

# HealthyNews

## Focus on Lifestyle

### Sleep Deprivation and Stress

Anybody who has ever tossed and turned after a rough day at work knows that stress can make it hard to get a good night's sleep. But the connection between sleep and stress is a two-way street. Just as surely as stress interrupts sleep, lack of sleep can be an uncomfortably large source of stress.

People working night shifts could be Exhibit A in the trial of sleep vs. stress. Humans aren't meant to be nocturnal, and people who work at night struggle to get enough sleep. As reported in the book *Principles and Practice of Sleep Medicine* (Elsevier/Saunders, 2005), night workers average five to 10 hours less sleep per week than other workers. The sleep they do get is often fitful. This problem is common enough to have a formal name: shift work sleep disorder.

Whether you're a long-haul trucker driving through the night or a student pulling an all-nighter to finish a paper, the shortfall of deep, restful sleep exacts a heavy toll, both emotionally and physically. As reported in *Medscape Neurology and Neurosurgery*, people who work night shifts are especially prone to stress, both on and off the job. Not surprisingly, they're also vulnerable to a wide range of stress-related conditions, including depression, heart disease, high blood pressure, stomach problems, weakened immune systems, and infertility. ▶ Continue reading on Page 2



### Health Tip:

#### Choose the Right Pillow for Better Slumber. Your sleep position matters

(HealthDay News) - Using the right pillow can help you sleep longer and feel more rested.

The National Sleep Foundation advises:

- For back sleepers, use a thinner pillow with a thicker area at the bottom for better neck support.
- Stomach sleepers should use the thinnest possible pillow, to reduce strain on the lower back.
- Side sleepers should opt for a thick pillow with a wide edge, to fill the area between the shoulder and ear.
- Wedging a pillow between the knees can help ease lower back strain.
- Replace a pillow after about 18 months of nightly use.

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## Stress and sleep: The inside story

No matter what your age or occupation, a lack of sleep will throw your system off balance. To fully understand the consequences, it helps to take a quick look at the inside story of stress and sleep.

Just as the Pony Express relied on a series of riders to deliver mail across the Old West, the body uses a chain of chemicals to send messages of stress. First, the brain releases a hormone called CRH. This hormone prompts the pituitary gland to produce ACTH — the next link in the stress chain reaction. ACTH is the messenger that tells the adrenal gland to release adrenaline and other stress hormones. These are the hormones that make a person feel “stressed out.” They’re also the hormones that, over time, can set the stage for stress-related illnesses.

A good night’s sleep seems to block this chain reaction. As Stanford stress expert Robert Sapolsky describes in his book *Why Zebras Don’t Get Ulcers* (Henry Holt, 2004), there’s “decent evidence” that the same brain chemical that brings on deep sleep also tells the pituitary gland to slow down the production of ACTH. As a result, the adrenal gland never gets the signal to pump out stress hormones, and the body gets a chance to truly rest.

Interestingly, the part of the brain that houses the stress signal becomes more active during the dreaming (REM) stage of sleep, presumably to help fuel the startling visions that go on in our heads. ► Continue reading on Page 3

## Health Tip:

### When Obesity Affects Sleep. Suggestions for losing weight and sleeping better

(HealthDay News) - Obesity can affect the quality of your sleep and contribute to disorders such as sleep apnea.

The National Sleep Foundation offers these suggestions for losing weight and sleeping better:

- Avoid fast food, high-fat and high-carbohydrate foods, and eat more vegetables, fruit and fish.
- Stick to a consistent exercise routine, and avoid exercise within three hours of bed.
- Take a look at your sleep schedule, evaluating how much sleep you’re getting each night and how you feel when you wake up each morning.

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## Health Tip:

### Seeing a Doctor About Sleep. Signs that a sleep problem needs medical attention

(HealthDay News) - Along with regular exercise and a healthy diet, sleep is essential for good health. If you're not getting enough zzzs, you should talk with your doctor.

The womenshealth.gov says a doctor visit is in order if:

- You frequently have difficulty sleeping and can't find relief.
- You wake during the night, gasping for air.
- Your partner tells you that while you sleep, you stop breathing for short periods.
- You snore loudly.
- You wake in the morning not feeling refreshed.
- You frequently fall asleep during the day.

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## The toll of tossing and turning

If you don't get enough deep sleep, you're missing a chance to take a break from stress. Losing sleep might even send your levels of stress hormones in the wrong direction. Although research has been mixed so far, one study published in 1997 in the journal *Sleep* found that sleep deprivation boosted stress hormones the next evening.

