

How to clear a slow drain . . . Using a solution of water and lye

Hair is the primary thing that causes drain stoppages.

Be sure to use enzymatic cleaner, if there is standing water, otherwise, you'll have a dangerous, caustic mess on your hands.

I think the fix for that would be to use something like the:

Mityvac 7201 Fluid Evacuator Plus . . . <https://amzn.com/B0002SR7TC>

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## SUPPLIES NEEDED

Lye crystals (base) . . . 100% sodium hydroxide . . . caustic soda . . . Roebic white vinegar (acid) . . . to neutralize any skin contact

50/50 white vinegar and water (acidic) . . . in a 32 oz spray bottle

1 rag

the fan, or an open window - to ventilate the fumes

one Tablespoon (Tbsp) - plastic

4 cup measure - Pyrex or Anchor Hocking (glass)

food containers x 2 (plastic) - like, from the grocery store olive bar

## DIRECTIONS FOR USE

Create a lye solution, and let it sit in the drain. 1 Tbsp per cup of water.

Roebic says, they don't say to do it this way because it's hazardous, but this is what you do for soap making, and **it won't turn into concrete in your pipes, the way they say to do it**, by putting the crystals directly in the drain . . . so, just be very careful. Get the fan going - same as when using soap scum remover on the shower

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"How safe is it to be using lye?"

The short answer is that if proper precautions are taken, lye is very safe to use . . . <http://www.diynatural.com/sodium-hydroxide-lye/>

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Safely Working with Lye . . . <http://www.soap-made-easy.com/safety-lye.html>

Remember: people use lye for many things besides soap-making, with very few problems. Have you heard of a lye-accident recently on the news? Me neither.

Use the rhyme:

"It's always smarter to add lye to water! Add water to lye, and you may die!"

Keep vinegar nearby. Vinegar is an acid, and it will quickly neutralize lye. If lye spills on you, use the vinegar immediately to neutralize it, then rinse with cool water.

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Soap Making: Never Add Water to Lye

. . . <http://www.naturesgardencandles.com/blog/tag/never-add-water-to-lye/>

ALWAYS pour the lye into the water.

To remember the order - envision "a light snow falling into a pond."

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## BATHTUB DRAIN . . . 3 cups for 20 to 30 minutes (max)

Fill the 4 cup Pyrex with 3 cups of COLD water, and place it in the tub  
If very careful, clear off the bathroom sink, and you can place it there

Slowly add 3 Tablespoons of lye crystals to the 3 cups of COLD water  
Envision "a light snow falling into a pond"

Gently stir the solution over a period of about 2 minutes  
**Don't put your face directly over it**  
All of the crystals will become dissolved  
The solution will go from cloudy to clear

Some could become encrusted on the bottom of the measuring cup,  
But not if you stir it . . . If it does, it can be scraped off later

Pour the solution into the tub drain  
Cover immediately with a plastic food container, to avoid splattering  
I'm not sure that the plastic food container is really necessary here

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## BATHROOM SINK DRAIN . . . 2 cups for 20 to 30 minutes (max)

Repeat for the sink drain

When done, slowly flush with COLD water for 1 minute on each drain  
If the water goes down, the drain should be clear  
Repeat application if necessary

Cleanup: Spray down all surfaces with the 50/50 white vinegar and water

I see that the liquid drain cleaners also contain lye, so they would work.

They're more expensive than making your own solution, though.

What you're paying for is convenience, and some extra safety.

They say to put 17 oz, or about 2 cups (16 oz), down the drain.

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**Drano Liquid Drain Cleaner** | Drano® | SC Johnson . . . 32 fl oz = 4 cups

For use on clogged or slow-running drains, pour half of the bottle (32 oz. size)

slowly over drain [16 oz]. For extremely slow-running drains or complete clogs, pour in entire contents of 32 oz. bottle . . . <https://www.drano.com/en-us/products/drano-liquid-drain-cleaner>

**Drano® Liquid Drain Cleaner - MSDS . . . It uses Sodium Hydroxide / Caustic Soda / Lye**

. . . <https://www.whatsinsidescjohnson.com/us/en/brands/drano/drano-liquid-clog-remover>

**Drano Dual-Force® Foamer Clog Remover** | Drano® | SC Johnson . . . 17 oz

. . . \$52.99 / 8 pak = \$6.62 . . . For slow-running drains, slowly pour entire contents of bottle down drain . . . <https://www.drano.com/en-us/products/drano-dual-force-foamer-clog-remover>

**Liquid-Plumr Urgent Clear 17-fl oz Drain Cleaner Pour Bottle at Lowes.com \$4.98**

. . . <https://www.lowes.com/pd/Liquid-Plumr-Urgent-Clear-17-fl-oz-Drain-Cleaner-Pour-Bottle/1000132465>

**Roebic, Lye Crystals - Drain Opener . . . 2lbs . . . 12/21/19 \$14.99** at Menards

. . . Use 1 Tbsp per cup of water. You can get a lot more applications from this, than the pre-mixed drain cleaners. Store in a cool, dry place

. . . <http://www.roebic.com/heavy-duty-crystal-drain-opener.shtml>

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How does the tub drain become blocked? Hair and soap scum sink, settle, and stick to the sides of the wall of the pipe. Please see video links on this page:

. . . <https://flexp-trap.com/self-cleaning-flex-ptrap>

**Video 29A Clog p trap - YouTube . . . 1:02 must be what hair and soap scum look like**

. . . <https://youtu.be/QaT7ATqqGIM>

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It looks like Drano no longer has lye in it as the active ingredient?

I need to take a closer look at this later sometime.

Lye is a "base". Some drain cleaners use Sulfuric "acid".

I don't think Lye (a base) gets as hot as acid, so that would be better for the pipes.

