

# **Do we need cold air returns in the basement?**

Last Updated: Saturday, November 10th, 2012, Created: Saturday, October 27th, 2001

Cory from Regina, Saskatchewan is finishing their basement and wants to know if they should have cold air returns in the basement. Hot air heating systems function best if there is at least one cold air return on each floor of the house. Essentially, that allows the warm air to circulate better. The basement is no exception to the rule. What is different in the basement is that most of the ductwork is on the ceiling. If you leave a cold air return opening on the ceiling, it will simply steal all the hot air from the ceiling and return it to the furnace, and the cold air on the floor will never move. Cut into the cold air return that is on the ceiling and drop a duct down to the floor. This is usually done inside the furnace room -- but be careful, you must not draw the cold air from the same room as the furnace itself or you might backdraft the chimney. So turn the cold air return 90 degrees through the wall so that it actually draws the air from the room next to the furnace room, or from the hallway of the basement. By putting the cold air return on the floor, it will vacuum up the cold air on the floor, and draw down the warm air from the ceiling. One other caution is to have the cold air return opening half as large as the sum of all the hot air outlets in the basement. That will assure that the basement does not come under negative pressure that could cause backdrafting with the chimney.

**Keywords:**

Balancing, Heating, Forced Air, Duct