

Chocolate and Weight Loss



The Flavor of Flavonoids A Post-Workout Remedy

What should you eat after strenuous exercise or competition? Many studies have shown that eating a meal rich in carbohydrates, protein and other necessary nutrients as soon as possible after physical activity hastens muscle recovery. When you feel the burn during exercise (whether in the gym, on the court or while trimming the hedges), you're damaging your muscle fibers. The pain that you feel eight to 24 hours after exercise is from muscle damage. It's now fairly well established that your muscles recover faster if you consume vital nutrients – carbohydrates, protein and so on – as soon after your workout as possible.

As mentioned in the accompanying story, various findings suggest that the polyphenol content in cocoa (specifically its flavonoids/flavanols) can minimize muscle and other tissue damage. A 2006 study further supports that notion. The study, published in a June 2006 issue of the *British Journal of Sports Medicine*, sought to determine if a cherry juice blend, rich in flavonoids, could protect against free radical damage and inflammation resulting from exercise. The researchers found that strength loss and pain were substantially less with the cherry juice beverage than with a placebo and recommended the inclusion of similar beverages for athletes and others involved in strenuous exercise, as exercise-friendly beverages – including chocolate based drinks – are becoming more popular.

Don't Let Disease Make Exercise Difficult

You're out for a jog, when suddenly it strikes – a distinct pain or cramp in your calf. You stop for a few minutes, and the pain goes away. You continue on your way, but the pain comes back. Don't chalk this up to getting old and retire your jogging shoes forever. Instead, determine if you're suffering from intermittent claudication.

A common symptom of atherosclerosis and other forms of cardiovascular disease, claudication is the result of damage to the arteries feeding the leg muscles. Characterized primarily by pain, muscle weakness and cramping, claudication isn't a disease but a cluster of symptoms resulting from a more serious underlying condition.

The good news is that while claudication and its underlying sources are potentially deadly, they are treatable. A recent review conducted by Swiss researchers found that a standardized herbal product called Padma 28, which is comprised of several flavonoids, among other things, could decrease the symptoms most common to intermittent claudication and increase walking distance in those with the condition.

The researchers called the relief offered by Padma 28 "significant." And while the product contains other ingredients, the review supports other findings that flavonoids – including those in cocoa – can improve arterial health, reducing the risk and symptoms of some vascular system ailments. As a result, physical activity that may be otherwise limited by factors such as intermittent claudication can be increased and enjoyed more fully as a result of the cardiovascular protection offered by cocoa and chocolate-based foods.

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Chocolate Lovers May Be Hard-Wired That Way Study finds their metabolism reacts differently to the sweet treat

FRIDAY, Oct. 12 (HealthDay News) -- Even if you don't watch what you eat, your body will. That's the message from a small new study that suggests that diets 'imprint' themselves on the metabolic system, attuning people to the food they prefer to chow down.

Researchers found that the bodies of chocolate fans reacted differently when they ate the candy, compared to other people.

'The body appears to become attuned to a particular diet, which can have both positive and negative health consequences, but which could also ultimately open the door to novel dietary regimes,' said study co-author Sunil Kochhar, a researcher with the Nestlé Research Center in Lausanne, Switzerland.

The Nestlé company, best known in the United States for its chocolate products, paid for the study, which is expected to be published in the Nov. 2 issue of the American Chemical Society's *Journal of Proteome Research*.

At issue is the body's metabolism system, which converts food into energy. According to Kochhar, scientists are exploring whether it may be possible to detect metabolic problems and help people improve their metabolisms -- and weight control -- through diet.

In the study, the researchers recruited 11 men who love chocolate and 11 men who described themselves as 'indifferent' to the sweet treat. Over a five-day period, the participants ate either daily doses of 50 grams of different kinds of Nestlé Caille chocolate (milk chocolate, dark chocolate, etc.) or a placebo.

The use of chocolate was 'not really the point of this study,' Kochhar said, but it did allow researchers to look at links between diet and metabolism.

Analysis of blood and urine samples found that the chocolate lovers had a specific metabolic profile -- low levels of LDL ('bad') cholesterol and marginally higher levels of a beneficial protein called albumin. It didn't matter if they ate chocolate during the five days or not.

The activity of beneficial bacteria in the digestive system was different in the chocolate fans, too.

'We now know that people's metabolic state is, in part, determined by their tastes and selection of food,' Kochhar said. 'In itself, this is not surprising. But what we have now is a way of measuring the [imprints] and as such may be able to help people make better food choices in the future.'

So, will the research help people avoid being fat? It's not clear yet, Kochhar said, but the research is a 'first step' toward manipulating metabolisms to improve health.

The next step, he said, is to look at possible gender differences by studying women and doing more research into how diet can affect the germs in digestive systems.

Kochhar said women weren't included in the first study, because previous research had shown metabolic variations linked to the menstrual cycle. But the researchers plan to include women in future clinical trials on metabolic responses to chocolate to see if there's a gender-based reaction to the candy.