An alternative would be Liquid Plumber . . . I would say to get 3 of these:

**Liquid Plumber, 17 oz. Industrial Strength Urgent Clear Drain Cleaner and Clog Destroyer**

. . . <https://www.homedepot.com/p/Liquid-Plumr-17-oz-Industrial-Strength-Urgent-Clear-Drain-Cleaner-and-Clog-Destroyer-4460031678/300012981>

a.) pour 1.5 bottles down each drain . . . 3 cups per drain - tub and bathroom sink

b.) let sit for no more than 30 minutes

c.) rinse with cold water for a few minutes

d.) set the Tub and Sink Shrooms in place

I would do it this way . . . I wonder how the bleach in it works

I'm thinking that if you do what the directions say, your results would not be as good.

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## HOW MUCH LYE SOLUTION, AND LET SIT FOR HOW LONG?

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I was making 2 cups of lye solution:  
one cup for the tub . . . one cup for the sink . . . let each sit for 30 minutes

11/01/19

The bathroom sink drain was good  
The bathtub drain was only slightly improved  
This indicates that it needs something a little stronger

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## BATHTUB DRAIN

Do a second application, but let it sit for 60 minutes  
[This seems logical, let it sit longer - but that's not what you want to do]  
It seems like it helped, but it's still not instant drainage

How about 2 applications . . . and let each sit for 60 minutes?

12/01/19 I let 2 cups sit for 3 hours - and saw a big improvement!

Two Kinds of Liquids to Fix a Clogged Drain . . . pour in enough of it to fill and bypass the P-trap. The parts that clog are often the P-trap or the slow-running horizontal just past it . . . lye dissolves toilet wax rings. You cannot use lye in a toilet without creating a leak. You may not see it, but it will be there. Toilets must be plunged or snaked, or the lye inserted into the sink and allowed to work its way down below the wax ring. (But most likely, this isn't where the clog is. Toilets don't need lye because the drain is so wide.) . . . <https://masslandlords.net/two-kinds-of-liquids-to-fix-a-clogged-drain/>

So, the next time I have a slow bathtub drain: 3 cups for 3 hours . . . ?  
That will get the slow-running horizontal

No, see the following.

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Temperature is a factor . . . How hot does the Pyrex container get?

I don't think it gets that hot

PVC pipes have a melting-point of 176 degrees F  
[melting point of ABS is 221 F]

Adding lye to room temperature water can cause the water to reach temperatures up to 200 ° F. The mixture also creates fumes, which should not be inhaled  
. . . <https://www.soapqueen.com/bath-and-body-tutorials/tips-and-tricks/back-to-basics-lye-safety-guide/>

12/19/19

The mixture in the Pyrex got to 100F within 10 minutes,  
decreased a bit by 20 minutes, and more by 30 minutes.  
I did not see anything close to a temperature of 200F.

Maybe if it's working on hair and soap scum, the reaction is hotter?

No, the Pyrex I had with the hair test was under 100F also

The effect it had on hair was to make it go from a stringy, sticky mess,  
to a clumped ball, that can be rinsed away

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What is the temperature of hot water?

The EPA recommends 120 degrees because it's hot enough to keep diseases at bay, it's not hot enough to cause scalding, it will supply enough hot water for most small families and is relatively energy-efficient

. . . <https://www.mrrooter.com/about/blog/2018/april/what-temperature-should-a-hot-water-heater-be-se/>

The Department of Energy recommends having your tank-based hot water heater set to 120 degrees Fahrenheit for most people, but if you've never adjusted the temperature on your hot water heater, it's probably set to 140 degrees, which is the default setting from most manufacturers . . . <https://www.thesimpledollar.com/save-money/turn-down-your-water-heater/>

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Drano -- Will It Harm Sewer Pipes? . . . With the exception of copper drain-lines (which are rare) "when used as directed", chemical drain cleaners don't have a history of harming any of the sewer pipes materials used in homes over the years. Below is background about what type of pipes your home likely has (based on its age) . . . ABS: Also Known As "Black Pipe". Between the years 1985 and 1998, some ABS pipe contained plastic resin that could cause the pipe to crack and ultimately leak. Sec. C-109. - The International Plumbing Code (IPC) Says: "ABS pipe and fittings are not approved materials for use." Most local municipality codes match the IPC. Even if a local municipality allows ABS, the IPC feels it should not be used . . . Enzymatic drain cleaners are a safer alternative to chemical drain cleaners. They contain bacteria-cultures and concentrated enzymes that break down organic substances. These tiny living organisms then digest the broken-down organic waste. They also reproduce, beneficial bacteria and enzymes moves further down the pipes. In ideal conditions, they will double in number every 25-30 minutes. They break down the waste and run it out of your system. Because an enzymatic drain cleaner isn't restricted by gravity (like chemical drain openers) the bacteria can clean the entire inside of the pipe. This has an added advantage for homes with a septic system (where city sewer is not available). Enzymatic drain cleaners were originally used for septic tanks. The bacteria & enzymes don't eat non-organic items like sewer pipes . . . RID-X Is The Top Selling Septic-Tank Treatment. It Works With Bacterial & Enzymes – Just Like Most Enzymatic Drain Cleaners. Drano Also Has An Enzymatic Cleaner For Pipe Maintenance . . . The temptation to leave it in longer certainly exists. Never do it! Chemical drain cleaners generate heat and are made of corrosive chemicals, there is a reason why Drano states "Allow to work for 15 Minutes. For tough problems, allow 30 minutes."

