

# NIH News in Health

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## Summer Travel Plan Ahead To Stay Healthy

Maybe you're counting down the days until your summer vacation. Or just got word your next business meeting will be in Boise or Bangkok. You can boost your chances of having a healthy and happy trip if you do a little prep work before you leave home.

Travel can be great for your health. Vacations can help you relax and reduce stress. Having fun and getting some exercise—like hiking or swimming—can benefit your heart and mind. But research has shown that your ability to successfully engage in healthy behaviors may decline more than you think once you're away from your daily routine. Planning ahead can help you make smart choices and avoid pitfalls while traveling.

"The combination of the stress and excitement of travel and being in a new place and out of routine makes us more vulnerable to unhealthy behavior and more likely to take risks," explains Dr. Charles Raison, a psychiatrist and behavioral scientist at Emory University. "People who travel healthy make strong decisions about what they will and will not do, and they plan for it."

Before you travel, think about your personal, day-to-day challenges and plan for how to manage them on your trip. Think in advance about how to make healthy food choices, get enough physical activity or deal with feelings of loneliness. If you're concerned about your alcohol consumption, plan for healthy



changing circumstances, like a delayed flight, traffic jam or choosing safe and healthy meals. Being well rested will help you plan and carry out healthy behaviors while on the road, where there are distractions, temptations and the excuse and opportunity to indulge. For families with kids, Twery adds, "getting enough sleep helps to optimize children's behavior and their ability to meet the challenges of travel."

Jet lag is another sleep concern for travelers crossing multiple time zones. Jet lag is often more severe for eastbound travelers, because their days are shortened and it's harder for the body to adapt to a shorter day than a longer one. Plan to give yourself some time so your body adjusts to the new time zone, if you can. It's also a good idea to avoid scheduling meetings or activities that require critical decision-making on your first day of arrival.

If you'll be driving, lack of sleep

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alternatives to the hotel bar at the end of the day. If you have trouble sleeping, think about bringing an item from home to make you feel more comfortable.

Getting enough sleep can be critical to having a safe trip, says Dr. Michael Twery, director of NIH's National Center on Sleep Disorders Research. But sleep is often neglected during travel. "We want to live every day to the fullest. If we had a choice, many would prefer never to sleep, and we often run until exhaustion," Twery says. "It's especially important before and during travel to consciously schedule time to sleep."

Too little sleep leads to poor concentration and judgment. Problems may seem more serious. You may have trouble dealing with common travel situations and

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## Wise Choices Plan for Healthy Travel

- **Schedule enough sleep before and during travel.** Adults typically need 7-8 hours of sleep each night. School-age children and teens need at least 9 hours. Younger children need 10-12 hours and newborns 16-18 hours of sleep a day.
- **Drive while rested.** You may be too tired to drive safely if you have trouble keeping your eyes focused, yawn repeatedly or can't remember parts of the drive.
- **Help your body adjust to a new time zone.** Get lots of sunlight and exercise, eat meals at local times, drink plenty of water and avoid alcohol and caffeine.
- **Make a plan for healthy choices and set limits.** Consider how to make decisions on the road that maintain aspects of your home life and routine.
- **Learn about your destination.** Research local living conditions, laws and customs, health risks and how to minimize them, and what vaccinations you'll need.
- **Consider food options.** Look for restaurants with freshly cooked, hot foods and clean utensils. Avoid risky foods, like raw or undercooked meat and seafood, unpeeled or raw fruits and vegetables, and drinks with ice.
- **Pack your medicines.** Make sure to pack enough medicine, sunscreen and any other health products you might need. If you have specific health problems, ask your doctor about how to prepare for your trip. You might also consider seeing a doctor who specializes in travel medicine.

### *continued from page 1*

puts you at greater risk for drowsy driving and car crashes. "It's common for travelers to push themselves when driving, either by being in the car at times they should be asleep or not taking enough breaks along the way," explains Twery. Lack of sleep can slow your reaction to a braking car ahead, a sharp curve or other road hazards.

Research shows that car, bike and pedestrian collisions can pose a serious danger to travelers—maybe even more than you realize. Traffic crashes are the leading cause of injury-related death among Americans traveling abroad. Lack of sleep and alcohol use often contribute to these accidents. "There really is a tendency for travelers to get less than adequate sleep and to drink more on vacation than at home," says Dr. Stephen Whitehead, a vaccine and international health researcher at NIH.

Learning about your destination and packing smart is one more way to help you stay healthy when you travel. Things like eating at a local restaurant, swimming in a lake, changes in altitude or exposure to new germs and insects can make you sick if you don't plan ahead. "Travelers run into trouble when they're not prepared," Whitehead says. "Know what you need before you go."

