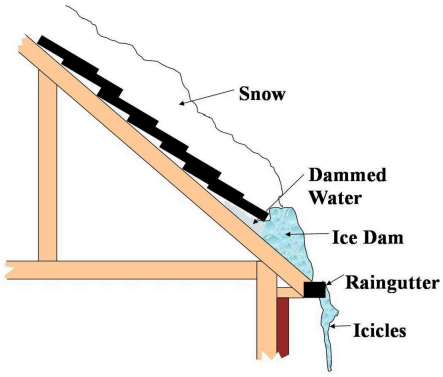
HOMEOWNER REPAIR GUIDE

PREVENTING ICE DAMS

Protecting your roof through Northeast Ohio winters

With the freeze-and-thaw cycles that so frequently occur during Northeastern Ohio winters, most houses will occasionally be decorated with long icicles hanging from the gutters. Spectacular as they are, the ice can have a destructive side, when it builds up along roof overhangs – a problem commonly known as an ice dam.

Ice dams can damage soffits, rafters, sheathing, shingles, and fascia boards on the outside of the house. Melting ice can also back up under shingles, where the resulting leak can compact insulation and damage walls and ceilings on the inside of the house.



How an ice dam forms at the roof edge

While it is unlikely that a roof will be completely ice-free, there are several ways to deal with ice dams. They range from simpler to more complex, vary widely in price – and none are foolproof. However, each can help reduce the chances that an ice dam will cause expensive damage to your house.

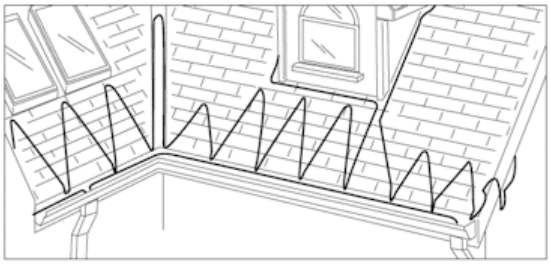
WAYS TO REDUCE ICE DAMS

1. **Add insulation.** The first option is to add insulation to keep heat from rising through the roof and melting the snow, which then flows down to the cold gutter area and refreezes. This is particularly important on older homes, where insulation is inadequate or was never installed at all. However, you need to be realistic; even snow on well-insulated roofs can melt, run down to the gutter area, and freeze partway.
2. **Increase ventilation.** In addition to adding insulation, consider increasing the ventilation beneath the roof to allow any heat that does move up from the living area to escape to the outside. The easiest time to do this is when you re-roof your house; discuss the need for additional ventilation with each roofer when you are obtaining estimates on the project.
3. **Install a waterproof membrane.** When you next replace your old shingled roof, make sure to have a waterproof membrane installed on the lower 3 to 6 feet of the plywood roof deck. This rubberized "Ice and Water Shield" will prevent melting ice from penetrating through the roof sheathing. Have your roofer install drip edge on the bottom edge of the roof, as well.
4. **Install heating cables.** The most common way to prevent ice build-up is to install low-wattage electric heating cables along the lower edge of the roof *(see below)*.

ELECTRIC HEATING CABLES

The cables look like heavy-duty extension cords and plug into a standard outlet. They are usually installed in a zig-zag pattern along the lower edge of the roof, through the gutters and several feet into the downspouts. Some homeowners install the cables themselves, while others contract the job.

The cables are available in various lengths, ranging from 20 feet to 120 feet or more. The length of cable you'll need depends on how deep into the overhang the cable will be run – 12", 24" or 36" from the bottom roofline. Most manufacturers explain how to figure the length of cable you should buy for their product.



Heating cable installed in a zig-zag pattern along the roof edge

INSTALL THE CABLE SAFELY

- Don't use extension cords with the cable, as they can overheat.
- The cable should not be crisscrossed or overlapped, because that contact can create sufficient heat to melt the plastic insulation around the wire.
- Make sure the cable is plugged into a weatherproof outlet that is properly grounded, and that the cable itself is also grounded.

While the cables operate on 120 volts, the longer the cable, the more wattage will be required to heat it.

Heating cables do not generally have thermostats, so you'll have to pay attention to the weather forecast to determine when you should turn them on and off. You don't want to pay for electricity to heat the cables on days when they are not needed.

Timing the installation is important, too. Make sure the heating cable is installed before the snowy weather hits. It's too dangerous to install them when there's a lot of snow and ice on your roof.

ONCE AN ICE DAM HAS FORMED

You can remove snow accumulation with a roof rake (a large broom-like tool with an extension handle that you can use to drag loose snow off the roof deck), but – once an ice dam has formed – your options are limited. Don't try to hack at the ice (you can damage your shingles or gutters), or throw hot water or rock salt on the ice in an attempt to melt it. Just be patient and wait for warmer weather.

IF YOU NOTICE A LEAK

If the worst happens and you do notice a leak into your ceiling, drill a quarter-size hole through the plaster to let the water come through. It's easier to patch that hole later than to repair a whole ceiling that comes down.

Home Repair Resource center

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

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