# Love Those Endorphins, Don't You?

By PHIL CAMPBELL, M.S., M.A., FACHE Author: Ready, Set, GO! Synergy Fitness

I love endorphins.

Endorphins are the body's natural pain medication hormones. Endorphins (endor-fins), when released, make us feel better, improve our mood, increase pleasure, and minimize pain. There are some good ways, and bad ways, to increase endorphins.

#### Low Endorphin Levels Make Us Crave Fat

Nan Allison in her excellent book Full & Fulfilled describes the relationship between endorphins, food, and exercise. By permission, Nan Allison, M.S., RD writes:

High concentrations of endorphins in the brain produce a sense of euphoria, enhance pleasure, and suppress pain, both emotionally and physically. When endorphins are low, people feel anxious; they are also more aware of pain. They have an appetite for fat and fatty foods, such as fries, cheese, creamy sauces, margarine, butter, fried chicken, potato chips, and chocolate, to name some of the most popular examples. Upon eating some fat, they will notice a change in mood, feeling more pleasure. This feeling is related to a higher concentration of endorphin. Exercise, by releasing fat from within the body, raises endorphins and causes the same mood changes.

When we have cravings for potato chips and chocolate, it may mean that we need an endorphin pill rather than all the empty calories from chips. Well, there's a problem. We don't have an endorphin pill. But we have something even better; knowledge of how to deal with these specific types of cravings.

#### Low Serotonin Levels Make Us Crave Sugar

Similarly, another hormone, serotonin makes us feel calm, poised, confident, and relaxed. When our serotonin levels are low, we feel nervous, irritable and stressed. We don't crave fat, now we crave sugar.

Have cravings for sugar? Nan Allison advises that trying some crackers, frozen yogurt or popcorn may help by raising serotonin levels with far less calories.

#### Low Dopamine Make Us Feel Foggy

Mentally "foggy" at times? This just may be caused by low dopamine levels. When we don't get adequate protein,

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may be caused by low dopamine levels. When we don't get adequate protein, dopamine levels drop and this makes us mentally sluggish.

The best way to raise dopamine levels, get plenty of lean protein in you diet, with moderate fat and carbs, advises Nan Allison.

#### You Need Carbs **Before You Exercise**

It's a mistake to think that exercising without adequate carbs in your system will help you lose body fat. Nan Allison explains:

Many people mistakenly believe that if they limit their carbohydrate intake, and then exercise, their body fat will be broken down. What happens, in fact, is that they are lowering their capacity to burn fat, and will lower their metabolism. The reason for this is that the body will break down muscle to form carbohydrate. In addition, the muscle breakdown raises stress hormone levels and causes carbohydrate cravings.

#### **High-Intensity** Exercise Performs Best

Researchers have shown for years that high-intensity exercise increases these hormones significantly.

"Post-exercise beta-endorphin levels correlated with the peak speed attained during the sprint and the subjects peak power to weight ratio. These results suggest that the increases in plasma adrenaline are related to those factors that reflect the stress of the exercise and the contribution of anaerobic metabolism." (Exercise intensity-related responses of beta-endorphin and catecholamines, 1987, McMurray).

#### The Take Home

When we experience strong cravings for sugar and high fat foods, it's probably due to a low hormone level that can be resolved with a sensible food choice.

When it comes to diet, the research is clear, the best diet is a balanced diet / in moderation.

Remember to get some high-quality carbs before workouts. This will help fuel the intensity of the workout, and increase, not lower your metabolism.

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Have a great day!

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