HOMEOWNER REPAIR GUIDE

SNAKING DRAINS

WHY DRAINS CLOG

The most common source of drain blockage inside a home is an accumulation of the soaps and shampoos that we Americans use so frequently. Most of these products have a base of animal fat. When they are rinsed down the drain, they tend to cool and cling to the inside of your drain lines where they act like “glue,” causing other debris (hair, rust, mineral sediment in the water, toothpaste, coffee grounds, food particles, etc.) to attach themselves to the walls. The most vulnerable locations for this process to happen are the parts of the drain system furthest from the drain itself, or any places where the line is fairly horizontal and the speed of the running drain water slows down.

A drain line from a sink or tub usually consists of pipe with an inside diameter of 1-1/2 inches, part of the system designed to carry away your waste water. However, as a clog slowly develops in the line, the diameter of the pipe is narrowed, slowing the water flow in it. This reduced flow then allows even more debris to cling to the sides of the drain line, exaggerating the problem further. Soon you can have an opening the size of a straw, which will eventually close totally.

Once your sink or bathtub drain starts to slow, you have three options.

OPTION 1: CHEMICAL DRAIN CLEANER

The first is a chemical drain cleaner. There are two types of liquid drain openers. One is caustic lye (like Liquid Plumber™ or Liquid Drano™). The other is an acid solution (usually sulfuric acid), available in various strengths; the less diluted (and more effective) types go by the brand names of Assault™ or Release™. Whatever type you use, add the product cautiously, and follow all safety practices on the label.

> **ONLY IF WATER IS STILL MOVING**
>
> **Use drain cleaners only if water is still moving through the drain** – once the line is blocked up, the drain cleaner just sits in one place, and is as likely to eat through the drain line itself as through the blockage.

OPTION 2: A DRAIN SNAKE

Your second option is a drain snake. A drain snake has a semi-rigid flexible cable, usually 25 to 50 feet long, with interchangeable cutting tips on the end. Some are hand-powered, and others are powered by an electric drill-style motor.

CHOOSING A SNAKE	
Electric sink snake	An electric “sink snake,” slightly larger than an electric drill, is generally used to clear interior drains – sinks, bathtubs, basement floor drains, etc.
Hand snake	Some bathroom drains have pipes of a slightly smaller diameter (1-1/4”), where you may only be able to use a hand snake with a smaller diameter cable.

CHOOSING A SNAKE	
Electric sewer snake	For outside sewers and driveway drains, use an electric “sewer snake.” A sewer snake is powered by a larger motor and has a thicker cable that won't fit inside interior drain lines. The cables of sewer snakes vary in length and diameter; some cables are comprised of segments that attach to one another to make up the length required. Longer cables, or cables used to dig through mud in the sewer line, must be driven by a more powerful motor.

Blockages in sewer lines are usually caused by roots that have invaded the line. The only way to remove the roots is to use a snake with a cutter bit; **drain cleaners will not eat through root blockages.** (Use copper sulfate to prevent new root growth – *see chart below*.) Occasionally, a drain may be blocked by mud and sediment, which must be dragged out with a “mud head,” a propeller-shaped bit at the end of the cable.

CUTTING TIPS

The main cutting tips on a snake are the arrowhead, the extractor, and the side cutters.

Arrowhead	Usually your first choice.
Side cutters	Add the side cutters to the arrowhead when you have a particularly tough clog and need extra cutting action.
Extractor	Use the extractor to pull out debris after you are through the clog.

USING AN ELECTRIC SNAKE

Electric sink snakes and electric sewer snakes work in basically the same manner. Both have a forward (clockwise) motion and a reverse (used only if the cable snags in the line).

1 GET STRAIGHT ACCESS TO THE LINE

Feed the cable into the pipe you are snaking, in as straight a line as practically possible. If you are snaking a sink drain, remove the trap and feed the snake into the drainpipe that runs into the wall. Bathtubs are almost impossible to snake from the drain; you'll usually need to remove the overflow for straighter access into the drain line. Some drains may have a clean out (an attachment to your drain line designed to give access for snaking); if not, you may need to take the trap apart under the tub and go in through there. If you have a **drum trap** on the line, it will probably be impossible to snake the whole drain line from the tub; you’ll need to snake “upstream” and “downstream” from the drum.

