

ON TRACK WITH BARIX

Support to Keep You On Track With a Healthful Lifestyle



Sleep & Obesity

An association between a lack of sleep and obesity has been hypothesized for years. Recent studies are giving more credence to that idea. Could it really be true that to have a healthy weight you need to sleep more? It looks like that may be the case.

Americans are sleeping less and less it seems. The average time spent sleeping is just under 7 hours and about 1/3 of us spend less than 6 hours a day sleeping. That is a major difference from the 1800s (before the discovery of electricity) when Americans slept for 12 hours a day. Even 60 years ago, Americans slept between 8 and 9 hours a night.

The modern American life certainly has more distractions, activity options, sedentary activities—and less physical work—than previous generations experienced. It is easy to see why people are sleeping less, but how does this change in sleep habits impact our waistlines? Research is giving us some clues.

A large population study found that those who sleep between 7 and 8 hours a night are least likely to be obese. Those sleep-deprived souls who sleep for four hours or less are 73% more likely to be obese than those sleeping 7–9 hours a night. There is a 50% increase in obesity in those sleeping 5 hours a night and a 23% increase for those who sleep 6 hours.

It is theorized that the eating behaviors of those sleeping less may play a role in the increased risk of obesity. If a person is spending his or her time in front of the TV, on the computer, or in other

sedentary activities and snacking, the increased calorie consumption could be significant. This may or may not be the case. Sanjay Patel, MD found that the opposite was true when he looked at 70,000 middle-aged women. Those who slept less actually ate less, exercised the same amount yet gained more weight.

Sleep deprivation has been found to change the regulation of appetite and energy expenditure. An increase in the hormone ghrelin, a decrease in leptin, a rise in cortisol, a decrease in adiponectin, and perhaps additional factors account for this. Let's take a look at each one of these hormones and its role in weight control.

GHRELIN is a hormone responsible for increased appetite, increased desirability of food, decreased fat utilization, and decreased energy expenditure. When food is consumed, ghrelin levels fall, signaling the body to stop eating and energy expenditure to increase. As the next meal draws near, ghrelin levels increase, making food appear more desirable, the

appetite to increase, fat utilization and energy expenditure to decrease. After just two sleep-deprived nights, ghrelin levels are impacted resulting in forty-five percent more food cravings for carbohydrate-rich foods. Ghrelin levels are depressed for the first several months following gastric bypass surgery, giving people a metabolic and behavioral edge in their weight loss efforts. It is a lot easier to avoid baked goods and sweets when they are not even appealing.

LEPTIN is produced in the fat tissues. Leptin has the opposite role of ghrelin and tells your body to when to stop eating. Sleep deprivation decreases the circulating leptin levels, minimizing its ability to decrease appetite and maximize energy expenditures.

CORTISOL, the stress hormone, is raised in the afternoon and evening hours in those with sleep deprivation. Cortisol impacts weight by increasing fat accumulation, appetite stimulation, reduced insulin sensitivity, and impaired glucose tolerance.

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How much sleep is enough?

Many experts recommend 7–8 hours a night at most. Getting 9-10 hours a night may increase your obesity risk almost as much as not getting enough sleep. If you get 7–8 hours of sleep a night and still feel fatigued, you should ask your doctor about being tested for sleep apnea.

Sleep, from page 1

ADIPONECTIN is a hormone that enables insulin to move from the bloodstream into cells where it is used for fuel or stored. Adiponectin is produced in the fat cells and is decreased during periods of sleep deprivation.

Studies show that those who sleep less than eight hours a night have higher levels of body fat. This higher body fat decreases sensitivity to leptin. The signals to stop eating, with lower leptin levels and a lower sensitivity to the levels that are available, can be severely hampered. A food-rich environment (the modern world) with faulty appetite control (thanks to sleep deprivation) is a sure recipe for obesity.

Sleep apnea often accompanies many people to weight loss surgery. Some aren't aware that they even have the condition until they undergo a sleep study in preparation for surgery. A recent study found that sleep apnea may persist even a year after weight loss surgery. Most people think that their sleep apnea has been resolved after surgery and stop using their CPAP machines. This may not be wise. Sleep apnea interrupts normal sleep patterns and results in sleep deprivation. Choosing to discontinue treatment may hinder weight loss efforts after bariatric surgery.

The American Academy of Sleep has the following tips for getting a good night's sleep:

- Follow a consistent bedtime routine.
- Establish a relaxing setting at bedtime.
- Get a full night's sleep every night.
- Avoid caffeine or any other stimulants before bedtime.
- Be worry-free at bedtime.
- Don't go to bed hungry, or too full.
- Avoid rigorous exercise within six hours of your bedtime.
- Make your bedroom quiet, dark, and a little cool.
- Get up at the same time every morning.

CONSIDERING SURGERY

Supplements can help you get ready for surgery. They can help to correct nutritional deficiencies and get you in the best health possible.

A complete multi-vitamin and mineral supplement is a good start.

- Calcium with vitamin D is recommended if you do not drink 3–8oz glasses of low fat milk or the calcium equivalent.

- Get your iron status checked the next time you see your physician. Supplement per your physician's recommendation until your iron status is optimal.

It's time to take control of your health and pre-surgery supplements are a great way to start. Contact your Barix nutritionist if you have specific questions.



