



FDA & YOU

News for Health Educators and Students

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Taking the Burn Out of School Lighting

It's a typical Friday night basketball game and the score is tied with three minutes left in the second half. The overhead gym lights make the court gleam brighter than the beads of sweat on the players' foreheads. You blame your own sweatiness on the excitement in the crowded stands, but when you wake up the next morning your skin is itchy and looks red, like it's been sunburned, and your eyes hurt. What happened?

Each year the FDA receives at least one report of injuries from accidental exposure to ultraviolet (UV) radiation caused by broken high intensity metal halide or mercury vapor lighting. This type of lighting is bright, long-lasting, and is often used to light school gyms, sports arenas, and streets. While injuries caused by this type of overhead lighting are rare, it's important to know how to protect yourself in case you encounter a broken mercury vapor light.

Metal Halide and Mercury Vapor Light Bulbs

Metal halide and mercury vapor light bulbs are composed of an inner, high pressure mercury vapor discharge tube, enclosed by an outer glass bulb that filters out harmful short-wavelength UV radiation. Unlike common household light bulbs, if the outer bulb of a mercury vapor light bulb breaks, and the inner tube continues to operate unshielded, intense UV radiation is emitted. The UV radiation from a broken metal halide or mercury vapor light bulb is so intense it can cause redness and burns to your skin and eyes, as well as blurred or double vision, headaches, and nausea. Most symptoms will appear within 6-12 hours after exposure.

Unfortunately, most of the reported injuries from mercury vapor lighting have occurred in school gyms, after the light bulbs were struck and partially broken by balls or other sports equipment.

"T" for Safety "R" for Risky

Because of the intense UV radiation they emit, mercury vapor light bulbs used in school gyms should automatically shut off when the bulb is broken, or only be used in light fixtures that completely enclose the bulb with a glass or plastic lens.

The types of metal halide and mercury vapor light bulbs sold in the U.S. include:

- "T" type light bulbs have an internal mechanism that shuts off the light within 15 minutes after the light bulb is broken. "T" type light bulbs may be used in either open fixtures or enclosed fixtures.
- "R" type mercury vapor light bulbs don't have the shut-off safety feature. The inner quartz tube can continue to emit intense UV radiation even after the outer bulb is broken. "R" type light bulbs should only be installed in light fixtures that fully enclose the bulb with a glass or plastic lens to protect the bulb from breakage, and shield people from the UV radiation.

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Walking on Broken Glass

You probably won't know if the lights in your school gym are mercury vapor, but it's still a good idea to take safety precautions.

When light bulbs are used in open fixtures that are not fully enclosed with a glass or plastic lens, it's easy to tell if the outer bulb has been broken. One of the most obvious signs is shards of glass that have fallen from the light onto the gym floor. This is a sure sign that the light should be replaced with a "T" type light bulb.

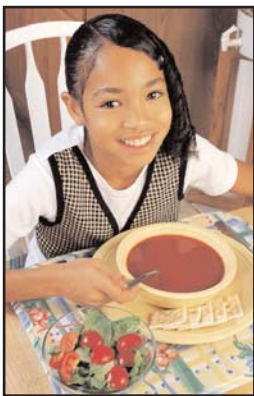
If you encounter a broken overhead light:

- **TURN OFF THE LIGHT IMMEDIATELY.**
- Move people out of the area as quickly as possible.
- If you are the only witness, immediately report the broken light to a teacher or your principal.
- Make an appointment to get checked out by your doctor if your skin is burned or you have eye pain, redness, excessive tearing, or sensitivity to light. These symptoms could be an indication that you have photokeratitis, a condition that can cause permanent eye damage if not properly treated.
- Ask your doctor to report your injuries to your State Health Department and the FDA
<https://www.accessdata.fda.gov/scripts/medwatch> or 1-888-INFO-FDA (1-888-463-6332).

Learn More

The National Electrical Manufacturer's Association (NEMA) web site contains additional information on care and maintenance of high intensity metal halide and mercury vapor lamps used in schools: <http://www.nema.org/stds/halide-schools.cfm#download>, and best practices for metal halide lighting systems: <http://www.nema.org/stds/LSD25.cfm>.

For more FDA information on high intensity mercury vapor lighting, see <http://www.fda.gov/cdrh/radhlth/mercury-vapor.html>.



A Guide to Healthier Eating

According to the latest dietary guidelines, most Americans consume too many calories and not enough nutrients. In January 2005, two federal agencies--the Department of Health and Human Services (DHHS) and the Department of Agriculture (USDA)--released the guidelines to help adults and children ages 2 and up live healthier lives.

