

PEAK SPEAK- May 2007

PEAK PERFORMANCE Fitness Center

Welcome to our newsletter!

In PEAK SPEAK you'll find general fitness info, workout ideas, nutrition tips, and news about our health club.

Feel free to forward email or printed copies of our newsletters to anyone you think might find the content interesting.

We'll keep past issues available on our web site.

If you have any questions about the content, or ideas for features, please see Joe or Pete.

In this edition:

- ***Can Exercise Make You Smarter?***
 - ***Lift Weights to Lose Weight?***
 - ***Announcing Peak Alliance with Prograde Nutrition Products!***
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Mental Benefits of Exercise

Sources for this article include:

Newsweek, WebMD, The Franklin Institute, Science Daily, Science News

There is mounting evidence that physical exercise may help keep the mind healthy and fight the effects of aging on brain function. Research on exercise and brain function suggests that exercise has short- and long-term beneficial effects in improving brain function, slowing age-related cognitive decline, and reducing the risk of dementia.

Benefits for Seniors

Studies have shown a significant relationship between exercise and brain function later in life and a reduced risk of dementia; these benefits appeared to last several decades. There is also evidence that an increased level of exercise or aerobic fitness training may improve mental processes even more than moderate activity. One study of older adults showed that aerobically active seniors were better able to ignore distracting information during a task than those who were less active. "Aerobically trained older adults showed increased neural activities in certain parts of the brain that involved attention and reduced activity in other parts of the brain that are sensitive to behavioral conflict," says Arthur F. Kramer, PhD, of the University of Illinois at Urbana-Champaign, in a news release.

Brain Fertilizer?

New research suggests that physical exercise encourages healthy brains to function at their optimum levels. Exercise releases chemicals that actually prompt nerve cells to multiply, strengthens their connections, and protects them from harm. These benefits even seem to extend to brains and nerves that are diseased or damaged, which could suggest new treatments for people with Alzheimer's disease, Parkinson's disease, and spinal cord injuries.

Among the proteins released during exercise is brain-derived neurotrophic factor, or BDNF. This protein prompts brain benefits on its own and triggers a series of other beneficial chemicals to activate. One scientist referred to BDNF as "Brain Fertilizer", because it stimulates multiplication, growth and strengthening of brain neurons.

Mental Benefits of Exercise (cont'd)

Smart Rodents

Scientists studying the effects of exercise on mice and rats reached some interesting conclusions. One of these was that mice and rats that participated in vigorous exercise for prolonged periods seemed to learn faster than their less-fit counterparts.

Dissections showed that the “fitter” rodents had many more new brain neurons (the cells that process and transmit signals throughout the nervous system) than the sedentary ones. These neurons were discovered to show greater signs of strengthened connections and cellular learning.

Recap

We already knew that exercise helps lower blood pressure, thereby alleviating the toll that high blood pressure takes on brain cells. It also improves circulation of blood within the brain. And it's common knowledge that exercise can relieve depression, improve mood and boost self esteem. Exercise also improves the oxygenation of the blood, which of course benefits all organs including the brain.

But now scientists are reporting that exercise actually strengthens brain function and fights the effects of aging on the brain.

Sounds like you'd be dumb not to exercise!

Special Thanks to Barry who suggested this topic

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Lift weights to lose weight?

Everyone knows the basic “common sense” weight loss formula:

sensible diet + exercise = weight loss

Let's break down that formula:

Regarding **diet**, the concept is pretty simple: consume fewer calories than you burn and you will lose weight. Of course the nutritional science of weight loss is much more complicated than that. In future issues, we'll address diet and weight loss in more detail.

Let's take a look at the **exercise** component. When most people think of the exercise portion of their weight-loss program, they think of jogging, running or other aerobic exercises. All of these are of course beneficial in that they burn calories and enhance overall cardio-respiratory fitness. In fact, most people seeking to lose weight assume that cardio is the way to go, and they tend to focus their exercise routines on cardio.

But did you know that strength training should be a major component of any effective weight loss program? That's right: **Lift weights to lose weight!**

Numerous studies- confirmed by our own experience as successful fitness trainers- have shown that strength training plays a key role in weight loss. In addition to enhancing muscular strength and endurance, strength training increases lean muscle mass and raises the Resting Metabolic Rate (RMR). Why is that beneficial? Well, because lean muscle mass and an accelerated metabolism equals burning calories.

A body with more lean muscle mass (i.e. lower body fat content) has a higher RMR, so it actually burns more calories than a less fit body- even at rest!

Lift weights to lose weight? (cont'd)

How does this work?

Depending on workout intensity and your weight, an aerobic workout (walking, cycling, stair stepping) will burn approximately 300 calories per hour. Even with the most strenuous aerobic workout (i.e. a level that is very difficult for a beginning exerciser) the RMR is elevated **temporarily** for up to a few hours afterwards. Compare this to strength training which elevates the RMR **permanently**.

The RMR accounts for 60 to 75 percent of your daily calorie burn-off, so even a slight increase will help burn off more fat. Even basic strength-training programs will result in gaining muscle and losing fat, increasing the number of calories your body burns daily. Remember, aerobic exercise generally doesn't increase muscle tissue.

In fact, excessive amount of aerobic exercise combined with a low-calorie diet can cause the loss of some muscle tissue.

We are not saying that overweight individuals shouldn't do aerobic exercise. It offers many health benefits and should be part of any effective weight loss program. But aerobic exercise by itself is simply NOT the best solution for permanent weight (fat) loss.

Did you know?

Inactive adults lose ½ pound of muscle per year, or five pounds per decade. If you're losing muscle and your eating habits remain unchanged, guess what? You're burning fewer calories and storing the excess as fat. Keep in mind that fat is much less dense than muscle, so fat takes up a lot more room.

So, as we age, many of us lose muscle and gain fat. That means if you're inactive, your weight might remain the same over the years, but your waistline will continue to expand!

For more information on incorporating strength training into your weight loss program, please see Pete or Joe.