

Acetaminophen Overdose: What You Need to Know

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What is acetaminophen?

KnowYourDose.org
Acetaminophen Awareness Coalition

Know Your Dose is an educational campaign that works to help consumers safely use medicines that contain acetaminophen.

Acetaminophen (pronounced *a-seet'-a-min'-oh-fen*) is a medicine that lowers fevers and relieves mild to moderate pain. It's found in over-the-counter (OTC) and prescription medications. It's the active ingredient in Tylenol, one of the most common brand-name OTC products. There are over 600 medicines that contain acetaminophen, though, including drugs for infants, children, and adults.

Too much acetaminophen

According to the U.S. Food and Drug Administration (FDA), taking too much acetaminophen can damage your

Overdose: Taking too much of a drug

liver. The recommended maximum daily dose is 4,000 milligrams (mg) per day for adults. However, the difference between a safe dose of acetaminophen and one that may harm the liver is very small. McNeil Consumer Healthcare (the maker of Tylenol) lowered their recommended maximum daily dose to 3,000 mg. Many pharmacists and healthcare providers agree with this recommendation.

Other factors add to the risk of liver damage when taking acetaminophen. For example, the chance of liver damage is greater if you already have liver problems, if you drink three or more alcoholic beverages a day, or if you take warfarin.

In severe cases, an overdose of acetaminophen can cause liver failure or death.

When to seek medical help

Call 911 or [Poison Control](#) at 800-222-1222 immediately if you believe that you, your child, or someone else may have taken too much acetaminophen. You can call 24 hours a day, every day. Keep the medicine bottle, if possible. Emergency personnel may want to see exactly what was taken.

Also seek emergency care if you notice any symptoms of an overdose, such as loss of appetite, nausea and vomiting, or pain in the upper right side of the abdomen.

Most of the time, acetaminophen overdose can be treated. Someone who has overdosed may be admitted to the hospital or treated in the

Recognizing an overdose

Symptoms of an overdose can include:

- loss of appetite
- nausea
- vomiting
- pain in the abdomen or belly, especially in the upper right side

emergency department. Blood tests can help detect the level of acetaminophen in the blood. Other blood tests may be done to check the liver. Treatment may include medications that help remove the acetaminophen from the body or lessen its harmful effects. Stomach pumping may also be necessary.

Causes of acetaminophen overdose

In adults

The overwhelming majority of the time, acetaminophen is taken safely and according to the directions. Some common reasons that people may accidentally take more than the recommended daily dose of acetaminophen include:

- taking the next dose too soon
- using multiple medicines that contain acetaminophen at the same time
- taking too much at one time

People can also take several drugs that contain acetaminophen without even knowing it. For example, you may take a daily prescription medicine that contains acetaminophen. If you get sick, you may reach for an OTC cold medicine. However, many cold medications also have acetaminophen. Taking both drugs in the same day may lead to unintentionally taking more than the maximum daily dose. [Poison Control](#) recommends that you tell your healthcare provider about all prescription and OTC medicines that you're taking to make sure that you aren't taking too much acetaminophen. For a list of common medicines that contain acetaminophen, visit [KnowYourDose.org](https://www.knowyourdose.org).

You should talk to a healthcare provider before taking acetaminophen if you have three or more alcoholic drinks every day. Together, acetaminophen and alcohol increase the chance of overdose and liver damage.

In children

Children may also unintentionally take more acetaminophen than recommended by taking too much at once or taking more than one product with acetaminophen.

Other factors can also increase the chance of overdose in children. For example, a parent may give their child a dose of acetaminophen without realizing that the babysitter recently did the same. Plus, it's possible to measure the liquid form of acetaminophen incorrectly and give too large of a dose. Children may also mistake acetaminophen for candy or juice and accidentally ingest it.

Preventing acetaminophen overdose

In children

Don't give your child medication that contains acetaminophen unless it's necessary for their pain or fever.

Ask your child's healthcare provider how much acetaminophen you should use, especially if your child is younger than 2 years old.