The typical American diet is low in fruits, vegetables, and whole grains, and high in saturated fat, salt, and sugar. As a result, more Americans than ever are overweight, obese, and at increased risk for chronic diseases such as heart disease, high blood pressure, diabetes, and certain cancers.

Of course old habits are hard to break, and the notion of change can seem overwhelming. But it can be done with planning and a gradual approach. Some people can improve eating habits on their own, while others need a registered dietitian to guide them through the process. You may need a dietitian if you are trying to lose weight or if you have a health condition such as osteoporosis, high blood pressure, high cholesterol, or diabetes.

The Nutrition Facts label is an important tool that can help you make smart food choices because the label shows how high or low a food is in various nutrients. Experts say that once you start using the label to

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Try dishing out a smaller amount on your plate or using smaller plates to avoid overeating. According to the American Dietetic Association (ADA), an average serving size of meat looks like a deck of cards. An average serving size of pasta or rice is about the size of a tennis ball. Here are some other ways to limit portions: split a meal or dessert with a friend at a restaurant, get a doggie bag for half of your meal, get in the habit of having one helping, and ask for salad dressing, butter, and sauces on the side so you can control how much you use.

Control Calories and Get the Most Nutrients

You want to stay within your daily calorie needs, especially if you're trying to lose weight, but you also want to get the most nutrients out of the calories, which means picking nutritionally rich foods. Children and adults should pay particular attention to getting adequate calcium, potassium, fiber, magnesium, and vitamins A, C, and E.

According to the Dietary Guidelines, there is room for what's known as a discretionary calorie allowance. This is for when people meet their recommended nutrient intake without using all their calories. The discretionary calorie allowance gives you some flexibility to have foods and beverages with added fats and sugars, but you still want to make sure you're getting the nutrients you need. For example, a 2,000-calorie diet has about 250 discretionary calories.

Know Your Fats

Fat provides flavor and makes you feel full. It also provides energy, and essential fatty acids for healthy skin, and helps the body absorb the fat-soluble vitamins A, D, E, and K. But fat also has nine calories per gram, compared to four calories per gram in carbohydrates and protein. If you eat too much fat every day, you may get more calories than your body needs, and too many calories can contribute to weight gain.

Too much saturated fat, *trans* fat, and cholesterol in the diet increases the risk of unhealthy blood cholesterol levels, which may increase the risk of heart disease. Saturated fat is found mainly in foods from animals. Major sources of saturated fats are cheese, beef, and milk. *Trans* fat results when manufacturers add hydrogen to vegetable oil to increase the food's shelf life and flavor. *Trans* fat can be found in vegetable shortenings, some margarines, crackers, cookies, and other snack foods. Cholesterol is a fat-like substance in foods from animal sources such as meat, poultry, egg yolks, milk, and milk products.

Most of your fats should come from polyunsaturated and monounsaturated fatty acids, such as those that occur in fish, nuts, soybean, corn,

Differences in Saturated Fat and Calorie Content of Commonly Consumed Foods			
Food Category	Portion	Saturated Fat Content (grams)	Calories
Cheese			
• Regular cheddar	1 oz.	6.0	114
• Low-fat cheddar	1 oz.	1.2	49
Ground Beef			
• Regular (25% fat)	3 oz. (cooked)	6.1	236
• Regular (5% fat)	3 oz. (cooked)	2.6	148
Milk			
• Whole (3.24%)	1 cup	4.6	146
• Low-fat (1%)	1 cup	1.5	102
Breads			
• Croissant (medium)	1 medium	6.6	231
• Bagel, oat bran (4")	1 medium	0.2	227
Frozen desserts			
• Regular ice cream	1/2 cup	4.9	145
• Frozen yogurt, low-fat	1/2 cup	2.0	110
Table spreads			
• Butter	1 teaspoon	2.4	34
• Soft margarine, zero trans fat	1 teaspoon	0.7	25
Chicken			
• Fried leg with skin	3 oz. (cooked)	3.3	212
• Roasted breast with no skin	3 oz. (cooked)	0.9	140
Fish			
• Fried	3 oz.	2.8	195
• Baked	3 oz.	1.5	129

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ARS Nutrient Database for Standard Reference, Release 17

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canola, olive, and other vegetable oils. This type of fat does not raise the risk of heart disease and may be beneficial when consumed in moderation.

Make Choices That Are Lean, Low-fat, or Fat-free

When buying meat, poultry, milk, or milk products, choose versions that are lean, low-fat, or fat-free. Choose lean meats like chicken without the skin and lean beef or pork with the fat trimmed off.



