



# BetterSafe

WELCOA'S ONLINE BULLETIN FOR YOUR FAMILY'S SAFETY

Where's The

# Noise?

*Everywhere (and it's getting louder)*



Many kids are exposed to too much noise. Over time, exposure to excessive noise can cause hearing loss. Hearing loss from too much noise—called noise-induced hearing loss (NIHL)—may be hardly noticeable at first. Once lost, however, hearing cannot be restored.

As the world gets louder, noises compete with each other. For example, think of a common scene in a home kitchen. If the dishwasher is running, you might increase the volume on the kitchen TV to hear it better. Add a blender and garbage disposal, and your spouse might turn the TV volume up even more. If the phone rings, you have to turn up the headset volume to be heard over the TV. Then your son and daughter turn up their headsets to hear their music or video games over the noise around them.

The design of today's restaurants is making them far noisier than they once were. Hard surfaces like glass, metal, concrete, and polished wood reflect sound and amplify noise. Some restaurant owners use these materials because it makes the place sound lively. Others use them because they encourage people to eat faster, allowing more parties to be seated at the same table during the dining period.

## **Protect Yourself & Your Family**

Whether you prefer classical, jazz, rock, pop, hip hop, or even bagpipe music, concerts are also sources of potentially damaging noise. A symphony orchestra playing at peak volume can easily reach 100 decibels, and certain brass and percussion instruments have registered 130 to 140 decibels at close range. The music at a pop concert typically maintains a fairly constant level of 110

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decibels. If the fans are screaming, the noise can register at 115 to 120 decibels! That's roughly as loud as an ambulance siren!

Consider other common sources of noise like leaf blowers, home entertainment systems, movie theaters, and traffic. Not all exposure to loud noise can be prevented, but when the noise is too loud for too long a time, a little effort to protect your hearing and your children's hearing can go a long way.

## Tips For Creating A Quiet Home

You can create a quiet home in three ways:

1. Reduce noises at the source.
2. Avoid competing noises in the same area.
3. Make your family aware of noise sources, noise levels, and how to avoid unsafe noise levels.

## Here are some practical tips for creating a quiet home:

- ✓ Set your television, video games, and music to the lowest volume at which they can be heard clearly. If someone in the room has trouble hearing, consider turning on your television captioning rather than turning up the volume.
- ✓ Create ways to muffle the noise of chores. An example is to close the door between family members and appliances in use, such as those in a workshop or laundry room.
- ✓ Buy quiet toys. If you buy electronic toys, choose those with volume controls, and use only the lowest volume setting. This will both lower your household noise levels and help protect your child from NIHL.
- ✓ When buying certain appliances, such as a fan, range hood, or dishwasher, ask about its noise rating. Some ratings are given in "sones": the lower the sone number, the quieter the unit.
- ✓ If your home is in a particularly noisy location, work to keep outdoor noises outdoors. Caulk cracks around windows and doors. Insert putty or expanding foam around pipes and wires where they enter the house.
- ✓ Close windows and doors against potentially harmful sounds, such as leaf blowers, lawn mowers, power tools, and sirens.
- ✓ Use soft furnishings to soften noise indoors. The more cushions, curtains, and wall coverings you have, the more noise will be absorbed.
- ✓ Place carpets and area rugs over hard flooring to help soak up sound. Thicker rugs are more effective at reducing noises that bounce off of hard surfaces.

**By taking just a few simple steps, you can achieve a home that is filled with only safe, peaceful sounds.**



# Day In Day Out

WELCOA'S ONLINE BULLETIN FOR YOUR LIFESTYLE

## Fruit Flies Yield Insights Into Aging



Both calorie restriction and resveratrol—a compound found in grapes, red wine, and nuts—ward off several age-related diseases in animal models. Researchers have been exploring the molecular mechanisms involved. Recent studies have implicated an enzyme called AMP-activated protein kinase (AMPK). AMPK senses and maintains energy levels in the cell. Among its many effects, it helps to regulate autophagy, a recycling process that continually breaks down and recycles waste within our cells. Autophagy has also been linked to aging and lifespan.

### The Research

A team led by Dr. David Walker at the University of California, Los Angeles, used transgenic technology to manipulate AMPK levels in specific organs of fruit flies (*Drosophila*) and explored the impact on autophagy, cellular signs of aging, and lifespan.

### The Results

The researchers found that boosting AMPK levels in the nervous system (neurons) induced autophagy within the brain and prolonged the flies' lifespan. Surprisingly, boosting neuronal AMPK also induced autophagy in the flies' intestines and improved a measure of intestinal aging. It induced autophagy and reduced signs of aging in muscle as well.

Autophagy can be directly induced in *Drosophila* by increasing expression of the gene *Atg1*. When the researchers raised expression of *Atg1* in adult fly neurons, it also improved intestinal function during aging and prolonged lifespan. Further experiments showed that the anti-aging effects of neuronal AMPK disappeared when *Atg1* was blocked.