. . . PVC pipes have a melting-point of 176 degrees F

. . . [melting point of ABS is 221 F]

. . . PVC expands with increasing temperatures and contracts with decreasing temperatures. This movement has the capacity to break the glue at the joints where the plastic pipes are attached to each other . . . Broken glue-bonds are possible with frequent misuse of chemical drain cleaners . . . High temperatures have important effects on glued PVC pipe joints . . . High temperatures can possibly increase the softening effects of the solvents used to connect PVC piping . . . This can also possibly soften or damage the piping . . . Will Chemical Drain Cleaners Harm Pipes: Not Likely – when used as directed, Possibly – if not used as directed. Typical examples would be using too much, or leaving it in the drain too long . . . What About Glued Joints? - PVC expands & contracts with changing temperature. Since chemical drain cleaners typically make heat, the risk of breaking the glue bonds is a possibility. It's much more likely with misuse of chemical drain cleaners . . . Can Chemical Drain Cleaners Harm You? Absolutely! There is no disagreement about this. Make a simple mistake while using chemical drain cleaners and you could severely injury yourself. If a chemical drain cleaner does not clear the clog – the standing water is now highly toxic. If you have used a chemical drain cleaner, don't attempt to clear the drain with a plunger, drain-snake or any other method that could splash or expose you to the standing water

. . . <https://www.alsplumbing.com/drano-harm-sewer-pipes/>

Is Drain Cleaner Truly Bad for Your Pipes? . . . Are Liquid Drain Cleaners Safe To Use? . . . In many cases, liquid drain cleaners are capable of damaging pipes and toilets . . . These drain cleaners sit in pipes and generate more heat and chemical reactions than some pipes were designed to withstand. They react with corrosion that already may exist in your pipes and they can do so in an unpredictable way. They can create cracks in joins and old pipes and over time can cause PVC pipes to break . . . Clogs happen. This means that if Drano is your go-to solution, you are using it again and again over time and the negative effects accumulate. **It can dissolve the glue that holds PVC pipes together.** These cleaners are not designed for frequent or even regular use. The generated heat can crack a toilet or create fractures that later cause leaks that may be traced back to Drano use . . . How to Avoid Most Clogs in the First Place . . . Watch what you put down the drain and ensure your family does too. Only allow water down your drain. In toilets, only organic waste and toilet paper . . . Except for toilet paper, paper products clump in water. Even products called "flushable" can clog your drain lines . . . Keep all drains covered with drain guards . . . **All grease from cooking should be thrown into the trash. Grease is the worst thing you can put down a pipe because it cools and hardens when it gets deeper into the plumbing system . . . Garbage disposals are not for garbage. They have a very limited ability to grind food to safely let water carry it away. Additionally, many foods are fibrous and are clog prone. Only wash small bits of food off plates to grind with your garbage disposal**

. . . <https://bfplumbingbayarea.com/blog/drain-cleaner-truly-bad-pipes/>

[**It can dissolve the glue holding the pipes together . . . The 30 minutes max rule must be because, if you flush it out within that amount of time, which is also diluting it, then it won't be able to affect the glue that much.**]

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Should I put it on my calendar, to just use a lye solution regularly on the bathtub drain once every 6 months?

No, just use "as needed"

Maybe it won't be needed again for a long time, using the TubShroom (see below).

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#### Conclusion:

##### 1.) Lye solution is fine

You just don't want to let it sit for more than 30 minutes.

a.) Temperature doesn't seem to be an issue.

b.) If you rinse it down within 30 minutes,

that's probably what keeps it from doing any damage to the glue

It is hazardous though, so be very careful about not getting any of it on you.

##### 2.) The enzyme based cleaners might be a better option, but are:

a.) slower

b.) less effective / not effective (see product reviews)

but, you can use them on the toilet, which can become slow after a while

You can put some Dawn dishwashing liquid down the overflow tube,  
to clean the rim holes

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USE OF ENZYMATIC CLEANER . . . 1 of 4

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There are 3 applications per bottle, 8 oz each

12/16/19 6 pm . . . Mix in a bucket:

4 cups of water + 1/3 bottle Rid-X (8 oz) = 5 cups

Pour it in:

1.) the bathtub drain

2.) the toilet

let sit for 12 hours

12/17/19

I noticed a small fleck of something dislodged from the toilet

I can't say that I noticed any real change in the flush.

The bathtub drain was already good from the lye. No real change noticed.

Do another application to the toilet tomorrow night.

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12/17/19 6 pm . . . Mix in a bucket:

3 cups of water + 1/3 bottle Rid-X (8 oz) = 4 cups . . . a little more concentrated

Pour it in the toilet

It emptied the deep hole, and left blue solution covering the jet

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12/18/19

I can't say that I noticed any real change in the flush . . . but, this can't hurt

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How much empties the deep hole?

3 cups of plain water - no

4 cups of plain water - no . . . because the solution is less dense?

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## USE OF ENZYMATIC CLEANER . . . 2 of 4

Can Rid-X be used in non-septic tank situations? - Straight Dope

. . . <https://boards.straightdope.com/sdmb/showthread.php?t=158822>

Can you use Rid-X on a toilet that is not on a septic system? | Hometalk

. . . <https://www.hometalk.com/29090391/q-can-you-use-ridex-on-a-toilet-that-is-not-on-a-septic-system>

Rid-X Recipe to Clean Plumbing Fixtures . . . Applied regularly, it will “clean” the inside of the pipes by breaking down the solid waste stuck to the pipes. Because it is organic, it is safe to use in every type of plumbing pipe, and it is a great preventative measure . . . [If you don't let it sit, how can enzymes break down the material? Use the liquid, and let sit 12 hours. Rid-X is said to be #1.