If you frequently drink whole milk, switch to 1 percent milk or skim milk. Many people don't taste a difference. Some mix whole milk with lower-fat milk for a while so the taste buds can adjust. This doesn't mean you can never eat or drink the full-fat versions, they should be factored into your discretionary calories.

Other tips to reduce saturated fat include cooking with non-stick sprays and using olive, safflower, or canola oils instead of lard or butter. Eat more fish, which is usually lower in saturated fat than meat. Bake, grill, and broil food instead of frying it because more fat is absorbed into the food when frying. You could also try more meatless entrees like veggie burgers and add flavor to food with low-fat beans instead of butter.

Focus on Fruit



The Dietary Guidelines recommend two cups of fruit per day at the 2,000-calorie reference diet. Fruit intake and recommended amounts of other food groups vary at different calorie levels. An example of two cups of fruit includes: one small banana, one large orange, and one-fourth cup of dried apricots or peaches.

Eat a variety of fruits--whether fresh, frozen, canned, or dried--rather than fruit juice for most of your fruit choices. Whole fruit has more fiber, is more filling, and is naturally sweet. Can't live without juice? Some juices, such as orange and prune, are a good source of potassium.

Ways to incorporate fruit in your diet include adding it to your cereal, eating it as a snack with low-fat yogurt or a low-fat dip, or making a fruit smoothie for dessert by mixing low-fat milk with fresh or frozen fruit such as strawberries or peaches.

Eat Your Veggies

The Dietary Guidelines recommend two and one-half cups of vegetables per day if you eat 2,000 calories each day.

Try putting vegetables into foods such as meatloaf, lasagna, omelettes, stir-fry dishes, and casseroles. Frozen chopped greens such as spinach, peas, carrots, and corn are easy to add. Also, add dark leafy green lettuce to sandwiches. Choose a variety of dark green vegetables such as broccoli, spinach, and greens; orange and deep yellow vegetables such as carrots, winter squash, and sweet potatoes; starchy vegetables like corn; legumes, such as dry beans, peas, chickpeas, pinto beans, kidney beans, and tofu; and other vegetables, such as tomatoes and onions.

Make Half Your Grains Whole

Like fruits and vegetables, whole grains are a good source of vitamins, minerals, and fiber. The Dietary Guidelines recommend at least three ounces of whole grains per day. One slice of bread, one cup of breakfast cereal, or one-half cup of cooked rice or pasta are each equivalent to about one ounce.

In general, at least half the grains you consume should come from whole grains. For many, but not all, whole grain products, the words "whole" or "whole grain" will appear before the grain ingredient's name.

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The whole grain must be the first ingredient listed in the ingredients list on the food package. The following are some whole grains: whole wheat, whole oats or oatmeal, whole-grain corn, popcorn, wild rice, brown rice, buckwheat, whole rye, bulgur or cracked wheat, whole-grain barley, and millet. Whole-grain foods cannot necessarily be identified by their color or by names such as brown bread, nine-grain bread, hearty grains bread, or mixed grain bread.

Lower Sodium and Increase Potassium



Higher salt intake is linked to higher blood pressure, which can raise the risk of stroke, heart disease, and kidney disease. The Dietary Guidelines recommend that people consume less than 2,300 milligrams of sodium per day (approximately one teaspoon of salt). There are other recommendations for certain populations that tend to be more sensitive to salt. For example, people with high blood pressure, African Americans, and middle-aged and older adults should consume no more than 1,500 milligrams of sodium each day.

Most of the sodium people eat comes from processed foods. Use the Nutrition Facts label on food products: 5%DV or less for sodium means the food is low in sodium and 20%DV or more means it's high. Compare similar products and choose the option with a lower amount of sodium. Most people won't notice a taste difference. Consistently consuming lower-salt products will help taste buds adapt, and you will enjoy these foods as much or more than higher-salt options.

Prepare foods with little salt. The DASH (Dietary Approaches to Stop Hypertension) eating plan from the National Heart, Lung, and Blood Institute recommends giving flavor to food with herbs, spices, lemon, lime, vinegar, and salt-free seasoning blends. Consult with your physician before using salt substitutes because their main ingredient, potassium chloride, can be harmful to some people with certain medical conditions.

Increase potassium-rich foods such as sweet potatoes, orange juice, bananas, spinach, winter squash, cantaloupe, and tomato puree. Potassium counteracts some of sodium's effect on blood pressure.