2 FEED THE CABLE

Some snakes have a power feed, which automatically advances the cable; with the rest, you’ll need to advance and retract the cable manually. With these snakes, after you have fed the snake into the drain by hand as far as it will go, pull out about 12 to 18 more inches of cable and start using the motor with a forward motion. (When using the electric sink snake, push the orange collar forward to unlock the cable and pull the collar back to lock the cable in place.) The sink snake has a trigger mechanism, much like a drill, while the sewer snake has a foot pedal that you depress to start and stop the snake.

3 WORK THE CABLE INTO THE DRAIN

As the motor turns the cable, physically push the cable into the drain and pull it back, repeatedly – much like rocking a car out of a snowdrift – as you work the cable into the drain line. Each time that length of cable goes in all the way, pull out another 18 inches of cable from the snake, and work the new length into the drain.

4 RETRACT AND TEST

You can usually feel when the snake cuts through the blockage, whatever it is. When you think you are through, pull the cable out and retract it into the snake by hand. (Hose down the cable on the bigger snake before returning it to the drum; on a smaller model, you can wipe the cable clean with a rag as you retract it.) Then, reassemble the drain and give it a try. On interior drains, follow up with drain cleaner once a week for a month or so, to help enlarge the hole you have bored through the debris with the snake.

WATCH THE SLACK

Don't allow too much cable between the snake and the drain; if it snags, the excess cable can wrap around your arm.

OPTION 3: CALL A PLUMBER

You've probably been wondering about your third option – calling a plumber! Given the cost of professional drain cleaning, however, it makes sense to try this repair yourself first. (Plumbers don't approach the job any differently, but they've had more experience and will be persistent.)

STICK WITH IT

If you get stuck, try a different tip, try a different angle, try a different access to the drain line – those are the same things a plumber will try. It's usually by sticking with it that you can snake a drain successfully.

SNAKING CHART

DRAIN	SNAKE TO USE	COMMON PROBLEMS	COMMENT
Basement floor (mid-floor or under laundry tubs)	Electric sink or smaller sewer snake; extractor bit	Laundry drain usually clogged with lint or fabric; can be tightly packed	Drain can be too small for sewer snake. Cover drain or outlet hose with screen to keep out lint and floor dirt.
Kitchen or bathroom sink	Electric sink snake or hand snake; arrowhead bit	Clogs in kitchen sinks generally food and/or grease; usually not too tightly packed. Clogs in bathroom sinks most often hair and soap.	Some sink drains are too small for electric snake; use hand snake. Take trap off drain line before snaking. Use the straightest access possible.
Toilet	Hand-powered closet auger	Seldom clogs; obstruction usually a large item	Electric snake can crack porcelain toilet; use hand power only. As a last resort, take up toilet for access through bottom.

DRAIN	SNAKE TO USE	COMMON PROBLEMS	COMMENT
Bathtub	Electric sink snake; arrowhead bit	Clog usually hair and soap; not too tightly packed	Can’t snake through tub drain; snake through overflow or take trap apart and snake there. Can be a recurring problem; regular use of drain cleaner can help as preventative (do not use in drum traps).
Driveway drain	Electric sewer snake; arrowhead bit with side cutters, or mud head for dirt-clogged line	Tree roots or gravel are common problems; can be hard to get through. Blockage can be far from drain opening.	Copper sulfate, though it doesn’t dissolve roots, can prevent new growth into lines. Use 2-4 times per year. The largest snake can be required to power through tough clogs or reach obstruction.
Downspouts from gutters	(same as above)	(same as above) Watch for leaves.	(same as above) Take downspout out of drain before inserting snake. Adding cleanout can give easy access for regular snaking.

Home Repair Resource center

Home Repair Resource Center empowers homeowners to maintain their homes for sustainable and diverse communities.

WWW.HRRC-CH.ORG **+1.216.381.6100** **2520 Noble Road, Cleveland Heights, OH 44121**

© 2026, Home Repair Resource Center