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Step It Up with Cocoa

How Chocolate Can Enhance Your Physical Capacity

Most of us are not serious athletes. Many of us, though, enjoy a wide variety of physical activities, whether athletics, training at the gym, hiking a canyon or just working in the yard. And while it seems that gyms are popping up on every other corner, and some new exercise gadget is always advertised, the problem is that many obstacles – including hectic lifestyles, increasing age and decreasing energy levels – make it difficult for the majority of adults to engage in adequate exercise for optimal health.

If you happen to be a serious athlete, no doubt you're constantly searching for that extra edge – something to increase endurance, boost energy levels and reduce recovery time after training. Over the years, a plethora of products have been touted as the latest and greatest in athletic training. Chocolate, surprisingly, a food that has been around for centuries (and oft maligned for its supposedly unhealthy attributes), is emerging as a delicious and nutrient-rich tool for increasing your physical performance.

Exercise Fallout: Repair, Replenish and Reinvigorate

Simply stated, the more intense an activity or sport, the greater the body's need for certain nutrients. Individuals who participate in endurance activities – those involving more than one hour of constant activity – are most worried about maintaining nutrient and fluid levels, while those participating in more intense exercise may need different nutrients to address damage and wear and tear on muscles and tissues. And even if your workout consists of only an occasional hike or your weekend softball league, chocolate appears to address all these needs.

Cocoa and chocolate-based foods contain several vitamins, minerals and other nutrients well-known for their roles in helping the body perform physically. Here is a summary of these nutrients and their benefits:

Calcium is one of the most important nutrients for physical activity (especially for endurance athletes), calcium is crucial for maintaining strong, flexible bones and connective tissue. Several studies show that most people, including athletes, do not consume enough dietary calcium, thereby raising their risk of bone loss and related conditions.

Copper is a trace mineral necessary for producing adenosine triphosphate (ATP), the energy the body runs on. Synthesis of some hormones requires copper, as does the synthesis of collagen, the glue that holds connective tissue together.

Iron is an essential component of hemoglobin, the oxygen-carrying component of the blood. Iron also helps muscle cells store oxygen. Without enough iron, ATP (the fuel the body runs on) cannot be synthesized properly. Iron deficiency is a potential risk for those exercising more than six hours a week.

Magnesium is necessary for a wide variety functions and processes relating to physical activity. It is needed for bone, protein and fatty acid formation, making new cells, transmission of nerve impulses, activating B vitamins, relaxing muscles, clotting blood and forming energy (ATP). Its role in maintaining healthy muscles, joints and connective tissues is well known. Low magnesium levels can acutely contribute to early fatigue, nausea and muscle cramps.

Manganese is crucial for healthy skin, bone, and cartilage formation and glucose tolerance. It also helps activate superoxide dismutase (SOD) – an important antioxidant enzyme that can prevent exercise-induced muscle damage by neutralizing free radicals.

Niacin (vitamin B3) is necessary for releasing energy from carbohydrates and the proper fat use.

Pantothenic acid (vitamin B5) is involved in the Krebs's cycle of energy production and is needed for the production, transport and release of energy from fats.

Protein is a crucial nutrient for improved endurance and exercise recovery. Though cocoa contains relatively small amounts of protein, it helps with aerobic metabolism (for endurance) and tissue repair (for improved strength).

Riboflavin (vitamin B2) is needed to process amino acids and fats, activate vitamin B6 and folic acid, and help convert carbohydrates into energy, or adenosine triphosphate (ATP). Under some conditions, vitamin B2 can act as an antioxidant.

Thiamine (vitamin B1) is needed to process carbohydrates, fat and protein. Every cell in the body requires vitamin B1 to form the body's fuel adenosine triphosphate (ATP). Nerve cells require vitamin B1 to function normally.

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Vitamin E is a powerful antioxidant known to minimize free radical damage caused by exercise. One study showed that cyclists who followed a five-month vitamin E regimen significantly decreased their markers of oxidative damage to muscle tissue. Vitamin E is also helpful for controlling inflammation (a common effect of increased physical activity).

Zinc aids in repair of muscle tissue after exercise and is needed to convert food to fuel. Zinc is a component of more than 300 enzymes needed to repair wounds, synthesize protein, help cell reproduction and protect against free radicals, and other processes. Several studies link zinc deficiency to greater fatigue and decreased endurance in athletes. Other studies show that athletes who suffer from compromised immune function also suffer depleted zinc stores.

Enhancing Exercise with Chocolate

A 2006 study confirms earlier preliminary data that chocolate is an effective exercise aid. Researchers from Indiana University, whose findings were published in the *Journal of International Sport Nutrition and Exercise Metabolism*, investigated the effects of chocolate milk on recovery of athletes after exercise.

Volunteer athletes were given either chocolate milk, fluid-replacement drinks or carbohydrate-replacement drinks. The researchers found that times to exhaustion and total workload were substantially high in the chocolate milk group than for the other two groups.

The study's authors, and numerous other experts, have weighed in on the findings. Most agree that chocolate milk provides a variety of nutrients needed for energy, increased endurance and shortened recovery time after exercise. Compared with plain milk, water or most sports drinks, chocolate has twice the carbohydrate and protein content, perfect for replenishing tired muscles. Its high water content replaces fluids lost as sweat, preventing dehydration. Plus, the combination of chocolate and milk packs a nutritional bonus of calcium, and includes just a little sodium and sugar – additives that help recovering athletes retain water and regain energy.