Limit Added Sugars

The Dietary Guidelines recommend choosing and preparing food and beverages with little added sugars. Added sugars are sugars and syrups added to foods and beverages in processing or preparation, not the naturally occurring sugars in fruits or milk. Major sources of added sugars in the American diet include regular sodas, candy, cake, cookies, pies, and fruit drinks. In the ingredients list on food products, sugar may be listed as brown sugar, corn syrup, glucose, sucrose, honey, or molasses. Be sure to check the sugar in low-fat and fat-free products, which sometimes contain a lot of sugar.

Instead of drinking regular soda and sugary fruit drinks, try diet soda, low-fat or fat-free milk, water, flavored water, or 100 percent fruit juice.

For snacks and desserts, try fruit. You may be surprised how great fruit is for satisfying a sweet tooth. And if ice cream is calling your name, don't have it in the freezer. Make it harder to get by having to go out for it. Then it can be an occasional treat.

- | Smart Snacks |
|--|
| <ul style="list-style-type: none"> • Unsalted pretzels • Applesauce • Low-fat yogurt with fruit • Grapes • Raisins • Nuts • Graham crackers • Gingersnap cookies • Unbuttered and unsalted popcorn • Apple slices with peanut butter • Low- or reduced-fat string cheese • Baked whole-grain tortilla chips with salsa • Whole-grain cereal with low-fat milk • Broccoli, carrots, or cherry tomatoes with dip or low-fat yogurt |

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Exercise Made Easy

The 2005 Dietary Guidelines recommend finding your balance between food and physical activity. Consuming more calories than you expend leads to weight gain. More than half of all Americans don't get the recommended amount of physical activity. To reduce the risk of chronic disease in adulthood, engage in at least 30 minutes of moderate activity a day on most days of the week. Children and adolescents should engage in at least 60 minutes a day on most, and preferably all, days of the week.

To manage body weight and prevent gradual weight gain, people should exercise about 60 minutes at a moderate to vigorous intensity on most days of the week, while not exceeding recommendations for caloric intake. Sixty to 90 minutes may be needed to maintain weight loss.

The more vigorous the activity and the longer the duration, the more health benefits you'll get. But every little bit counts. Here are some examples of easy ways to work exercise into your day:

- Take a family walk after dinner.
- Walk your dog.
- Do yard work.
- Wash your car by hand.
- Pace the sidelines at kids' athletic games.
- Ask a friend to exercise with you.
- Walk briskly at the mall.
- Take the stairs instead of the elevator.
- Park your car in the farthest spot when you run errands.
- Run around and play with your children for 30 minutes a day.
- Take a 10-minute walk after breakfast, lunch, and dinner to reach the goal of 30 minutes per day.



For More Information:

- HHS Small Steps program: <http://www.smallstep.gov>
- Dietary Guidelines for Americans 2005 and "Finding Your Way to a Healthier You" <http://www.health.gov/dietaryguidelines>
- NIH Interactive Menu Planner: <http://hin.nhlbi.nih.gov/menuplanner>
- Calculate the number of calories you need to maintain your current weight: <http://www.bcm.edu/cnrc/caloriesneed.htm>
- American Heart Association's Delicious Decisions: <http://www.deliciousdecisions.org>
- The New Food Pyramid: <http://www.mypyramid.gov>

Spanish Language Materials from FDA

Looking for FDA information in Spanish? Check out the FDA's Web page for publications in Spanish <http://www.fda.gov/oc/spanish>.

Is It Done Yet? Only Your Food Thermometer Knows for Sure

Thermometers Aren't Just for Turkey Anymore

These days, food thermometers aren't just for your holiday roasts—they're for all cuts and sizes of meat and poultry, including hamburgers, chicken breasts, and pork chops. Using a food thermometer when cooking meat, poultry, and even egg dishes is the only reliable way to make sure you are preparing a safe and delicious meal for your family.



Why Use a Food Thermometer?

Everyone is at risk for foodborne illness. One effective way to prevent illness is to use a food thermometer to check the internal temperature of meat, poultry, and egg dishes. Using a food thermometer not only keeps your family safe from harmful food bacteria, but it also helps you to avoid overcooking, giving you a safe and flavorful meal.

Some people may be at high risk for developing foodborne illness. These include pregnant women and their unborn babies and newborns, young children, older adults, people with weakened immune systems, and individuals with certain chronic illnesses. These people should pay extra attention to handling food safely.

What Are the Signs of Foodborne Illness?

The signs and symptoms of foodborne illness range from upset stomach, diarrhea, fever, vomiting, abdominal cramps, and dehydration, to more severe illness or even death. Consumers can take simple measures to reduce their risk of foodborne illness, especially in the home.

