Do's and Don'ts of Plumbing Safety Basics

Before taking on any do-it-yourself [plumbing](https://www.thespruce.com/plumbing-basics-4127791) project or repair, it's a good idea to be mindful of some basic safety precautions. These include general tool safety tips as well as official—or legal—requirements pertaining to plumbing installations. And since plumbing work usually involves pipes, you always want to be mindful of what's in a pipe (Pressurized water? Sewage?) and the possible results of your actions.

Do

Plumbing the smart and safe way starts with thinking about your next step. Taking a moment to consider what might be in a pipe or whether you need to shut off the water first can make the difference between a simple project and a disaster scenario.

* Think before opening a drain. Before separating drain parts or removing a cleanout, stop to ask yourself if it's possible that the contents of the pipe will drain in your direction? Drains aren't normally under pressure, but a clog in a drain can build significant pressure, due to gravity and the ​weight behind the clog. Many a plumber has a horror story of opening a cleanout in a basement and creating a firehose effect of spewing sewage.
* Shut off the water. If there's any chance that your work will involve a water supply, shut off the water to be safe. Sometimes what looks like a decorative cap or knob actually holds back pressurized water. You don't want to have to search for the household shutoff in a panic.
* Be informed. Check all pertinent local building and plumbing codes before starting a significant plumbing project. Know what work you can do yourself and what work requires a professional. Get a permit whenever it is required for your plumbing project.
* Protect your eyes. Wear safety glasses when doing any plumbing work, especially something that could potentially damage your eyes. Work such as snaking a drain, using a drill, or reciprocating saw, hammering, or even working under a sink while looking up can pose a safety hazard for your eyes. Also be aware of the possibility of contaminants, like sewage or drain gunk, splashing into your eyes.
* Protect your hands. Wear appropriate work gloves to protect your hands. Hands come into contact with many different materials and chemicals when doing plumbing projects, and using gloves is an easy way to prevent injuries. When using a drain machine of any sort, it is a good idea to wear latex gloves under leather gloves to protect you from the germs typically found in drain lines.
* Protect your lungs. Use a face mask when necessary to protect your lungs. When your project involves sawing or sanding, take the extra precaution of using a disposable face mask to prevent the inhalation of dust particles.
* Practice tool safety. Exercise caution when using power tools, and follow the manufacturer's recommendations for use. Drilling large holes for pipes with a powerful 1/2-inch drill is a common hazard for plumbing work. Make sure the drill bit or cutter will not bind during the operation; if the bit stops, the drill will keep going. Also be extra cautious when [soldering](https://www.thespruce.com/how-to-solder-copper-pipes-4148134) or using any heat on pipes, especially on the wall or near any insulation. Use a heat shield to protect nearby combustible materials when working with a soldering torch.
* Read labels. Always read labels and instructions when using chemicals or machines. Follow the recommendations for use at all times. Check the warning labels on products and equipment, and know what to do in case of an emergency.

Don’t

Plumbing can be deceptively simple; that is, it can seem less complicated than it really is. So the main rule of thumb is, Don't rush into things. Think through your project and make sure the plan works before you start tearing into your pipes or pulling out fixtures.

* Ignore code requirements. Plumbing and [building codes](https://www.thespruce.com/international-building-code-3972525) are put in place for the protection of you, everyone in your household, and the general public, so they should never be ignored. For example, leaving out a simple vacuum breaker (a common code requirement) in a water supply line can potentially lead to contamination of the public drinking water.
* Cut blindly. Before cutting or drilling into a wall, ceiling, or floor cavity, make sure you know what's behind the surface. Cavities hide plumbing pipes, electrical wiring, and ductwork, among other things you really don't want to cut or drill into.
* Misuse tools or equipment. Use tools and equipment for their intended purpose only. The misuse of tools can result in injury and/or damage to the tool. Poorly maintained tools and equipment can also be a safety hazard. Check power tools and equipment before using them to ensure they are in good condition.

Warning

Do not ignore the smell of gas. If you smell [natural gas](https://www.thespruce.com/emergency-actions-for-natural-gas-leak-4125781) or [suspect a gas leak](https://www.thespruce.com/how-to-spot-signs-of-a-gas-leak-2718710), stop what you are doing right away. If it is safe to do so, turn off the gas, and call your gas company. Don’t try to find the gas leak yourself.

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