**Roebic has an enzymatic cleaner, also: "Main Line".]**

. . . <https://mosbybuildingarts.com/rid-x-recipe-clean-plumbing-fixtures/>

Septic Tank Information: Septic System FAQs | RID-X®

. . . 5. Will RID-X® unclog my drain/pipes/toilet? . . . No, however, when used regularly, RID-X® liquid can help break down organic build-up in your pipes, to help prevent clogs before they happen

. . . <https://www.rid-x.com/faq/#faq-5>

**Rid-X Septic Cleaner 24-fl oz \$15.98** . . . Find peace of mind by using Rid-X® liquid formula for septic system treatment to help prevent the septic system maintenance associated with expensive system backups. Support a free-flowing septic system by keeping the bacteria population consistently high all year round with Rid-X® septic system treatment. Rid-X® is safe for use with all pipes and septic tanks. Always remember to use Rid-X® monthly along with regular pumping . . . Breaks down solid organic waste that can accumulate in your septic tank, such as detergents, soaps, grease, and paper . . . Use 1 monthly dose for tanks up to 1,500 gallons . . . Regular use will help keep the bacteria population consistently high throughout the year . . . Treat septic tanks with Rid-X once a month along with regular pumping . . . <https://www.lowes.com/pd/Rid-X-24-fl-oz-Septic-Cleaner/1000848786>

**Roebic Main Line Cleaner K-97 64-fl oz \$15.98** . . . Naturally breaks down waste, Digests paper, fats and grease, Ideal for low flow toilets, Safe for all pipes and the environment

. . . <https://www.lowes.com/pd/Roebic-Laboratories-Inc-64-oz-K-97-Main-Line-Cleaner-64-fl-oz-Drain-Cleaner/3612980>

[The packaging for "Instant Power" Main Line Cleaner (Model 1801, 1 gal, \$11.98) looks the same as Roebic Main Line Cleaner K-97, and has similar wording - but uses Lye, which would deteriorate the wax ring of a toilet - do not use for that]

. . . <https://www.scotchcorp.com/product/main-line-cleaner/>

**Drano, Max Build-Up Remover** . . . <https://www.drano.com/en-us/products/drano-max-build-up-remover>

If you keep hair out, then what's left, that can build up? Grease and soap scum:

Zep Drain Defense Pipe Build-up Remover 64-fl oz \$9.98 . . . Zep drain care build-up remover liquid provides 64 oz. of prevention for clogs in sinks, toilets and showers. The enzyme-based formula breaks down years of drain-clogging build-up to prevent clogs before they happen . . . Enzymes remove buildup, Drain maintenance prevents clogs, Opens slow drains, Safe for all plumbing and septic systems, 1 bottle contains up to 64 treatments . . . <https://www.lowes.com/pd/Zep-Drain-Defense-Pipe-Build-up-Remover-64-fl-oz-Drain-Cleaner/3745757>

ZEP Drain Defense Liquid Pipe Build Up Remover 64 oz - ZLDC648 - The Home Depot . . . Will this product help with drain flies? - Yes. The Drain Care Buildup Remover breaks down and digests organic materials like **grease, fats and scum** converting into two basic compounds—carbon dioxide (CO<sub>2</sub>) and water (H<sub>2</sub>O). Drain flies feed and breed in the organic waste. Use the Drain Care Buildup Remover to release the organic waste, and eliminate the breeding site. After use of 3-days or treatment, use the Zep Drain Care Buildup Remover once a month to prevent clogs, keep drains clean, and preventing new infestation from occurring . . . You can also try Dawn Dishwashing liquid . . . <https://www.homedepot.com/p/ZEP-64-oz-Drain-Defense-Liquid-Pipe-Build-Up-Remover-ZLDC648/202056509>

ZEP Drain Defense Liquid Build-Up Remover 64 oz . . . Give it time and it will work on most plugs. I think it even works on hair plugs because **it dissolves away the grease which is what anchors the hair** . . . <https://www.amazon.com/product-reviews/B001CEKUU8/>

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ZEP Toilet Buildup Remover - YouTube . . . <https://youtu.be/aRJxiuaqsvU>

Zep Drain Defense **Toilet Buildup Remover** . . . Uses a natural blend of enzymes and microorganisms to break down toilet tissue and waste and clear the system . . . Safe for pipes and septic systems and **works well on low flow toilets** . . . <https://www.zep.com/product/zepcommercial/Toilet-Care-Tune-Up>

## USE OF ENZYMATIC CLEANER . . . 4 of 4 . . . (instructions for Zep Drain Defense)

These instructions don't make sense to me.

Don't you want to have the product sit mostly in the P-Trap for a few hours,  
while a little more goes down the horizontal above it?

I did 2 cups of water + 1 cup of Zep (8 oz), and let sit over night,  
for at least six hours.

Maybe just put 1/2 a cup in the P-Trap once per month for 6 hours,  
but then you probably wouldn't be getting the horizontal too much.

Zep Drain Defense, Pipe Build-Up Remover . . . Product Code ZLDC64 . . . www.zep.com

For use in sinks, garbage disposals, tub-shower drains & grease traps

Safe for all pipes & septic systems

### DIRECTIONS FOR INITIAL DRAIN TREATMENT:

- 1.) Establish a partial flow removing debris from drain stopper
- 2.) Run warm water for 1 minute to warm pipes
- 3.) Pour 1 oz of Drain Defense Pipe Build-Up Remover into drain
- 4.) Flush with 16 oz warm water
- 5.) Do not use any drains for 6 hours
- 6.) Repeat for 3 days or until drain flows freely

NOTE: For faster results, use 8 oz of Drain Defense Pipe Build-Up Remover followed by  
16 oz warm water. Apply 3-day treatment once a month to keep drains clean.

In a severely clogged pipe, the first treatments of Drain Defense Pipe Build-Up Remover  
may dislodge so much buildup that the pipes become filled, requiring plunging  
or adding boiling water to restore water flow.

To TREAT TOILETS: Pour in 8 ounces of Drain Defense Pipe Build-Up Remover & flush once.  
Do not use for 6 hours. Treat for 3 days in a row.

GARBAGE DISPOSALS: Pour 3 ounces into a running disposal. Quickly turn off disposal  
and allow to sit overnight. Repeat as needed.