"Is It Done Yet?" How To Use a Food Thermometer

1. Use an instant-read food thermometer to check the internal temperature toward the end of the cooking time, but before the food is expected to be "done."
2. The food thermometer should be placed in the thickest part of the food and should not be touching bone, fat, or gristle.
3. Compare your thermometer reading to the USDA Recommended Internal Temperatures to determine if your food has reached a safe temperature.
4. Make sure to clean your food thermometer with hot, soapy water before and after each use!



Instant read, digital food
Thermometer

Large-dial oven-safe or oven-probe thermometers may be used for the duration of cooking.

Because there are so many types of food thermometers, it is important to follow the instructions for your food thermometer.

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Food Thermometer - Continued from page 8

USDA Recommended Internal Temperatures

- Steaks & Roasts - 145 °F
- Fish - 145 °F
- Pork - 160 °F
- Ground Beef - 160 °F
- Egg Dishes - 160 °F
- Chicken Breasts - 170 °F
- Whole Chicken - 180 °F

Seeing Isn't Believing

Many people assume that if a hamburger is brown in the middle, it is done. However, looking at the color and texture of food is not enough, you have to use a food thermometer to be sure! According to USDA research, 1 out of every 4 hamburgers turns brown before it reaches a safe internal temperature. The only safe way to know if meat, poultry, and egg dishes are "done" is to use a food thermometer. When a hamburger is cooked to 160 °F, it is both safe and delicious!

Be Food Safe! Prepare With Care

Know how to prepare, handle, and store food safely to keep you and your family safe. Bacteria can grow on meat, poultry, seafood, eggs, and dairy products, as well as cut-up or cooked vegetables and fruits.

CLEAN: Wash hands and surfaces often

Wash your hands with warm, soapy water for 20 seconds before and after handling food. Wash your cutting boards, dishes, etc., with hot, soapy water after preparing each food item. Wash fruits and vegetables with cold water before using. There is no need to wash or rinse meat or poultry.

SEPARATE: Don't cross-contaminate

Separate raw, cooked, and ready-to-eat foods while shopping, preparing, or storing. Never place cooked food on a plate which previously held raw meat, poultry, or seafood.

COOK: Cook food to proper temperatures

Use a food thermometer to be sure!

CHILL: Refrigerate Promptly

Refrigerate or freeze perishables, prepared foods, and leftovers within 2 hours or sooner.

For More Information

<http://www.isitdoneyet.gov>

Tools to Stop Foodborne Illnesses in Your School

Looking for a way to prevent foodborne illnesses in your school? The Food-Safe Schools Action Guide (<http://www.foodsafeschools.org>)* provides a one-stop resource for preventing foodborne illness. Brought to you by CDC and its partners in the National Coalition for Food-Safe Schools, the Action Guide can help schools identify gaps in food safety and develop an action plan for becoming food-safe. It includes individual critical recommendations on what key school staff and community members can do to prevent foodborne illness.

**Links to non-Federal organizations are provided solely as a service to our readers. Links do not constitute an endorsement of any organization by the FDA or the Federal Government, and none should be inferred. The FDA is not responsible for the content of the individual organization Web pages found at this link.*



Study Shows Programs Can Teach Children to Eat Healthier

A study of preadolescent children found that those who attended a behaviorally oriented nutrition education program and were taught to follow a diet low in saturated fat and dietary cholesterol adopted significantly better dietary habits over several years, compared with their peers who received only general nutritional information.

The government-sponsored study showed that after three years, children in the intervention group consumed more than 67 percent of their total calories on average from heart-healthy foods, compared with less than 57 percent for children in the usual care group.

The study provides glimpses of real-world eating behavior and reveals the challenges of trying to eat a healthy diet in a fast-paced world. For example, the study documents a long-suspected phenomenon of modern society: about one-third of the total daily calories consumed by the children in both groups came from snack foods, desserts, and pizza.

To help families adopt healthier lifestyles, the NIH has launched a national public education program targeting parents and caregivers of children ages 8 to 13. Developed by the NHLBI and promoted in collaboration with several other NIH institutes, national health and youth organizations, and community-based groups, We Can! Ways to Enhance Children's Activity & Nutrition provides resources to encourage healthy eating, increase physical activity, and reduce sedentary time.

