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Just In

Whole Foods Best for Lowering Cholesterol

Making fruits, vegetables, legumes and whole grains a significant part of a diet low in saturated fat and cholesterol is your best bet for a healthy heart. It's likely to result in greater improvements in total and low-density lipoprotein cholesterol (LDL, the "bad" cholesterol) than turning to reduced-fat foods like low-fat cheeses and low-fat frozen entrees.

That's what researchers at Stanford University found in a recent study. They split 120 volunteers into two groups for four weeks. The first ate a diet of reduced-fat prepared foods, while the second ate foods rich in fruits, vegetables, legumes and whole grains. Both diets were identical in total fat, saturated fat, protein, carbohydrates and cholesterol content, adhering to American Heart Association guidelines.

The results? Eating more vegetables, fruits, legumes and whole grains provided more cholesterol-lowering benefit than just reducing the amount of cholesterol and saturated fat in the diet.

Annals of Internal Medicine, May 2, 2005.

Suspect Produce: How To Be Safe From Contaminated Fruits, Vegetables

(Part 1 of a 3-part series on food safety.)

No doubt you're aware there are risks from eating contaminated meat, poultry, seafood or eggs. But it may come as a shock to learn that fruits and vegetables can harbor some of the same bacteria, viruses and parasites. Moreover, when produce is eaten raw, you can't rely on cooking to kill the bugs.

According to the Centers for Disease Control and Prevention, tainted food causes an estimated 76 million cases of illness in the U.S. each year, though the majority of cases go unreported. While most foodborne illness is mild, older adults and people with reduced immu-

nity are usually hit the hardest.

Even though animal foods are more likely to be contaminated, there's been a definite upswing in foodborne illnesses traced to fruits and vegetables. Does that mean you should avoid eating raw produce? Not at all. But there are precautions you should take. *EN* investigates how best to protect yourself against the growing threat of tainted produce.

Contamination Happens. In recent years, numerous microbes have made their way onto fresh fruits and vegetables. In the late 1990's, raspberries from Guatemala contaminated with the *Cyclospora* *(continued on page 4)*

Metabolic Syndrome: Are You At Risk? How To Know If You Are, What To Do

A new epidemic is brewing. Once ominously labeled as Syndrome X, it's now called metabolic syndrome and is believed to affect about 47 million adults in the U.S. You can expect to be hearing a lot more about this increasingly common condition.

Metabolic syndrome was the focus of international attention earlier this spring when a panel of experts released a "worldwide definition" at the 1st International Congress on Prediabetes and the Metabolic Syndrome in Berlin. Until now, experts had not agreed on criteria for what constitutes metabolic syndrome.

What It Is, Who's at Risk. Metabolic syndrome is a cluster of abnormalities in how the body processes food for energy and nutrients. It is particularly dangerous because it's a major risk factor for cardiovascular disease and diabetes and has been linked to numerous other health problems, including dementia and some cancers.

You're at risk for developing metabolic syndrome if you have a large waistline combined with two of the following: high blood pressure, low levels of high-density lipoprotein (HDL, the "good" cholesterol), high triglycerides or impaired glucose tolerance (pre-diabetes).

Insulin Resistance a Key Factor. Experts don't fully understand the causes of metabolic syndrome, but they believe that insulin resistance—which also causes type 2 diabetes—is a major player. In insulin resistance, cells lose their ability to respond to insulin, the hormone needed to transport glucose (blood sugar) out of the blood and into cells. Without it, blood sugar rises.

Metabolic syndrome (sometimes called insulin resistance syndrome) was first labeled "Syndrome X" by Gerald Reaven, M.D., professor emeritus at Stanford University School of Medicine, the researcher who first noted a

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Metabolic Syndrome: Are You at Risk? How to Know, What to Do

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link between insulin resistance and cardiovascular disease in 1988.

“What I saw,” says Reaven, “was that insulin resistance increased the risk for heart attack and stroke, even in people who never developed diabetes. [That means that] insulin resistance is

“Nearly three times as many people have metabolic syndrome as have diabetes.”

an even more important risk factor for cardiovascular disease than diabetes, because it affects more people.”

In fact, estimates suggest nearly three times as many people have metabolic syndrome as have diabetes. The American Diabetes Association estimates that metabolic syndrome affects at least one of every five overweight people, so the numbers are likely to climb as obesity rates rise.