RECIPES

WHITE BEAN CHICKEN CHILI

- 2 tablespoons vegetable oil
- 1 pound diced, cooked chicken meat
- 1 onion, chopped
- 2 cloves garlic, minced
- 1 (14.5 ounce) can chicken broth
- 1 (18.75 ounce) can tomatillos, drained and chopped
- 1 (16 ounce) can diced tomatoes
- 1 (7 ounce) can diced green chilies
- 1/2 teaspoon dried oregano
- 1/2 teaspoon ground coriander seed
- 1/4 teaspoon ground cumin
- 1 (15 ounce) can white beans
- 2 ears fresh corn
- salt to taste
- ground black pepper to taste
- 1 lime, sliced

Heat oil and cook onion and garlic until soft. Stir in broth, tomatillos, tomatoes, chilies, and spices. Bring to a boil and simmer for 10 minutes. Add corn, chicken, and beans; simmer 5 minutes. Season with salt and pepper to taste. Makes 9 servings.

NUTRITION INFORMATION PER SERVING: 226 calories, 20 grams protein, 6 grams fat, 22 grams carbohydrate, 815 mg sodium

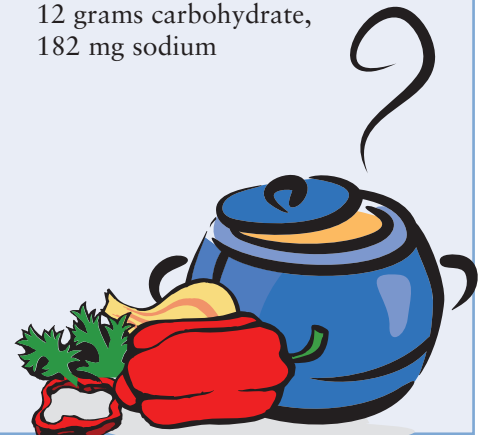
Optional Toppings: lime slices, cilantro, cheese, avocado, sour cream, and tortilla chips.

CROCK-POT POT ROAST

- 4 pounds chuck roast
- salt and pepper to taste
- 1 packet dry onion soup mix
- 1 cup water
- 3 carrots, chopped
- 1 onion, chopped
- 3 potatoes, peeled and cubed
- 1 stalk celery, chopped

Season the chuck roast with salt and pepper to taste. Brown on all sides in a large skillet. Place in the slow cooker and add the soup mix, water, carrots, onion, potatoes and celery. Cover and cook on the low setting for 8 to 10 hours. Makes 12 servings.

NUTRITION INFORMATION PER SERVING: 361 calories, 31 grams protein, 20 grams fat, 12 grams carbohydrate, 182 mg sodium



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On Track With Barix

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RECONSTRUCTIVE SURGERY

To receive a **FREE RECONSTRUCTIVE SURGERY** guide, call 800-282-0066 or send us an email at rc@barixclinics.com with your name and contact information. Our reconstructive surgery program is currently performed at our centers in Michigan, Ohio, and Pennsylvania. *Call us today for more information!*

OTHERS CARE PLEASE SHARE

Please tell us about the lives that have changed because you shared your weight-loss story. Submit your story to http://www.barixclinicsstore.com/share_your_story.html. What you have to say may be printed in this publication or on our website and can serve as inspiration to all.

QUESTIONS

ABOUT FINANCING
YOUR SURGERY?

Call a Barix Patient
Service Representative
at 800-282-0066

IN THE NEWS

Researchers tracked weight loss and bone loss in 46 healthy men and women and found that there was not a significant loss of bone in those who lost weight quickly (more than 10% in three months). This conflicts with early research that suggested that rapid weight loss resulted in a loss of bone health.

There is still a void in bone health research for those undergoing bariatric surgery. The best bet is to choose foods/beverages to meet your calcium and vitamin D needs or supplement as recommended and to engage in regular weight-bearing exercise. You only have one set of bones—take care of them.



REWARD YOURSELF

This month, you could earn a **SPECIAL GIFT** for your “It Worked For Me” tips or recipes! Just submit as many recipes and “It Worked For Me” tips as you like. The most original and creative will be awarded a special gift from our online store. Include your name and contact info with your entry—make sure your recipes follow Barix nutritional guidelines. Tips must be submitted by October 31, 2008. Please send comments, ideas, recipes and “It Worked For Me” tips to Deb Hart, RD, LD at dhart@foresthealth.com.

REQUEST A FREE BROCHURE

for you or a friend at 800-282-0066, or www.barixinfo.com



IT WORKED FOR ME

Paraphrased from the Barix Connection Message Board

I'm 7 years out and have maintained my weight loss. The eating style they give you is not just for your weight loss—it is for the rest of your life! Exercise is a huge part of my life. Be it walking, weight training, sports, etc., there is something I do daily, even if it is only 10 minutes.

WHAT'S NEW?

Great tasting, vitamin-packed coffee drinks!

Coming soon to your surgeon's group practice, **AchievOne high protein lattes** and **Smart Forme soup mixes**. AchievOne is a great-tasting coffee drink with 20 grams of protein and only 120 calories. A great substitute for those high-calorie coffee shop drinks. Packed full of vitamins—it's a great way to start your day.

Smart Forme soup mixes are good source of protein—each serving provides 15 grams. They come in five great flavors—cream of chicken, cream of tomato, chicken bouillon, cream of mushroom and chicken noodle.