For More Information

<http://wecan.nhlbi.nih.gov> or call (866) 35-WE CAN (359-3226)

Buying Prescription Medicine Online: An Updated Consumer Safety Guide



The Internet has changed the way we live, work and shop. The growth of the Internet has made it possible to compare prices and buy products without ever leaving home. But when it comes to buying medicine online, it is important to be very careful. Some websites sell medicine that may not be safe to use and could put your health at risk.

Some websites that sell medicine:

- aren't U.S. state-licensed pharmacies or aren't pharmacies at all
- may give a diagnosis that is not correct and sell medicine that is not right for you or your condition
- won't protect your personal information

Some medicines sold online:

- are fake (counterfeit or "copycat" medicines)
- are too strong or too weak
- have dangerous ingredients
- have expired (are out-of-date)
- aren't FDA-approved (haven't been checked for safety and effectiveness)
- aren't made using safe standards
- aren't safe to use with other medicine or products you use
- aren't labeled, stored, or shipped correctly



MEET AND TALK WITH YOUR DOCTOR

- **Talk with your doctor** and have a physical exam before you get any new medicine for the first time.
- **Use ONLY medicine that has been prescribed** by your doctor or another trusted professional who is licensed in the U.S. to write prescriptions for medicine.
- **Ask your doctor** if there are any special steps you need to take to fill your prescription.



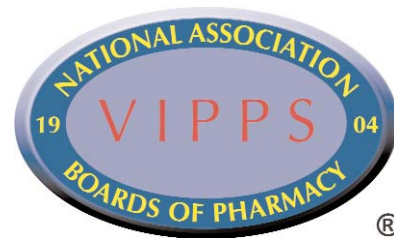
These tips will help protect you if you buy medicines online: **KNOW YOUR SOURCE to make sure it's safe**

Make sure a website is a state-licensed pharmacy that is located in the United States. Pharmacies and pharmacists in the United States are licensed by a state's board of pharmacy. Your state board of pharmacy can tell you if a website is a state-licensed pharmacy, is in good standing, and is located in the United States. Find a list of state boards of pharmacy on the National Association of Boards of Pharmacy (NABP) website at <http://www.nabp.info>.

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Buying Online - Continued from page 11

The NABP is a professional association of the state boards of pharmacy. It has a program to help you find some of the pharmacies that are licensed to sell medicine online. Internet websites that display the seal of this program have been checked to make sure they meet state and federal rules. For more on this program and a list of pharmacies that display the Verified Internet Pharmacy Practice Sites™ Seal, (VIPPS® Seal), go to <http://www.vipps.info>.



Look for websites with practices that protect you

A safe website should:

- 1. be located in the United States and licensed by the state board of pharmacy** where the website is operating (check <http://www.nabp.info> for a list of state boards of pharmacy)
- 2. have a licensed pharmacist** to answer your questions
- 3. require a prescription** from your doctor or other health care professional who is licensed in the United States to write prescriptions for medicine
- 4. have a way for you to talk to a person if you have problems**

BE SURE YOUR PRIVACY IS PROTECTED

- **Look for privacy and security policies** that are easy-to-find and easy-to-understand.
- **Don't give any personal information** (such as social security number, credit card, or medical or health history), unless you are sure the website will keep your information safe and private.
- **Make sure that the site will not sell your information**, unless you agree.

PROTECT YOURSELF AND OTHERS

- Report websites you are not sure of, or if you have complaints about a site.

Go to <http://www.fda.gov/buyonline> and click on "Notify FDA about problem websites."

Buying your medicine online can be easy. Just make sure you do it safely.

For more information on buying medicines and medical products over the Internet, go to <http://www.fda.gov> and click on "Buying Medicines Online," or go directly to <http://www.fda.gov/buyonline>.

For related information, go to:

- Imported medicine <http://www.fda.gov/importeddrugs>
- Counterfeit medicine <http://www.fda.gov/counterfeit>
- Generic drugs <http://www.fda.gov/cder/ogd>

This information is available in Spanish at:
http://www.fda.gov/cder/consumerinfo/buyOnlineGuide_text_span.htm

Taking a Bite Out of Rabies



Rabies is a virus that attacks the brain and is fatal if left untreated. It's transmitted through the saliva of infected mammals and can have a devastating effect on a person who becomes infected.

Thanks to increased vaccination of pets and advances in human vaccines, the number of human deaths from rabies in the United States in the last century has decreased from 100 or more per year to an average of one to two per year, according to the Centers for Disease Control and Prevention (CDC). Yet rabid animals are found each year in every state except Hawaii.

In 2003, the CDC received reports of more than 7,000 cases of rabies in animals in the United States and Puerto Rico. More than 90 percent of the cases occurred in wild animals, mostly raccoons, skunks, bats, and foxes. Reports of domestic animals with rabies that year included 321 cats and 117 dogs.