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# Day In Day Out

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## At A Glance

- Activating certain molecules in key tissues slowed aging in fruit flies.
- The findings may lead to a better understanding of aging processes in people.

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The team next raised levels of AMPK in the intestine. This similarly boosted autophagy, both in the intestine and the brain. It also reduced signs of aging in muscle tissue and prolonged life.

To investigate how AMPK and *Atg1* might exert these system-wide effects, the researchers explored the insulin/insulin-growth-factor-1-signaling pathway, which had previously been linked to lifespan in flies and mammals. Their results suggest that AMPK and *Atg1* affect other tissues by altering insulin-like peptide signaling.

“We have shown that when we activate the [AMPK] gene in the intestine or the nervous system, we see the aging process is slowed beyond the organ system in which the gene is activated,” Walker says.

### What's Next?

Autophagy may slow the aging process by increasing the turnover of damaged cell components. Which of these components might be relevant to aging remains to be discovered. Researchers will also need to test whether activation of autophagy in a single tissue in mammals can slow aging in other tissues as well.

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# TakeCharge

WELCOA'S ONLINE SELF-CARE BULLETIN



# Cold, Flu, or Allergy?

*Know The Difference For Best Treatment*

You're feeling pretty lousy. You've got sniffles, sneezing, and a sore throat. Is it a cold, flu, or allergies? It can be hard to tell them apart because they share so many symptoms. But understanding the differences will help you choose the best treatment.

"If you know what you have, you won't take medications that you don't need, that aren't effective, or that might even make your symptoms worse," says National Institutes of Health (NIH's) Dr. Teresa Hauguel, an expert on infectious diseases that affect breathing.

Cold, flu, and allergy all affect your respiratory system, which can make it hard to breathe. Each condition has key symptoms that set them apart.

## Signs & Symptoms

Colds and flu are caused by different viruses. "As a rule of thumb, the symptoms associated with the flu are more severe," says Hauguel. Both illnesses can lead to a runny, stuffy nose; congestion; cough; and sore throat. But the flu can also cause high fever that lasts for 3-4 days, along with a headache, fatigue, and general aches and pain. These symptoms are less common when you have a cold.

"Allergies are a little different, because they aren't caused by a virus," Hauguel explains. "Instead, it's your body's immune system reacting to a trigger, or allergen, which is something you're allergic to." If you have allergies and breathe in things like pollen or pet dander, the immune cells in your nose and airways may overreact to these harmless substances. Your delicate respiratory tissues may then swell, and your nose may become stuffed up or runny.

"Allergies can also cause itchy, watery eyes, which you don't normally have with a cold or flu," Hauguel adds.

## Treatment & Recovery

Allergy symptoms usually last as long as you're exposed to the allergen, which may be about 6 weeks during pollen seasons in the spring, summer, or fall. Colds and flu rarely last beyond 2 weeks.

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# TakeCharge

WELCOA'S ONLINE SELF-CARE BULLETIN

## Cold, Flu, or Allergy?

Treatment depends on which you have. A health professional can help you choose the best therapy.

### Common Cold

- Symptoms last up to 2 weeks
- Stuffy, runny nose; sore throat; cough
- Treated with rest, fluids, over-the-counter (OTC) medicines to ease symptoms

### Seasonal Flu

- Symptoms usually last 1-2 weeks
- High fever (100-102 °F, or higher in youngsters), headache, aches and pains, weakness, exhaustion, cough, chest discomfort
- Treated with rest, fluids, OTC medicines, prescription antiviral drugs

### Airborne Allergy

- Lasts as long as allergens (such as pollen, pet dander) are present
- Stuffy, runny nose; itchy, watery eyes
- Treated with antihistamines, decongestants, nasal steroids

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Most people with a cold or flu recover on their own without medical care. But check with a health care provider if symptoms last beyond 10 days or if symptoms aren't relieved by over-the-counter medicines.

To treat colds or flu, get plenty of rest and drink lots of fluids. If you have the flu, pain relievers such as aspirin, acetaminophen, or ibuprofen can reduce fever or aches. Allergies can be treated with antihistamines or decongestants. See the "Wise Choices" box for more details.

Be careful to avoid "drug overlap" when taking medicines that list 2 or more active ingredients on the label. For example, if you take 2 different drugs that contain acetaminophen—one for a stuffy nose and the other for headache—you may be getting too much acetaminophen.

"Read medicine labels carefully—the warnings, side effects, dosages. If you have questions, talk to your doctor or pharmacist, especially if you have children who are sick," Hauguel says. "You don't want to overmedicate, and you don't want to risk taking a medication that may interact with another."

*Read medicine labels carefully—the warnings, side effects, dosages. If you have questions, talk to your doctor or pharmacist.*





# To Your Health

WELCOA'S ONLINE GENERAL WELLNESS BULLETIN

## Sweet Stuff

### How Sugars and Sweeteners Affect Your Health

Most of us love sweet foods and drinks. But after that short burst of sweetness, you may worry about how sweets affect your waistline and your overall health. Is sugar really bad for us? How about artificial or low-calorie sweeteners? What have scientists learned about the sweet things that most of us eat and drink every day?