For TOUGH GREASE CLOGS, use Zep Liquid, Gel or Crystal Drain Openers.

For HAIR CLOGS, use Zep 10 Minute Drain Opener Gel.

Warning: Eye irritant. Sensitizer. May be harmful if swallowed.

May cause irritation to skin and mucous membranes.

Contains Bacteria and Enzymes.

Avoid contact with eyes and prolonged contact with skin.

May cause allergic reaction in sensitive individuals.

Avoid breathing vapors or spray mists. Use only with adequate ventilation.

### FIRST AID

Eyes: Flush eyes with plenty of water for at least 15 minutes.

Get medical attention immediately.

Skin: Flush skin with plenty of water. Get medical attention if irritation develops.

Inhalation: Get to fresh air. If irritation persists, get medical attention.

Ingestion: Do not induce vomiting. If person is conscious, give plenty of water to drink.  
Get medical attention immediately.

HANDLING AND STORAGE: Keep container closed when not in use. Store in a cool, dry,  
well ventilated place. Protect from freezing. Do not reuse empty container.

Keep out of reach of children and pets.

For emergency medical assistance, call your local Poison Control Center or 1-877-541-2016

## USE OF SULFAMIC ACID

Sulfamic acid works to clean the water distiller.  
Make a solution of this for calcium deposits in the toilet.

Sulfamic acid - Wikipedia . . . [https://en.m.wikipedia.org/wiki/Sulfamic\\_acid](https://en.m.wikipedia.org/wiki/Sulfamic_acid)

Sulphamic Acid Toilet Cleaner - Cleanline | Toilet Cleaner | Washroom Cleaning | Cleaning Chemicals | BCBS

. . . <https://www.bunzlchs.com/Cleaning-Chemicals/Washroom-Cleaning/Toilet-Cleaner/Cleanline-Sulphamic-Acid-Toilet-Cleaner~p~037450>

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THE LIFT BUCKET CAN PLAY A PART IN REDUCING WATER FLOW?

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I read somewhere a while back - Crud either collects on the lift bucket, or the lift bucket slightly blocks drainage, even if properly adjusted . . . So:

11/30/19 I removed the lift bucket - I notice that the drain runs better

12/01/19 But, it seems like it should be there - Put it back, and try adjusting it

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12/03/19

How do you install and adjust the Lift Bucket?

Begin with the stopper set at around the maximum rod length

With the lever UP (in the CLOSED position)

lower it into the overflow

until it bottoms out / becomes seated at the bottom.

The lowered bucket closes the internal passageway.

Look at the vertical distance between  
the overflow plate screw holes, and the pipe holes.

You want to make sure that the stopper does not bottom out 100%

Reason: This will ensure a longer life for the overflow faceplate.

So, with the lever in the UP position, adjust the length of the rod  
so that the faceplate holes are 1/4" lower than the pipe holes.

When screwed in, this will leave 1/4" of space at the bottom.

Cover in left hand, spin the stopper away from me, it goes left / up.

Secure the desired length with the lock nut.

Check that it seals, and holds water in the tub when closed.

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What I see . . . after being screwed in:

Lever up - there is no play

. . . THAT MEANS THAT IT'S COMPLETELY SEATED . . . I SHOULD PROBABLY RAISE IT 1/4"

Lever down - there is some play - the drain is open, because the bucket is lifted

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## ALTERNATIVE TO THE LIFT BUCKET

12/04/19 You can replace the lift bucket style stopper for \$18 to \$30 with a pop-up style, keywords: Keeney bath drain repair kit . . . Danco bath drain repair kit

It requires you to replace the drain flange, so that it fits their stopper. This would alleviate the issue of how crud accumulates on the lift bucket, but the strainer on it looks like it will let through a lot more hair.

So, how about just raising the lift bucket as high as possible, so it's out of the way, make the bathtub strainer removable, by using a thinner screw, and get a rubber stopper - set it under the bathroom sink when not in use

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## WHAT ELSE CAN I TRY?

08/24/14 I first purchased Roebic Lye, 2 lbs  
12/04/19 I've almost used it up - after 5 years

The guy at Lowes recommended to use lye on the bathtub drain.  
He said that it was the most effective way to clear drains.

I determined to use a lye solution:

- a.) since I know how to do that from soap making
- b.) from reading stories of how putting crystals in your drain can turn to concrete

**The lye solution clears the drain, but, why do I find myself standing in 4 to 6" of water again, way too soon?**

I determined to get rid of the lift bucket - but then, I will need:

- a.) a rubber stopper
- b.) to be able to remove the bathtub strainer easily

I was at Menards looking at the rubber stoppers - **Need hollow underneath**, the solid ones don't squish down enough), and below them, I saw something I've never seen before - the TubShroom

A revolutionary hair catcher? Silicone? It looks cheap, but the design looked effective.

I think I've tried the finer screen strainers before, that they have for the drain. My memory is that they catch hair, but due to that, and the soap scum, the water still backs up, so I reverted to the original strainer.

But, the TubShroom was something new to try - and it seems to work.

So now, how long will it be before I have to use a lye solution on the drain again?  
We'll see.