Just three cases of rabies in humans were reported to the CDC in 2003, but more than 40,000 people may have been spared from the deadly disease by getting vaccinated after they were potentially exposed. The Food and Drug Administration has approved vaccines to prevent rabies in humans, and the U.S. Department of Agriculture (USDA) has licensed vaccines to prevent rabies in many animals.

Deadly Virus

Only mammals get rabies--birds, reptiles, amphibians, and fish do not get the disease. Rabies is caused by a virus that attacks the brain. The virus enters the body through the saliva of an infected animal, usually by a bite, but it can also be transmitted if infected saliva gets into an open wound or splashes into mucous membranes such as those in the eyes, nose, or mouth. From the saliva's point of entry, the virus travels along nerve cells to the brain. It replicates there and moves to the salivary glands. In a rabid animal, the cycle is repeated when the animal bites a person or another animal.

Rabid animals may be aggressive and vicious, or lethargic and weak. In people, early rabies symptoms of fever, headache, and fatigue are followed by confusion, agitation, hallucination, and paralysis. If a person is exposed to rabies, the sooner treatment is begun after exposure, the better. Once symptoms begin, the disease is almost always fatal.

Human Rabies Vaccines

Older rabies vaccines required painful, daily injections in the abdomen for up to three weeks, and they could produce severe side effects. Today's rabies vaccines require fewer injections, are given in the arm, and have few serious side effects.

The FDA has approved several injectable products that are effective in preventing rabies in people who have been exposed to the virus. This post-exposure treatment consists of one injection of proteins that fight the infection (rabies immune globulin) and five injections of rabies vaccine over a 28-day period.

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The vaccine works by stimulating a person's immune system to produce antibodies that neutralize the virus, and the person develops a protective immune response before the virus reaches the brain and begins to actively replicate.

Rabies immune globulin contains antibodies from blood donors who were given rabies vaccine. The antibodies provide interim protection until an exposed person's own antibodies develop in response to the vaccine. Injecting rabies immune globulin at the site of injury also reduces the amount of virus that is able to enter the nerve cells and possibly start an active infection.

No test can detect rabies in humans at the time of a bite. People who may have been exposed should immediately wash all bite wounds and scratches with soap and water to decrease the chance of infection. If the suspect animal cannot be captured and tested or observed for symptoms, the vaccine regimen should be started promptly. According to the CDC, no one in the United States has developed rabies when the currently recommended post-exposure treatment regimen was followed.



Rabies vaccine may also be given to people before they are exposed to the virus if they are considered at high risk for exposure, such as veterinarians, wildlife officers, animal handlers, and some laboratory workers. This pre-exposure regimen consists of three injections of vaccine instead of five. Being bitten by a rabid animal, though, requires two more vaccine injections. Pre-exposure vaccination simplifies therapy by eliminating the need for immune globulin and by decreasing the number of doses of vaccine needed after exposure. It may protect people who unknowingly were exposed to rabies, as well as those who may be delayed in getting post-exposure vaccine.

Before travel abroad, the CDC recommends consulting a health care provider, travel clinic, or health department about the risk of exposure to rabies and about ways to handle an exposure should it arise. A pre-exposure vaccine may be suggested when traveling to some developing countries or remote areas.

A Rare Recovery from Rabies

Only one person in the United States is known to have recovered from rabies without receiving a rabies vaccination, according to the Centers for Disease Control and Prevention. While attending a church service in September 2004, 15-year-old Jeanna Giese of Fond du Lac, Wisconsin, picked up a bat she saw fall to the floor and released it outside the building. The bat bit her finger, but she didn't get medical treatment at the time. A month later, the teen complained of tiredness and a feeling of numbness in her hand. Walking became difficult, and she experienced double vision, nausea, vomiting, slurred speech, twitching, and fever. Jeanna was diagnosed with rabies and after intensive care in a Milwaukee hospital, which included a drug-induced coma for seven days, she gradually improved. Doctors are unsure whether she will fully recover.

Animal Rabies Vaccines

Rabies vaccines are available for dogs, cats, ferrets, horses, sheep, and cattle. To be effective, these vaccines must be injected before an animal is exposed to rabies. If exposed, the animal should get a booster shot.

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One of the most important ways to prevent rabies is to keep up to date on vaccinations for cats, dogs, and ferrets. Depending on the type of vaccine used, it should be given yearly or every three years. Even indoor pets should have rabies vaccinations.