Our bodies need one type of sugar, called glucose, to survive. "Glucose is the number one food for the brain, and it's an extremely important source of fuel throughout the body," says Dr. Kristina Rother, a National Institutes of Health

(NIH) pediatrician and expert on sweeteners. But there's no need to add glucose to your diet, because your body can make the glucose it needs by breaking down food molecules like carbohydrates, proteins, and fats.

Some sugars are found naturally in foods, such as fruits, vegetables, and milk. "These are healthful additions to your diet," says Dr. Andrew Bremer, a pediatrician and NIH expert on sweeteners. "When you eat an orange, for instance, you're getting a lot of nutrients and dietary fiber along with the natural sugars."

Although sugar itself isn't bad, says Rother, "sugar has a bad reputation that's mostly deserved because we consume too much of it. It's now in just about every food we eat."

Experts agree that Americans eat and drink way too much sugar, and it's contributing to the obesity epidemic. Much of the sugar

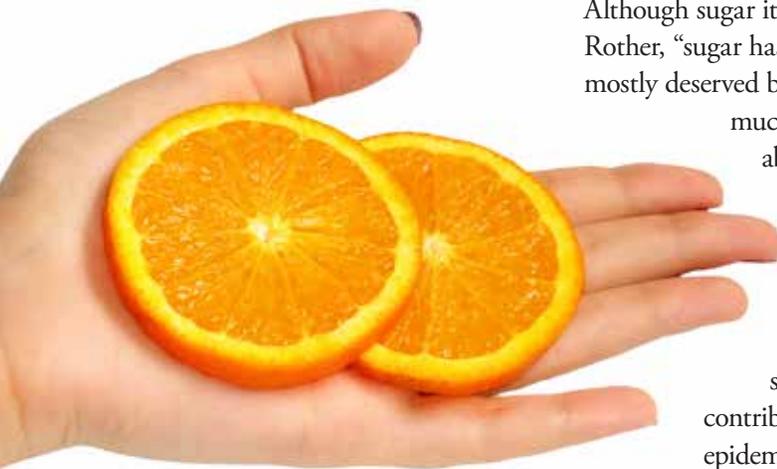


we eat isn't found naturally in food but is added during processing or preparation.

#### Not So Sweet News

About 15% of the calories in the American adult diet come from added sugars. That's about 22 teaspoons of added sugar a day. Sugars are usually added to make foods and drinks taste better. But such foods can be high in calories and offer none of the healthful benefits of fruits and other naturally sweet foods.

Sugar-sweetened beverages like soda, energy drinks, and sports drinks are the leading source of added sugars in the American diet. Juices naturally contain a lot of sugar. But sometimes, even more is added to make them taste sweeter.



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“Juices offer some vitamins and other nutrients, but I think those benefits are greatly offset by the harmful effects of too much sugar,” says Bremer.

Over time, excess sweeteners can take a toll on your health. “Several studies have found a direct link between excess sugar consumption and obesity and cardiovascular problems worldwide,” Bremer says.

Because of these harmful effects, many health organizations recommend that Americans cut back on added sugars. But added sugars can be hard to identify. On a list of ingredients, they may be listed as sucrose (table sugar), corn sweetener, high-fructose corn syrup, fruit-juice concentrates, nectars, raw sugar, malt syrup, maple syrup, fructose sweeteners, liquid fructose, honey, molasses, anhydrous dextrose, or other words ending in “-ose,” the chemical suffix for sugars. If any of these words are among the first few ingredients on a food label, the food is likely high in sugar. The total amount of sugar in a food is listed under “Total Carbohydrate” on the Nutrition Facts label.

Many people try cutting back on calories by switching from sugar-sweetened to diet foods and drinks that contain low- or no-calorie sweeteners. These artificial sweeteners—also known as sugar substitutes—are many times sweeter than table sugar, so smaller amounts are needed to create the same level of sweetness.

People have debated the safety of artificial sweeteners for decades. To date, researchers have found no clear evidence that any artificial sweeteners approved for use in the U.S. cause cancer or other serious health problems in humans.

The key to good health is eating a well-balanced diet with a variety of foods and getting plenty of physical activity. Focus on nutrition-rich whole foods without added sugars.

## Cut Added Sugars

- Choose water, fat-free milk, or unsweetened tea or coffee instead of sodas, sports drinks, energy drinks, and fruit drinks.
- Reduce sugar in recipes. If a recipe says 1 cup, use 2/3 cup.
- To enhance flavor, add vanilla, cinnamon, or nutmeg.
- Eat fresh, canned, frozen, and dried fruits without added sugar. Choose fruits canned in their own juice rather than syrup.
- Use fruits to top foods like cereal and pancakes rather than sugars, syrups, or other sweet toppings.
- Read the ingredients list to pick food with little or no added sugar.
- Use the Nutrition Facts label to choose packaged foods with less total sugar.