“Our study indicates that chocolate milk is a strong alternative to other commercial sports drinks in helping athletes recover from strenuous, energy-depleting exercise,” study co-author Joel M. Stager, Ph.D., says in a news release. “Chocolate milk contains an optimal carbohydrate-to-protein ratio, which is critical for helping refuel tired muscles after strenuous exercise and can enable athletes to exercise at a high intensity.”

Drinking plain water after exercise replaces sweat losses – and that's it. “Chocolate milk provides carbohydrate replenishment to your muscles – something they can metabolize,” says Stager's colleague, Jason Karp. “There's nothing to metabolize in water.”

Numerous studies demonstrate that the more strenuous the physical activity, the greater degree of damage by free radicals. To explore the potential of cocoa flavanols to act as antioxidant agents, another recent study involved strenuous exercise to determine if the resulting oxidative damage could be minimized by consuming a flavanol-rich cocoa drink.

When the volunteers consumed the flavanol-rich beverage before exercising, they experienced a significant reduction in markers showing lipid oxidation. Later they consumed a flavanol-poor beverage, and the lipid-oxidation level was substantially higher.

Currently, other researchers are trying to determine how cocoa's polyphenols can contribute to the health of other body systems by improving the ability to participate in physical exercise. Researchers at the University of South Australia are analyzing data from their study looking to determine if combining cocoa with exercise will not only increase the body's ability to burn fat and lose weight, but also improve heart health as well. The results are pending.

The Chocolate Choice for Wellness

We all know exercise is important. Yet most of us don't get enough. While the search for “bigger and better” in exercise-improvement tools will undoubtedly continue, chocolate offers an unexpected way to enhance your workout. Its energy-rich nutrients, protection of the heart and vascular system and antioxidant-repair mechanisms contribute to chocolate's exercise-improvement arsenal. **BIH**

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Tips for Better Exercise

Besides making dark chocolate a regular part of your diet, there are many ways you can improve your workouts, boost your endurance and enjoy a lift in your overall physical performance.

Take a Vacation

While traveling comes with some hassles (airport security, ticket-counter lines and so forth), they are certainly worth it when considering that people who regularly take vacations have longer life spans.

And don't just go to relax or sight-see. While these are important, work in some activity as well – hiking, skiing, swimming or even exercise equipment at the hotel can make your vacation that much more enjoyable.

Fat to Muscle

It is a common misconception that weight training will cause fat to turn to muscle. Muscle and fat are two different kinds of tissue. When you train with weights, the muscle you build will take the place of the fat you burn.

And while it may seem that weight training isn't helpful for weight loss, don't be discouraged. Because muscle weighs more than fat, your fat loss may not be as noticeable on the scale, but you'll discover a slimmer, sculpted figure that's sure to please.

The Mind Matters

Feeling blue? Then get out and exercise! When you're down in the dumps, get down and boogie for your mental and emotional health. Aerobic exercise, resistance training and stretching regimens (such as yoga) are proven treatments for depression. Studies show that even those who engage in regular yardwork or vigorous housework are less at risk for depression.

Don't Forget Stretching

Research indicates that people who regularly stretch (even if it's for as little as 10 minutes a day) live longer than those who never stretch. Besides living longer, those who stretch also live healthier. They suffer

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fewer injuries as they age, chronic pain is decreased, and overall mood and emotional health can be improved.

Gardening for Health

Gardening is a great activity that can improve your functional strength and overall wellness. Fresh produce and the satisfaction of seeing your efforts rewarded in the harvest are added benefits. Remember to use sunscreen, and be careful not to strain your back.

More Activity, Less Stress

There's no doubt about it. Even chronic stress levels can be quickly reduced with good old-fashioned exercise. Regular exercise doesn't just help take your mind off looming debt, an annoying co-worker or your kid's bad grades momentarily. It also increases blood flow to the brain and stimulates production of those chemicals needed to make you feel good. Research demonstrates that even people under constant stress experience less sickness and report that they're happier than those with similar stress levels who rarely exercise.

Ten Thousand Steps

As the saying goes, the journey of a thousand miles begins with one step. How about 10,000 steps? An increasingly popular way to augment your activity levels, boost cardiovascular health and burn fat is to bump up the number of steps you take each day. Experts recommend walking at least 10,000 steps daily and setting goals to increase that number every week. Use a pedometer to count (it fits on your waist band, and some even monitor things like calories burned and heart rate), and you'll soon find yourself looking for every opportunity to get an extra step or two.

Jump for Your Bones

Did you know that jumping as few as 30 times a day can make your bones, joints and connective tissue stronger? The impact from jumping stimulates the bones to grow and strengthen. A few things to know: 1) Use a soft surface; 2) You don't have to jump off of anything – simply up and down; and 3) To prevent injury, warm up lightly before you start. A great (and fun!) way to begin is to use a jump rope.

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