If you're travelling internationally, you may need certain shots or medicines. Many local or county health departments can provide pre-travel advice about what you'll need to do. Some even run their



## Web Links

For more information about travel and health, see our links online:  
<http://newsinhealth.nih.gov/issue/Jun2011/Feature1>

own travel clinics, which provide vaccines and other health services for travelers. Visit <http://wwwnc.cdc.gov/travel/page/travel-clinics.htm> to learn more.

If you're visiting a country with unsafe drinking water, it's important to consider things like how your vegetables were rinsed or how you'll brush your teeth. "When you travel, you really have to think about what you put in your mouth and consider that everything could be contaminated," says Dr. Linda Mansfield, a microbe researcher at Michigan State University.

Mansfield encourages you to try to learn more about restaurant quality. Poor hygiene in local restaurants may be the largest risk factor for travelers' diarrhea, which affects up to 50% of international travelers. Make sure the food is freshly cooked and hot, and that utensils are clean. You might try to avoid some of the most risky foods, like raw or undercooked meat and seafood and unpeeled raw fruits and vegetables.

"It's a lot more fun not to be sick when you're traveling," Mansfield says. "Prevention really does work, but you have to be prepared."

So plan ahead for the best trip possible. "It's all about balance," adds Raison. "Just be mindful and create a plan so you have fun, set limits and stay safe and healthy." ■

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### National Institutes of Health

Office of Communications  
& Public Liaison  
Building 31, Room 5B64  
Bethesda, MD 20892-2094  
[nihnewsinhealth@od.nih.gov](mailto:.nihnewsinhealth@od.nih.gov)  
Tel: 301-435-7489 Fax: 301-496-0019

**Editor** Harrison Wein, Ph.D.

**Assistant Editor** Vicki Contie

**Contributors** Vicki Contie, Alan Defibaugh (illustrations), Bryan Ewsickek (design), Bonnie Flock, Jennifer Wenger and Harrison Wein

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# Strange Migrations and Killer Cramps

## Understanding Endometriosis

Endometriosis is linked to pain and infertility for many women. It arises when cells like those that line the uterus (the endometrium) attach to other tissues and grow inside the lower belly. These out-of-place cells may be just the start of a problem that, for some, lasts a lifetime.

Endometriosis affects up to 1 in 10 women of childbearing age. The pain it causes can range from extreme to barely noticeable. A woman may not know she has the disease until she has trouble getting pregnant and her doctor makes the diagnosis. About 40% of women with infertility turn out to have endometriosis.

“Endometriosis is an incredibly complex disease. Its causes have been kind of a mystery, and we’re not sure how to prevent it,” says NIH scientist and gynecologist Dr. Pamela Stratton. She and other NIH-funded researchers have been gradually adding to our understanding of the condition. They’re working to find better ways to diagnose and treat endometriosis, and maybe even prevent it.

Many scientists think that endometriosis results when some of the endometrial tissue shed from the uterus during menstruation

flows backward into the pelvis. This strange migration—called retrograde menstrual flow—likely happens to most women, but it doesn’t always lead to endometriosis.

Researchers are trying to figure out why some women have endometrial cells that stick and grow where they don’t belong, and why other women don’t. These misplaced cells—sometimes called lesions or implants—can also form scars between tissues and organs like the bladder, intestine or ovaries. Surprisingly, scientists have found that the number and size of lesions aren’t related to how severe the symptoms are.

To diagnose endometriosis, doctors often use imaging tests like ultrasound and MRI to look for signs of internal lesions. But the only way to be certain you have endometriosis is with surgery, usually laparoscopy. For this procedure, the surgeon makes a small cut in the abdomen and inserts a tiny light at the end of a tube, or laparoscope. The instrument allows the doctor to view patches of endometriosis inside the pelvic area. Some lesions can be removed during laparoscopy. Removing lesions—especially deep lesions—sometimes helps to relieve pain.

Most often, though, endometriosis pain is treated with **hormone** therapy, usually birth control pills. These medications can suppress the body’s natural production of reproductive hormones and lighten the menstrual flow, which can help ease pain.

“There’s a lot of active research into the basic biological mechanisms of endometriosis. There’s so much we don’t yet know,” says NIH’s Dr. Esther Eisenberg, an expert in reproductive



health. “Once we understand the mechanisms, we’ll have better tools to help women deal with this serious problem.”

Since endometriosis tends to run in families, researchers have been searching for culprit **genes**. Some are also looking for molecules in the blood that might help detect endometriosis without the need for laparoscopy. Others are testing potential new treatments in clinical trials.