Not only is it good preventive health care to vaccinate pets, but it's the law in most states for dogs and cats to be vaccinated against rabies, according to The Humane Society of the United States. Some states also require rabies vaccinations for ferrets.

In a cooperative program between the USDA, the CDC, and state governments, animals such as raccoons, coyotes, foxes, and skunks are being vaccinated orally in certain areas where rabid wildlife are frequently found. The oral vaccine is hidden in a bait of fishmeal or other food. The baits are dropped by airplanes into rural areas and spread by hand in urban and suburban areas.

Help Prevent Rabies

- Keep rabies vaccinations for all cats, dogs, and ferrets up to date. Many communities sponsor low-cost rabies vaccination clinics for pets. Check with your local animal control agency.
- Do not let pets roam.
- Enjoy wildlife from a distance.
- Do not approach a stray animal; report it to your local animal control agency.
- Seal off holes that can be entryways for animals into your home.
- Keep lids on garbage cans and don't leave pet food outside overnight.
- If bitten by an animal, immediately wash the wound with soap and water for at least five minutes and get medical help at once. Report the bite to your local health department.

Keep Your Distance

Many more wild animals than pets are reported to have rabies. But the most common reason people get post-exposure vaccines is that they're bitten by a domestic animal that isn't available for testing.

It's best to avoid wildlife and domestic animals that you don't know. Most healthy wild animals will generally try to avoid humans, but wild animals at parks and camp sites may be more brazen if they're used to getting handouts.

Wildlife are not found only in remote or rural areas. New development for housing and shopping malls disturbs wildlife habitats and makes animals more visible. People and animals living closely together has made rabies a problem in the suburbs too.

For more information

<http://www.cdc.gov/ncidod/dvrd/rabies/>

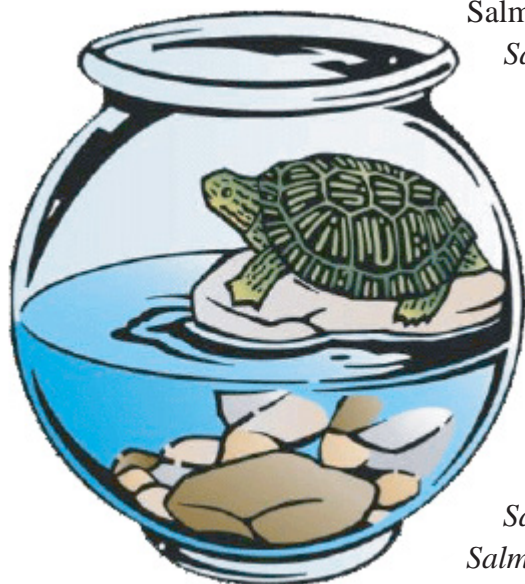
ALERT TO PARENTS

PET TURTLES MAY BE HARMFUL TO YOUR CHILDREN'S HEALTH

Small turtles are a source of a disease called salmonellosis in humans.

Salmonellosis is an infection of the intestines caused by bacteria called *Salmonella*. Symptoms of the disease may include diarrhea, stomach pain, nausea, vomiting, fever and headache. Symptoms begin in 6 to 72 hours (usually 12 to 36 hours) after a person is exposed to *Salmonella*, and they generally last for 2 to 7 days.

Anyone can get *Salmonella* infection, but the risk is highest in infants and young children as well as the elderly, and people who have lowered natural resistance to disease due to pregnancy, cancer, chemotherapy, organ transplants, diabetes, liver problems, or other diseases.



Salmonella are naturally occurring bacteria in turtles and those with *Salmonella* usually do not appear sick in any way. In addition, turtles do not shed *Salmonella* all of the time. So, just because a turtle might have one negative test for *Salmonella* doesn't mean that they are not infected. It could mean that the turtle was not shedding *Salmonella* on the day it was tested.

The sale of turtles with a carapace (thick shell that covers the back of a turtle) length of less than 4 inches has been banned in the U.S. since 1975 because of the public health impact of turtle-associated salmonellosis. This regulation is enforced by the Food and Drug Administration (FDA) in cooperation with State and local health jurisdictions. Experts estimate that the regulation has prevented about 100,000 cases of salmonellosis per year. However, there has been an increase in the sale of turtles in recent years.

Alert to parents and other persons responsible for the care of children:

- The sale of small turtles for pets is illegal.
- Be alert for turtles in petting zoos, parks, child day care facilities, or other locations where children may be.
- If you come in contact or handle turtles or their housing, be sure to wash your hands thoroughly with soap and water.

About FDA & You

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