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Menards® had the best selection of rubber stoppers . . . Lowes was #2, Home Depot #3  
. . . I needed 1-3/4" . . . 1 to 1-3/8 \$1.29 . . . 1-1/8 to 1-1/4 \$1.29  
. . . 1-3/8 to 1-1/2 \$1.39 . . . 1-5/8 to 1-3/4 \$1.49 . . . 1-1/2 to 2 \$3.99 . . .  
[https://www.menards.com/main/search.html?search=tub+stopper&sf\\_categoryHierarchy=&queryType=allItems&Spec\\_ProductType\\_face\\_t=Bathtub+Drain+Stoppers+and+Strainers&sortBy=priceAsc](https://www.menards.com/main/search.html?search=tub+stopper&sf_categoryHierarchy=&queryType=allItems&Spec_ProductType_face_t=Bathtub+Drain+Stoppers+and+Strainers&sortBy=priceAsc)

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A BETTER IDEA - The TubShroom

Hair is the primary thing that causes drain stoppages

12/04/19 I have disabled the built-in tub drain stopper / lift bucket, by putting it as high up as possible  
. . . and purchased a TubShroom, and rubber stopper

TubShroom Silicone

. . . The Revolutionary BathTub Drain Protector Hair Catcher/Strainer/Snare  
. . . 6 colors: white, blue, green, grey, orange, clear  
. . . \$12.99 . . . <https://amzn.com/B01BYMTYBS>

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12/04/19 How does the TubShroom work? How often do I need to clean it?

12/05/19 TubShroom Start - The drain is really fast now

12/06/19

12/07/19 I couldn't finish the shower - So, 2 showers, max  
It's much better than the original bathtub drain strainer, though.  
12/07/19 It's probably best to clean it after it's dry - before the next shower.  
12/14/19 No, clean after the shower when wet. Bring the can to it.

-----  
TubShroom Ultra Stainless Steel . . . this is probably more durable and easy to clean  
. . . \$13.88 . . . <https://amzn.com/B07PB6ZX9Y>

12/17/19 installed the TubShroom stainless steel.

How does it compare to the silicone white?

The screening is a little different. It seems like it catches more.  
They include an extra one for 1-3/4". It's still easy to use.

The top is secured by a screw from underneath, Metric: M3-0.45, 3/16"

. . . [it does not go into Imperial 5-40]

Get the Philips screwdriver vertically, with the screw balanced up on the tip.  
Screw it into the TubShroom. Then you can re-screw on the top.

White silicone is easier to see, to remove the hair.

Stainless steel will be easier to clean later, though, and is more durable, long term.

The rubber part on the bottom doesn't come out as easily as the silicone.

Maybe it will loosen up after a while from use? Or:

To install: Put it into the drain perpendicularly.

To remove: Tip it towards 1 of the 3 flat areas, and pull up.

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SinkShroom Ultra Revolutionary Bathroom Sink Drain Protector, Stainless Steel \$14.99  
. . . <https://amzn.com/B07W8218FZ>

For floor drains: ShowerShroom® (White) The 2" Hair Catcher That Prevents Clogged Shower  
. . . <https://www.tubshroom.com/collections/buy-showershroom/products/showershroom-white-the-2-hair-catcher-that-prevents-clogged-shower-drains>

5 SMART WAYS TO PREVENT HAIR CLOGS IN THE SHOWER ... They don't know about the TubShroom  
. . . <https://www.drano.com/en-us/explore-clog-basics/5-smart-ways-to-prevent-hair-clogs-in-the-shower>

## SCREWS

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This is the original screw for the bathtub strainer.

#10-24 x 1-8/16" stainless steel

Please see notes for more info

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The original bathtub strainer:

- 1.) It catches hair, which I find that I have to remove in the middle of a shower
- 2.) It also, apparently, lets through a lot of hair, leading to a slow drain

### **The TubShroom:**

- 1.) It let's me get through a whole shower, without having to clean any hair
- 2.) It catches all hair, keeping the drain clear

What if you want to take a bath?

- 1.) Use a rubber stopper
  - 2.) This screw makes that difficult to do, so I have removed it - for the following:
- 

This screw might be used  
to just hold the original bathtub strainer in place,  
making it easily removable,  
so that the bathtub stopper can be used.

#6 - probably -32 x 2-5/16" stainless steel

Please see notes for more info

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This is a cut down 3" screw, which can go through the bathtub drain strainer,  
and the hole into which the strainer is secured,  
which may help to hold the bathtub strainer in place.

The bathtub strainer might stay in place by itself with no screw, for quick removal.  
If not, this screw is something to try.

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Q. Both the tub and bathroom sink drains get hair down them.

Why does the tub drain clog sooner?

A. Probably because of different volumes of hair, grease, soap, and water.

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Q. Does hair eventually dissolve in water, downline? No . . . Please see the following:

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Can I flush hair? . . . Don't flush hair. Hair, especially when mixed with grease, is great at clogging pipes. It also tangles up in pump impellers. It does not readily break down at the wastewater treatment plants, either, particularly when compared to human waste. Remember, toilets have a specific purpose. They are designed to handle human waste and toilet paper. They are not trash cans

. . . <https://boards.straightdope.com/sdmb/showthread.php?t=519101>

Things to never flush down the toilet . . . 3. Kitty litter: Some manufacturers say their kitty litter is flushable, but Agugliaro does not recommend flushing it down the toilet. "Today's water-saving toilets use only 1.6 gallons of water per flush. That's not enough water to keep the kitty litter moving," he explains. Plus, it adds more "stuff" that water purification plants need to remove . . . 4. Dried poop from a litter box: Toilets are designed for water-soluble waste. When cat poop sits in litter, it gets dehydrated and becomes hard as a rock. These "petrified poops" can get lodged in the labyrinth of pipes exiting the toilet and cause a clog. So, from now on, bag up your litter — poop and all — and dispose of it in the garbage . . . 5. Hair: Hair will never dissolve in water. In fact, it floats and easily gets caught on its way out the toilet, snagging whatever comes its way. So, don't clean a brush and toss the hair in the commode. And if you wear hair weaves and one falls in the toilet, fish that lock out or you could face a big repair bill . . . 7. Bleach: Bleach is a very harsh chemical that does not belong in sewerage lines or septic systems. "The toilet bowl doesn't need to be cleaned with bleach or an industrial cleaner. It has a glazed finish, so just swish it with a toilet brush to clean it," says Agugliaro. "If you want to use something stronger, try white distilled vinegar. Toilet bowl stains are caused by the minerals in the water and not from human waste," he adds . . . Bottom line: The toilet was invented to dispose of human waste. Using it for any other purpose can not only damage your plumbing, it can also pollute the community's water supply. Flush smart