Related Concerns. Metabolic syndrome is linked to two other conditions that increase cardiovascular risk: vascular inflammation, which can be assessed with a blood test for C-reactive protein (CRP), and hypercoagulation (an increased tendency to develop blood clots), for which there currently is no widely available test. If you have the one must-have criterium for metabolic syndrome—a large waistline—then be sure to get tested for all the other criteria, as well as for CRP (see “Do You Have Metabolic Syndrome?,” above right).

Managing Metabolic Syndrome. Experts believe that inactivity and carrying around extra pounds are what’s fueling insulin resistance and the skyrocketing incidence of metabolic syndrome. The good news is that the syndrome is treatable—even reversible—if you target the underlying insulin resistance with diet and lifestyle changes. The diabetes drug metformin (*Glucophage*) is also sometimes used to treat metabolic syndrome, but new research actually favors diet and lifestyle changes over medication.

In a recent study of more than 3,000 participants from George Washington University, diet and lifestyle interventions were more effective than metformin at preventing metabolic syndrome in people who didn’t have it and revers

Do You Have Metabolic Syndrome?

If so, the following is always present:

- Excess abdominal fat (waist circumference of 37 inches or more in men; 31 inches or more in women).

And two of the following are also present:

- Elevated triglyceride levels (above 150) or treatment for this condition.
- Reduced HDL or “good” cholesterol levels (less than 40 for men, less than 50 for women) or treatment for this condition.
- Elevated blood pressure (130/85 or higher) or treatment for this condition.
- Elevated fasting blood sugar (100 or higher) or a diagnosis of type 2 diabetes. (Blood insulin levels are also often elevated, but lab results for insulin vary, so fasting blood sugar is used instead.)

Source: International Diabetes Federation, April 2005.

ing it in those who did. The lifestyle intervention involved moderate weight loss (about 7% of body weight) and increased physical activity (e.g., walking briskly for 150 minutes or more each week), demonstrating that even modest changes can reduce your risk.

Activity, Diet Can Reverse Symptoms.

Exercise is “absolutely crucial” to controlling metabolic syndrome, according to lifestyle researcher Mark Pereira, Ph.D., of the University of Minnesota.

“Accumulating 30 minutes of aerobic activity, like brisk walking, cycling or swimming, at least five days a week—either all at once or in short bouts—has been consistently shown to lower rates of cardiovascular disease and diabetes, even without weight loss,” says Pereira. Reaven also advocates exercise as it helps control weight and encourages cells to use insulin more efficiently.

There’s no one-size-fits-all diet for metabolic syndrome, but because your carbohydrate intake dictates your insulin needs, experts agree that controlling the quantity and especially the quality of the carbs you eat is key. What does that mean? Reaven and Pereira advocate getting about 40% to 50% of calories from whole grains and whole fruits and vegetables. Another 40% should come from plant-based and fish-based heart-healthy fats, with the remaining 10% to 20% from protein.

“When you add protein and fat to

a meal, it moderates the blood sugar response slightly, improves nutrition and adds a sense of satiety and pleasure to the meal,” Pereira says. He also suggests smaller, more frequent meals. At the very least, do not skip meals, particularly breakfast. Pereira argues against weight loss as a primary focus.

“Eating regular meals, making more healthful food choices and increasing activity all help control appetite, improve risk factors and likely result in weight loss in a way that is a lot more enjoyable,” he contends.

The Bottom Line. Metabolic syndrome is a cluster of symptoms that carry multiple health risks when they occur together. Reaven warns that having even one risk factor can spell trouble. But not surprisingly, the more risk factors you have, the greater the threat.

And yet, this is a condition you can successfully combat. Changes in diet and activity—particularly if they result in weight loss—can reverse metabolic syndrome, lowering the likelihood of heart attack, stroke and diabetes. If you think you’re at risk, check out *EN*’s “To Do” list, below.

—Hillary Wright, M.Ed., R.D.

Metabolic Syndrome “To Do” List

- Team up with your doctor to check waist circumference, blood pressure, HDLs, triglycerides and fasting blood sugar.
- Aim for at least 30 minutes of activity on most days.
- Eat a minimum of three meals a day, with small snacks as needed to keep hunger under control.
- Include lean protein (meat, poultry, seafood, low-fat dairy and soy foods).
- Emphasize unrefined carbohydrates like whole fruits and vegetables, whole-grain breads, cereals, crackers and pasta, brown rice, barley, bulgur.
- Choose monounsaturated-rich fats, like olive, canola or peanut oils, seeds, nuts, nut butters and avocado; increase your intake of omega-3 fats from fatty fish, flaxseed meal and walnuts.
- Limit intake of fast foods and refined grains like “wheat flour” and sugar. All can aggravate metabolic syndrome.

—H.W.

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