It doesn't take a research study to show that missing sleep can make a person miserable. We've all felt the consequences: drowsiness, irritability, and a fog that just won't lift. Stress hormones block storage of short-term memories, which may explain why sleep-deprived people notoriously have trouble holding onto thoughts, much to the chagrin of students who cram all night for a test.

Missing one night's sleep is one thing; struggling with sleeplessness for weeks or months will really turn up the volume on stress. A study of insomniacs published in the *Journal of Clinical Endocrinology & Metabolism* found that those with the worst sleep produced especially large amounts of ACTH and stress hormones throughout the day and night. The levels of stress hormones — and, thus, levels of stress — were highest from afternoon until early night, a time when most people get to wind down.

People with insomnia feel more stressed out than people who have no trouble sleeping at night. As reported in the *Journal of Clinical Endocrinology & Metabolism*, people who sleep soundly enjoy a daily reprieve from stress hormones. For insomniacs, however, hormone levels stay high all day long.

With stress messengers literally coursing through their veins, it's no surprise that insomniacs often feel frazzled. A study of 772 men and women of all ages published in the journal *Sleep* found that people who suffered from insomnia were 17 times more likely than sound sleepers to have anxiety problems. ► Continue reading on Page 4



## Health Tip:

### How Many Zzzz's Do You Need? A sleep guide by age

(HealthDay News) - Sufficient sleep is essential to help you feel sharp, focused and well. So, are you getting enough?

The U.S. Centers for Disease Control and Prevention offers these guidelines by age:

- Newborns need 16 hours to 18 hours of sleep each day.
- Children in preschool need 11 hours to 12 hours of sleep per day.
- School-aged children should get a minimum of 10 hours of sleep per day.
- Teens should get a minimum of nine hours of sleep each day.
- Adults, including seniors, need seven hours to eight hours of sleep daily.

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## Sleeping away stress

If you're feeling stressed out, getting enough sleep should be one of your top priorities. Try to get at least eight hours of sleep every night, even if you feel like you can "get by" on less. Of course, putting sleep on your schedule is only the first step. The National Sleep Foundation recommends "winding down" for an hour or two before bed — no catching up on work, no phone calls. Also, you should reserve your bedroom for sleep or sex, not "waking" activities such as working or watching TV. Don't go to bed unless you actually feel tired. And if you find yourself wide awake between the sheets, get up and do something else until you feel sleepy again.

For shift workers, sleep can be especially elusive. The National Sleep Foundation offers special sleep tips for the graveyard shift: Sleep in a dark room (or wear a mask or dark glasses), use earplugs to block out sound, go to bed at the same time every day, and avoid caffeine or alcohol before bedtime.

Good sleep is worth the effort. Anyway you look at it, rest is better than stress. ■

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# Stir-Fried Orange Beef

**PREP** – 30 minutes

**SERVINGS** – 4 servings

**SERVING SIZE** – 2 cups of meat and vegetables

Calories 261

Cholesterol 28mg

Sodium 418mg

Carbohydrates 23g

Total Fat 9g

Saturated Fat 2g

Fiber 3g

Protein 23g

## Ingredients

- 1 12-oz bag frozen vegetable stir-fry
- 1 Tbsp peanut or vegetable oil
- 1 Tbsp onion, minced (or 6 Tbsp dried)
- 1 Tbsp garlic, minced (about 2-3 cloves)
- 1 Tbsp ginger, minced
- 1 egg white, lightly beaten (or substitute liquid egg white)
- 2 Tbsp cornstarch
- 12 oz beef flank steak, sliced into thin strips
- 3 Tbsp Hoisin sauce
- 1 Tbsp light soy sauce
- ½ cup orange juice
- 1 Tbsp dry sherry (optional)



## Instructions

1. Thaw frozen vegetables in the microwave (or place entire bag in a bowl of hot water for about 10 minutes). Set aside.
2. Heat oil in a large wok or sauté pan. Add onion, garlic, and ginger and stir fry until tender but not brown, about 30 seconds to 1 minute.
3. Put egg white in one bowl and cornstarch in another. Dip steak strips into egg white and then coat with cornstarch. Add steak strips to pan and continue to stir fry until lightly browned, about 5-8 minutes.
4. Add Hoisin sauce, soy sauce, orange juice, and sherry (optional). Bring to a boil over high heat. Immediately lower temperature to a simmer.
5. Add the thawed vegetables and mix gently. Simmer until vegetables are heated through, about 3-4 minutes.

Deliciously Healthy Meals, NHLBI

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