While there’s currently no cure for endometriosis, there are ways to minimize its symptoms. Work with your doctor to explore your treatment options. ■



### Definitions

#### Genes

Stretches of DNA, a substance you inherit from your parents, that define characteristics such as how likely you are to get certain diseases.

#### Hormones

Molecules sent through the bloodstream to signal another part of the body to react a certain way.



### Wise Choices Symptoms of Endometriosis

- Infertility
- Pain before or after menstrual periods, as well as during or after sex
- Lower back, intestinal or pelvic pain
- Heavy menstrual periods, or spotting and bleeding between periods
- Painful bowel movements or painful urination during menstrual periods



### Web Links

For more about endometriosis, see our links online:

<http://newsinhealth.nih.gov/issue/Jun2011/Feature2>



# Health Capsules

For links to more information, see these stories online:  
<http://newsinhealth.nih.gov/issue/Jun2011/Capsule1>

## How Secondhand Smoke Affects the Brain

Even if you don't smoke, a new study shows, secondhand smoke affects your brain much as it does a smoker's. It's one more reason to steer clear of secondhand smoke in cars and other enclosed spaces.

Tobacco is the leading cause of preventable death nationwide. People who smoke are up to 6 times more likely than nonsmokers to have a heart attack. Tobacco also causes cancer. Up to 90% of lung cancer deaths are linked to smoking.

But the smoker isn't the only one harmed by tobacco smoke. Secondhand smoke can make it more likely you'll get heart disease, have a heart attack or die early. Smokers find it harder to quit if they're around secondhand smoke. And kids exposed to

secondhand smoke are more likely to become teenage smokers.

A team of NIH-funded scientists decided to take a closer look at how secondhand smoke affects the brains of young adults. About half of the study volunteers were nonsmokers. The rest were tobacco-dependent cigarette smokers.

Each volunteer sat in a car for 1 hour while a smoker puffed away on a cigarette to create secondhand smoke. On a different day, the volunteers had a 1-hour car session without being exposed to secondhand smoke. Their brains were scanned before and after each session.

The researchers discovered the addictive chemical nicotine—found in all tobacco products—both in the

blood and attached to molecules in the brain after exposure to secondhand smoke. This nicotine binding was similar in smokers and nonsmokers. The smokers also had stronger cravings after being exposed to secondhand smoke.

"These results show that even limited secondhand smoke exposure delivers enough nicotine to the brain to alter its function," says Dr. Nora D. Volkow, director of NIH's National Institute on Drug Abuse. ■

## Listen Safely When Summer Sounds Abound

When you think of the sounds of summer, you may conjure up the soft tinkle of the ice cream truck ambling down the street or the chirping of crickets outside your window at night. But that's only part of the story. Some of the sounds you're exposed to during summer months can be as loud as if you were working in a factory or at a construction site. And people in those occupations are required to wear hearing protection!

Attending summer concerts, watching a monster truck show at the fair, riding a personal watercraft, watching fireworks—these are the activities that make summer so much fun. But they can also wreak havoc

on your hearing if they expose you to loud noises for too long. Your power lawn mower, weed trimmer and chainsaw can also damage your hearing if used repeatedly with no earplugs or earmuffs.

Here's a tip: If you have to shout to be heard over the noise, then it's likely loud enough to damage your hearing. If you find yourself in those situations, walk away from the sound, turn down the volume or wear hearing protection.

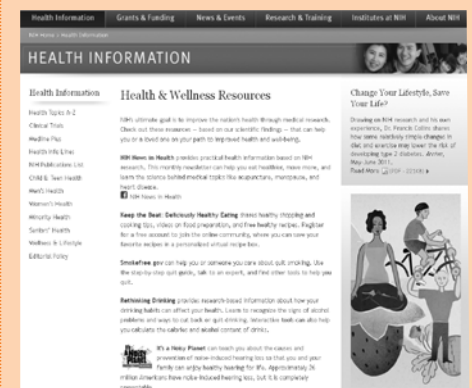
Learn more about how to enjoy the sounds of summer for life at NIH's Noisy Planet campaign website at [www.noisyplanet.nidcd.nih.gov](http://www.noisyplanet.nidcd.nih.gov), or call 800-241-1044 or 800-241-1055 (TTY). ■



### Featured Website NIH Health & Wellness Resources

<http://www.nih.gov/health/wellness>

NIH's ultimate goal is to improve the nation's health through medical research. Check out these resources, gathered from across NIH, to help you or a loved one on your path to improved health and well being. All the information is based on NIH's scientific findings.



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