



Weight loss by diet or exercise benefits the heart

Reuters Health - Shedding excess pounds may restore some of the heart's youth, whether the weight loss comes from eating less or exercising more, the results of a small study suggests.

Researchers found that among 25 healthy, but overweight, middle-aged adults, moderate weight loss appeared to restore some of the heart's youthful elasticity, making it easier for the heart to relax between contractions and refill with blood.



It did not appear to matter whether the weight loss was achieved through changes in diet or exercise, the researchers report in the American Journal of Physiology.

"If individuals want to do something that's good for their heart, then my message to them

is lose weight by the method they find most tolerable," Dr. Sandor J. Kovacs, the senior researcher on the study, said in a statement.

"They're virtually guaranteed that it will have a salutary effect on their cardiovascular system," said Kovacs, a professor of medicine at Washington University School of Medicine in St. Louis, Missouri.

As people age, their body tissue accumulates collagen fibers, which causes tissue, including heart muscle and arteries, to become more stiff. So over time, the heart starts to take a bit longer to relax between contractions and fill back up with blood.

Excess weight, obesity in particular, has been shown to affect the heart's elasticity as well. But while studies suggest that weight loss achieved by diet and exercise improves cardiac function, it hasn't been clear if the same is true if weight loss is accomplished using just one of these strategies.

So Kovacs and his colleagues looked at weight loss and heart function in 25 men and women who were overweight, but not obese. For one

year, half of the participants cut their daily calories by about 12 percent, while the rest took up an exercise routine, doing activities like walking, running or cycling six days per week.

The exercisers did not make diet changes, but burned roughly the same percentage of calories as the diet group cut from their food intake.

In the end, both groups lost a similar amount of weight, about 12 percent of their original weight. What's more, ultrasound imaging showed that dieters and exercisers also had similar improvements in the heart's ability to relax between contractions.

According to Kovacs, one challenge to getting people to lose weight is that the potential consequences of being overweight, including diabetes, high blood pressure and heart disease, are often far off in the future.

"But now we can tell them, lose weight and right away you can have better cardiovascular health," he said.



Please Note

Friday March 21st

The club will be opened from
8:00 am to 8:00 pm.

All classes starting before 8:00 am or ending after 8:00 pm will be cancelled.

Monday March 24th

The club will be opened from
5:30 am to 11:00 pm

The 11:30 am Spinning class is cancelled.

Ask the expert - Exercise and Weight Loss

Q : I want to lose fat but with all the different information in magazines, I'm confused when it's time to choose the intensity that I should train at. High Intensity or Low intensity? Can you help me understand?

A: It has been well established that exercise plays an important role in the regulation of body fat accumulation. However, there is little agreement as to the how much exercise is needed and how hard the exercise should be. The answer below will demonstrate to you that the exercise intensity for fat loss should not be based on the concept of high or low intensity exercise but on the unique physiology of the individual. Once understood, this concept will help anyone who wants to lose fat, regardless of the amount of fat to lose.

Low Intensity Aerobic Exercise

The amount of fat that is used during an exercise session can be estimated in a lab setting using a measure called the respiratory exchange ratio (RER). A low RER means that more fat is being used. A high RER means more carbohydrate is being used. As the intensity of an exercise session increases the amount of fat that is used as an energy source decreases. In exercise of low intensity (50% of VO₂max) the oxidation of fat can account for as much as 90% of the energy production. While high intensity exercise may result in a greater number of calories used, the proportion of calories derived from fat will be very small. A study on untrained subjects conducted by Chad and Quigley (1991) found that exercise at 50% of VO₂ max resulted in approximately twice the amount of fat being metabolized as exercise at 70% VO₂ max. The use of fat as a fuel source during exercise is necessary for efficient and effective fat loss.

High Intensity Aerobic Exercise

High intensity exercise is advocated by some groups as a means of altering body composition because number of calories burned during higher intensity exercise is greater than that burned during low intensity exercise. There has also been some research on post exercise metabolic rate that indicates that higher intensity exercise cause a higher post exercise metabolic rate that remains elevated longer than with lower intensity exercise (Schuenke, Mikat, and McBride, 2002). While high intensity exercise may cause a significant increase in post exercise

fat use it is a statistical, not a physiologically significant increase. Binzen, Swan and Manore (2001) found the greatest increase in post exercise metabolism to occur during the first 30 minutes, increasing 18.6%. This may sound like a large increase but if we accept the average resting metabolism to be about 1.5 kcal/min an 18.6% increase results in only an extra 0.28 calories per minute consumed or 16.8 kcal hour beyond resting metabolism, at this rate it would take about 200 hours to lose a pound of fat. High intensity exercise at or above anaerobic threshold, characterized by an increased reliance of carbohydrates as a fuel source, has several drawbacks when exercising for fat loss. First, even though a greater number of calories may be burned during a given time period there is very little use of stored fat as an energy source during the exercise session. According to Flatt (1988) exercise which causes a depletion of carbohydrate stores in the body will stimulate the intake of more food, which is often high fat food, in an attempt to replenish the stores. This process in effect negates any energy imbalances created by the exercise session. It can be very difficult, particularly in untrained people, to maintain high intensity exercise for long periods of time due to carbohydrate depletion (Saltin and Astrand, 1993).

It is important to note that as an individual becomes more fit they also burn fat more efficiently at higher intensities. In fact, some elite endurance athletes burn fat most efficiently at 80% VO₂ max or above. This means that exercise intensity for fat loss should not be based on the concept of high or low intensity exercise but on the unique physiology of the individual.