Use your child's weight to guide how much you give. Dosage based on their weight is more accurate than dosage based on their age. Measure liquid acetaminophen using the dosing device that comes with the medicine. Never use a regular teaspoon. Regular spoons vary in size and won't give an accurate dose.

For adults

Always read and follow the label. Never take more medicine than the label says. Doing so is an overdose and can lead to liver damage. If you have pain

that isn't relieved by the maximum dose, do not take more acetaminophen. Instead, talk to your healthcare provider. You may need a different medicine or treatment. Acetaminophen is only for mild to moderate pain.

Know if your medications contain acetaminophen. Check the active ingredients listed on the labels of all your medications. On over-the-counter drug labels, the word "acetaminophen" is written on the front of the package or bottle. It's also highlighted or bolded in the active ingredient section of the Drug Facts label.

Also known as...

On prescription medicine labels, acetaminophen is sometimes listed as APAP, acetam, or other shortened versions of the word. Outside of the United States, it may be called paracetamol.

Take only one medication at a time that contains acetaminophen. Tell your healthcare provider about all prescription and OTC drugs that you're taking to make sure you aren't taking too much acetaminophen. Ask your healthcare provider or pharmacist if you have questions about dosing instructions or medicines that contain acetaminophen.

Also, talk to your healthcare provider before taking acetaminophen if you:

- drink three or more alcoholic drinks per day
- have liver disease
- take warfarin

You may be at greater risk of liver damage.

Takeaway

Acetaminophen is safe and effective when used as directed. However, acetaminophen is a common ingredient in many medications, and it's possible to take too much without realizing it. It's also possible to take too

much without thinking of the risks. Even though it's readily available, acetaminophen comes with serious safety warnings and risks. To stay safe, make sure to do the following when you use acetaminophen:

- Always read and follow the medicine label.
- Know if your medicines contain acetaminophen.
- Take only one medicine at a time that contains acetaminophen.
- Ask your healthcare provider or a pharmacist if you have questions about dosing instructions or medicines with acetaminophen.
- Make sure to keep all medications where children can't reach them.



NCPiE focuses on medication safety issues like adherence, preventing abuse, reducing errors, and better communication.

Article Resources

- Acetaminophen Awareness Coalition. (n.d.). Safe use with kids. Retrieved from <http://www.knowyourdose.org/acetaminophen-for-infants-and-children/>
- Acetaminophen overdose and liver injury – background and options for reducing injury. (2009). Retrieved from <http://www.fda.gov/downloads/AdvisoryCommittees/.../UCM164897.pdf>
- Brennan, Z. (2015, November 16). FDA amends liver warning labeling guidance for some OTC drugs containing acetaminophen. Retrieved from <http://www.raps.org/Regulatory-Focus/News/2015/11/16/23608/FDA-Amends-Liver-Warning-Labeling-Guidance-for-Some-OTC-Drugs-Containing-Acetaminophen/>
- Mayo Clinic Staff. (2014, April 13). Acetaminophen and children: Why dose matters. Retrieved from <http://www.mayoclinic.com/health/acetaminophen/HO00002>
- O'Malley, G. F., & O'Malley, R. (n.d.). Acetaminophen poisoning. Retrieved from <http://www.merckmanuals.com/home/injuries-and-poisoning/poisoning/acetaminophen-poisoning>
- Soloway, R. A. G. (n.d.). Acetaminophen: Take it safely. Retrieved from <http://www.poison.org/articles/2009-dec/acetaminophen-take-it-safely>
- U.S. Food and Drug Administration. (2014, January 1). FDA recommends health care professionals discontinue prescribing and dispensing prescription combination drug products with more than 325 mg of acetaminophen to protect consumers. Retrieved from <http://www.fda.gov/Drugs/DrugSafety/ucm381644.htm>
- U.S. Food and Drug Administration. (2015, November 16). Notice to industry: Final guidance for over-the-counter products that contain acetaminophen. Retrieved from <http://www.fda.gov/Drugs/DrugSafety/ucm310469.htm>
- U.S. National Library of Medicine. (2016, September 6). Drug record: Acetaminophen. Retrieved from <http://livertox.nih.gov/Acetaminophen.htm>