bluetooth
- Choose DSL over Wi-Fi

And keep in mind that the practice of Earthing—where you physically reconnect with the earth's energy field either by going barefoot or having skin contact while sitting or lying down outside on concrete, grass, stone, or sand—can help protect the body against the ill effects caused by electropollution. Just 40 minutes a day can make a difference.

Join the Conversation...

You and your fellow readers are a never-ending source of inspiration to me and to each other. I encourage you to read more of my blogs, ask me a question, or post your thoughts at blog.dr Sinatra.com.

Dr. Stephen Sinatra's

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Volume 18, Number 1

INSIDE THIS ISSUE:

- Dear Reader: My Online Advice Options1
- Vitamin D Download.....2
- Sinatra's Super Foods: Cinnamon4
- Nutrient Science—Green Tea.....4
- The Cooking Cardiologist: Chicken, Rice, and Cilantro Soup5
- Heart Beat: Drug for Aortic Stenosis; Coumadin Still King; The Mediterranean Diet/CoQ10 Combo6
- Dr. Sinatra's Healthy Heart Blog: Electropollution and Heart Health7

"Drugs are not always necessary. Belief in recovery always is."

—Norman Cousins 1915–1990

Q & A Session

Keep those questions coming! Send an email to feedback@drs Sinatra.com, or write to me at Dr. Sinatra Feedback, P.O. Box 3264, Lancaster, PA 17604-9915.

Screening for Cardiovascular Risks

What are the most important screening tests that new patients should ask their doctors for if they have suspected risks for cardiovascular disease, such as metabolic syndrome?

Dr. Sinatra replies: First off, if you have online access, I highly encourage you to visit my **Diagnostics Health Center** at drs Sinatra.com, where I outline in detail the array of tests that will best assess your risk of heart disease. Metabolic syndrome, in particular, is a symptomless precursor to heart disease and diabetes. The telltale sign is a waistline over 40 inches for a man and 35 inches for a woman. You can measure your midriff on your own with a cloth measuring tape, but you'll need a doctor to check out the other indicators, which include insulin, blood pressure, and cholesterol levels.

If your tests do indicate metabolic syndrome, then you really need to keep a close eye on your glucose, hemoglobin A1c (a long-term glucose level), and triglyceride levels. Cardiovascular disease is an inflammatory disease and these factors are indicators of inflammation within the body.

If you are specifically concerned about cholesterol, have your doctor order a VAP test (thevaptest.com) or an LPP profile (spectracell.com). These are advanced lipid tests that assess the presence of dysfunctional and inflammatory cholesterol particles. Standard lipid tests are worthless. If the advanced tests indicate too much small particle inflammatory cholesterol in your blood, I recommend niacin, nattokinase, and tocotrienol supplements.

See more Q & As online at drs Sinatra.com