Ask the expert

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Strength Training Of Neck Muscles Relieves Chronic Pain

Neck pain has been steadily increasing over the past two decades and is now second to back pain, the most common musculoskeletal disorder. Women are more likely than men to suffer from persistent neck pain, in particular those who engage in repetitive tasks such as working at a computer keyboard. Previous studies have shown conflicting results as to whether or not exercise can effectively treat neck pain, but there has not been enough high-quality research in this area to draw firm conclusions. A new study on women with neck pain found that specific strength training exercises led to significant prolonged relief of neck muscle pain, while general fitness training resulted in only a small amount of pain reduction.

Led by Gisela Sjøgaard and Lars L. Andersen of the National Research Centre for the Working Environment in Copenhagen, Denmark, researchers conducted a randomized controlled trial for which they recruited 94 women from seven workplaces in Copenhagen between September 2005 and March 2006. The work tasks performed by the women consisted of assembly line work and office work, with 79 percent of the participants using a keyboard for more than three-quarters of their working time.

Participants first answered a questionnaire about their pain and then underwent a clinical exam to confirm a diagnosis of trapezius myalgia (muscle pain in the trapezius muscle, which extends along the back of the neck). Participants were assigned to three intervention groups: those who did supervised specific strength training (SST) exercises for the neck and shoulder muscles, those who did high-intensity general fitness training (GFT) on a bicycle ergometer, and a control group that received health counseling but no physical training. Both exercise groups worked out for 20 minutes three times a week for 10 weeks.

The results showed that the GFT group showed a small decrease in neck muscle pain only immediately after exercise, while the SST group showed a marked decrease in pain over a prolonged training period and with a lasting effect after the training ended. "Thus, specific strength training locally of the neck and shoulder muscles is the most beneficial treatment in women with chronic neck muscle pain," the authors state.



The study also showed that the reduction in pain occurred gradually in the SST group, with trapezius muscle pain gradually decreasing as muscle strength increased. Although the GFT decreased the pain only temporarily, the authors note that even minor decreases in pain may be enough motivation to overcome barriers to exercise, and the resulting increase in fitness may benefit overall long-term health.

The authors state that the marked reduction in pain in the SST group is of "major clinical importance." They conclude: "Based on the present results, supervised high-intensity dynamic strength training of the painful muscle 3 times a week for 20 minutes should be recommended in the treatment of trapezius myalgia."

Journal article: "Effect of Two Contrasting Types of Physical Exercise on Chronic Neck Muscle Pain," Lars L. Andersen, Michael Kjær, Karen Søgaard, Lone Hansen, Ann I. Kryger, Gisela Sjøgaard, Arthritis Care & Research, January 2008; 59:1; pp. 84-91.



The Chefs' Corner

by Derek Dammann,
Executive Chef
at Le Café du Club

Walnut fougasse

Yield: 3-4 loaves

4 tsp	sea salt
2 ¾ pounds	all purpose flour
2 tbsp	active dry yeast
3 cups	water
2 cups	chopped walnuts
1 ½ cups	walnut oil
1 tbsp	coarse sea salt

Stir the 4 tsp salt into the flour.

Soften the yeast in the 3 cups of water. Whisk in the flour 1 cup at a time until the mixture is thick. Stir in the chopped walnuts and ½ cup of the walnut oil and mix thoroughly. Continue kneading until it is a smooth, elastic ball, about 5-10 minutes.

Allow to rise until doubled, about 1 ½ hours.

Pour ½ cup of walnut oil over the dough and knead it in thoroughly. Let the dough rise again until doubled in size. Pour the final ½ cup of walnut oil over the dough and knead it in. allow to rest for 10 minutes.

Divide the dough into 3 or 4 portions and shape the fougasse about ¾-1 inch thick. Place onto parchment lined baking sheets and rest for

3 minutes. Slash and stretch the dough into the desired shapes and allow to rise, covered until doubled in size.

-Brush the loaves lightly with walnut oil and sprinkle with the coarse sea salt. Bake in a preheated oven at 425F for 30-35 minutes.



Weight is Easier Gained Than Lost When Exercise Is Inconsistent

Weight gain caused by inconsistent exercise cannot be lost by simply resuming a previous exercise routine, suggests a study published in the February 2008 issue *Medicine & Science in Sports & Exercise*®, the official scientific journal of the American College of Sports Medicine (ACSM).

In an eight-year study of more than 40,000 runners, researcher Paul Williams, Ph.D., found that weight gain among men and women who decreased their running distances per week was significantly more than weight loss among men and women who increased their running distances per week by the same amount.



"If you stop exercising with the intention of starting again later, you don't get to pick up where you left off," Thompson said. "You're likely to gain weight and get stuck with it unless you exercise a lot more. It's an ounce of prevention or a pound of cure, literally."

Additionally, substantial weight loss in participants did not occur unless running distances were more than 25 kilometers (15.5 miles) per week for men, and 48 kilometers (29.8 miles) per week for women. Participants who already ran a long distance per week and decreased their running, still maintaining a long distance per week, gained significantly less weight than those whose running distances started shorter and decreased to even less.

"We saw the most weight gain in subjects who were approaching a very sedentary lifestyle," Williams said. "This concurs with the vast amount of research showing that at least some daily activity is necessary to prevent significant weight gain."

Williams believes that exercise has taken a back seat to controlling diet in addressing America's obesity epidemic. The key, he says, is to start exercising before weight gain actually occurs.

ACSM and the American Heart Association recommend that healthy adults engage in physical activity for at least 30 minutes, five days per week, at a moderate intensity, or 20 minutes, three days per week, at a vigorous intensity. Individuals striving for weight loss



may need to exercise as many as 60 to 90 minutes per day.

"Although this study showed weight loss when running at high levels, others may want to do a different type of activity," Williams said. "Whether it's running, cycling, swimming, or something else, the important thing to remember is that activity is needed for a healthy lifestyle that prevents weight gain."

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