. . . <https://www.today.com/home/things-never-flush-down-toilet-t107548>

Human Hair "Waste" and Its Utilization: Gaps and Possibilities . . . In urban areas or areas with high population density, it often accumulates in large amounts in the solid waste streams and chokes the drainage systems, posing a multifaceted problem. Due to slow degradation, it stays in the dumps/waste streams for long occupying large volumes of space . . . authorities could not resolve the issue because they found no way to deal with the hair waste other than to burn or dump it . . . The unique properties of human hair such as its unique chemical composition, slow degradation rate, high tensile strength, thermal insulation, elastic recovery, scaly surface, and unique interactions with water and oils, along with its sociocultural roles, have led to many diverse uses . . . <https://www.hindawi.com/journals/jwm/2014/498018/>

## IF I KEEP HAIR OUT OF THE DRAIN, IS THAT SIGNIFICANT? YES . . . 2 OF 2

What Can and Cannot Go Down The Drain . . . Clean the hair out of your shower every time you wash your hair or shave. The same thing goes for your bathroom sink (if you wash your hair there or shave over it). Simply remove the trapped hair and - voila! - you're one step closer to preventing a clog. Most of the time liquid soaps like shower gel and shampoo aren't a problem . . . Can I dump coffee grounds down the drain? No. Contrary to popular misconception, coffee grounds do not dissolve in water  
... <https://www.andersonplumbingheatingandair.com/blog/2011/april/what-can-and-cannot-go-down-the-drain/>

**Defend Your Drains** North Texas . . . While it's possible to flush things like dental floss, hair, cotton swabs, cotton balls, and condoms down the toilet, it is a bad idea. These items do not break down in water, and they can tangle with other items and block your sewer line . . . 1. Keep Hair out of Your Drains. When cleaning your hairbrush or your sink or shower drain, place the wads of hair in the trash. Clean your drains frequently to prevent clumps of hair from slowing your drain . . . 3. When in Doubt, Trash it. The toilet should only be used for three things; Pee, Poop, and toilet Paper. If you are unsure if you should flush something, the answer is probably NO. Place the item in question in the trash. Facial tissues and wipes - even "flushable" wipes - belong in the trash and should not be flushed down your toilet  
... <https://defendyourdrainsnorthtexas.com/personal-care.html>

**Think Before You Flush . . . Hair - Dispose of it in your garbage**  
... <https://www.epcor.com/learn/efficiency-conservation/inside-your-home/bathroom/Pages/flush.aspx>

Why is My Sink & Bathtub Draining Slowly? . . . Kitchen and bathroom drains sometimes experience painfully slow drainage, mostly because of a mixture of toothpaste, grime and soap that has accumulated down there over the years. Shower drains and bath tubs may also be draining slowly because of soap and hair clogging the pipeline  
... <https://www.deervalleyplumbing.com/blog/2014/september/why-is-my-sink-bathtub-draining-slowly-/>

Common Causes Of Clogged Drains & How To Fix Drain Clogs . . . Hair can accumulate to the point where it creates slow flow or total blockage. We can't help that hair comes out of our heads naturally, but we can try to protect the drain as much as possible with small screens and good practices, such as sweeping hair out of sinks and cleaning the hair brushes over the trash can . . . Cat litter belongs in the trash and not down the toilet or any drain, and the same is true for dog waste in a bag. All kitty litter is made of clay-based material that can actually harden like concrete when it's been wet and dry enough times. The litter pieces are sharp and can easily catch on other things, which only increases the chances of a clog  
... <https://www.mrrooter.com/greater-syracuse/about-us/blog/2017/march/find-and-fix-the-clog-common-causes-of-drain-blo/>

## BASE VS. ACID

Lye vs. Sulfuric Acid

Is there any difference in reaction temperatures?

I did not see that lye went above 100F

The guy at Willow True Value Hardware said that he uses Sulfuric Acid. He said that he has seen that the heat bends the pipes - but it does not dissolve the glue

keywords to google: drain cleaner temp, lye vs. sulfuric acid

Using Chemicals as Effective Drain Cleaners . . . The combination of water and sulfuric acid produces an exothermic reaction. The fluids will heat up significantly, so be sure not to add too much at a time or it could potentially cause melting of the pipes . . . Sodium hydroxide lye reacts with fats and greases when combined with water to make soap. It is a strong base and effective when attacking clogged drains. Sodium Hydroxide is naturally occurring and is sewer and septic safe as it is diluted in its journey down your pipes. Though not as effective as sulfuric acid, it is safer and easier to use . . . Potassium hydroxide may also be used in drain opening. It is a bit more expensive but dissolves into water faster and usually clears the drain quicker. It is best when drains are very clogged . . . [https://www.dudadiesel.com/drain\\_cleaners.php](https://www.dudadiesel.com/drain_cleaners.php)

My impression is that:

- 1.) lye is safer
  - 2.) there would be less heat
  - 3.) it's less expensive
-

## PIVOT ASSEMBLY HOLE, FOR BATHROOM SINK POP-UP

If I got rid of the prong for the pop-up,  
that would be one less place where crud could accumulate.

It would also make it easier to use a bottle brush on the drain.

Is there a cap that you can put over the hole?

I asked the guy at Willow True Value Hardware:

There is no cap for the pivot assembly,  
because the manufacturer intends for it to be used.

The pivot assembly could be modified, though.

You could:

- 1.) get a rubber cork, or
  - 2.) a sheet of rubber
- . . . cut it to size, put it under the ring, and secure it, to cover the hole  
01/22/20 look into doing this later

They have a pipe with no hole for a pop-up. It's called a "P O" Assembly,  
but apparently, it's for old-style sinks, and would not work on today's sinks (?)

