

# WARMING UP COLD CANADIAN FLOORS

Is the bedroom or bathroom above your garage cold and getting colder as winter comes on? Is the floor especially frigid? This is a common problem in suburban Canada because so many modern houses are designed with rooms above the garage. And while this may be a great configuration for getting the most

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out of narrow building lots, it does cause a lot of people cold feet. The reason is simple. These rooms are typically under-insulated, especially in the floors. Builders aren't used to insulating floors properly because no other area of common Canadian house construction requires it. The problem also extends to older homes built over crawlspaces, and in both cases the same strategy is ideal for solving the problem.

The first thing to understand is what won't work. Insulating garage walls is useless because garages typically have no heat source. You'd have to heat the garage to room temperature to make the bathroom upstairs warm and this would be wasteful and bad for your car.

The only practical option involves a two-pronged campaign to add insulation to the floor somehow, and possibly increasing the amount of heating in the room itself. You're fortunate indeed if



*Two-part spray foam offers a highly effective way to seal and insulate. This kit is designed to be used by handy homeowners. Application requires warm room conditions and you'll need to wear a respirator. Photo credit: Steve Maxwell*

the garage ceiling frame is still open and uncovered because this makes work a lot easier. But even with the garage ceiling finished, solutions still exist.

The easiest option is to spray foam between the overhead joists in the garage at least four inches thick. Foam does need to be covered afterwards to meet building code, and you could use plywood or drywall. It's an aesthetic choice. There are many types of foam on the market, but I've had good luck

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with polyurethane in applications involving floors, where air sealing and vapour barrier action is required.

Spray foam is expensive, though prices are falling as more and more contractors get into the business. If cost is a concern, you can save a bit by cutting 2-inch thick pieces of rigid foam to fit between the ceiling joists in the garage, then sealing the edges of this foam where it meets the surrounding wood using foam you spray yourself. Building supply outlets and hardware stores all carry two-part spray foam kits for this job. I've used Tiger Foam for several jobs ([www.tigerfoam.ca](http://www.tigerfoam.ca); 888.844.3736) and it works very well. It's not cheap, but less expensive than hiring a pro for the whole job. This is especially true when you're gaining the bulk of foam you need using rigid sheets.

If you'd rather not tear into the ceiling of your garage, you may find it preferable

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to insulate the top of the bedroom or bathroom floor. This makes sense if you'll be upgrading the finished floor anyway, and you don't mind losing about 2 1/2 inches of ceiling height. You could buy high density extruded polystyrene foam, lay it on your floor, then fasten a layer of plywood on top with screws driven right down into the existing floor. Barricade wall panels ([www.ovrx.com](http://www.ovrx.com); 866.544.6879) are factory-bonded sheets of foam with waferboard sheets on one side, and though they're made for use insulating basement walls, they create an excellent system of floor insulation, too.



*The factory-made foam and waferboard sandwich shown here is part of an insulated panel called Barricade. It's primarily sold for basement wall insulation, but also makes an excellent insulation option for warming up cold floors. Photo credit: Steve Maxwell*

Assuming your the wall and ceiling insulation in your frigid room is adequate, insulating the floor in one way or another is an essential part of the fix. That said, it still might not be enough to make your bathroom as warm as it should be. You may or may not need more heat. The best approach is to insulate the floor, then feel the results this winter. Directing additional heat into the bathroom may be required, but experience will tell for sure. If extra heat is necessary, a simple plug-in electric heater will probably be enough because of the insulation you've added. At 10 cents per kilowatt hour, one of these heaters costs just 15 cents an hour to operate continuously – a pretty good deal for keeping warm this winter.

Steve Maxwell, syndicated home improvement and woodworking columnist, has shared his DIY tips, how-to videos and product reviews since 1988. Follow "Canada's Handiest Man" at [SteveMaxwell.ca](http://SteveMaxwell.ca), Facebook or @Maxwells\_Tips on Twitter.

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