How to install a drain in a bathroom sink. P.O.Plug . . . <https://youtu.be/mb8aU4P4XR8>

Moen . . . 1-1/4" Push Button Drain with Overflow

. . . [https://www.moen.com/products/Moen/Moen\\_Popup\\_waste\\_kit/131553](https://www.moen.com/products/Moen/Moen_Popup_waste_kit/131553)

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01/29/20 Try asking on a plumbing forum

## PIVOT ASSEMBLY HOLE, FOR BATHROOM SINK POP-UP

SinkShroom / Remove Pop-Up / Cap Pivot Hole ... TubShroom / Lift Bucket | Terry Love  
Plumbing & Remodel DIY & Professional Forum  
. . . <https://terrylove.com/forums/index.php?threads/sinkshroom-remove-pop-up-cap-pivot-hole-tubshroom-lift-bucket.85422/>

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I read that if you can keep hair out of the drain, that's doing a lot. Hair needs to go in the garbage can.

So, I have removed my bathroom sink pop-up, and set one of these in place:

SinkShroom Ultra Revolutionary Bathroom Sink Drain Protector, Stainless Steel  
. . . \$14.99 . . . <https://amzn.com/B07W8218FZ>

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The Pivot Rod still needs to be screwed in, though, to keep water in.

I'm currently trying to figure out how to cap that hole, because the rod acts as a place that will accumulate crud:

Terminology for Popup Drain . . . Pivot Ball Nut  
. . . <https://terrylove.com/forums/index.php?threads/extension-terminology-for-popup-drain.57831/>

You need to know specs on the nut: diameter, depth, threads

I think it's going to be something like: **3/4" x 1/2" x -20**

I could figure it out if I had one of these:

Thread Detective - Amazon . . . keywords: **thread detective, pipes**  
. . . [https://www.amazon.com/s?k=thread+detective&i=tools&ref=nb\\_sb\\_noss\\_2](https://www.amazon.com/s?k=thread+detective&i=tools&ref=nb_sb_noss_2)

Thread Detective - Walmart . . . <https://www.walmart.com/c/brand/thread-detective>

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Then, I could get a thread protector cap from here:

thread protector caps | McMaster-Carr . . . <https://www.mcmaster.com/thread-protector-caps>

I'm wondering if the Pivot Hole is a standard size,  
and if someone can tell me what the threads on it are -  
and the other specs needed (diameter and depth), to replace the Pivot Ball Nut,  
then I don't need to buy the Thread Detective.

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## PIVOT ASSEMBLY HOLE, FOR BATHROOM SINK POP-UP

I use a bottle brush to brush down black slime from the side of the pipe into the sink drain:

Ted Pella, Inc . . . Cleaning Brushes . . . 24" Long Pipe Brush . . . good for cleaning long narrow openings and pipes . . . handle and bristles are polypropylene . . . [http://www.tedpella.com/brush\\_html/Brushes.htm](http://www.tedpella.com/brush_html/Brushes.htm)

I see that the pivot rod gets in the way here, doing this, also.

- - - - -

Another question I have is with the TubShroom.

I removed the standard strainer, and have set one of these in place:

TubShroom Ultra Revolutionary Bath Tub Drain Protector Hair Catcher/Strainer/Snare Stainless Steel, Single Pack . . . \$13.88 . . . <https://amzn.com/B07PB6ZX9Y>

I had a slow tub drain last month, which is what got me looking into the above, and finding the TubShroom, initially.

Previously, I read somewhere that the Lift Bucket in the tub drain can impede water flow, and act to catch crud.

Here where I live, I raised my Lift Bucket up as far as possible, and left it in place. At a friends, I removed the Lift Bucket completely, and put on a face plate. But, I'm not sure this was necessary - maybe it could be left in place, and you'd still get fine results.

So my question here is - Does the Lift Bucket in the tub drain:

- 1.) impede water flow at all?
  - 2.) can it act to catch crud at all?
  - 3.) is there a significant benefit in getting rid of it, and just using a rubber stopper, for when you want to take a bath?
- - - - -

The caps are pipe size. There is NOTHING 'standard' about your hole. Remove the rod and cut off the piece that fits into the drain, then reinstall the rod.

- - - - -

## PIVOT ASSEMBLY HOLE, FOR BATHROOM SINK POP-UP

That would work, but a threaded cap gives you the option to put it back how it was, if you want.

You just put in the specs you need:

thread protector caps | McMaster-Carr . . . round, screw on, straight-thread  
. . . <https://www.mcmaster.com/thread-protector-caps>

. . . plastic 3/4"-20 1/2" 150° Red Qty 100 \$9.94

Is that an un-common tool to have, a thread detector for pipes?

- - - - -

01/30/20

Does the Grainger site have threaded pipe caps? Yes:

<https://www.grainger.com/search/plumbing/pipe-tubing-and-fittings/pipe-fittings?atrs=Basic+Fitting+Shape%7CCap~~Pipe+Size--+Pipe+Fitting%7C3%2F4%22&filters=atrs&sortKey=price&sortOrder=asc>

. . . but it's not easily searchable, to get the thread you need - I called them

. . . they said that you would have to find out what you need, and then call them, and ask them to find it

Grainger suggested taking the pivot nut into Ferguson . . . they should have a pipe thread detective to determine what you need, and then be able to find a pipe cap that would work.

I called Ferguson. They have pipe caps, but, they said that they're not geared up to do that.

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So, it looks like there's no way to get around purchasing a pipe thread detective.

Get specs for the cap you need, and then see what's available.

The McMaster site seems to be the most comprehensive.

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It's probably not a bad idea to use some pipe dope, or Teflon tape, on the threads of the pipe cap.

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