How to Install Handrails Without a Wall

A nice railing can be a beautiful addition to any stairway. Not only is it decorative, but it also serves as an important piece of safety equipment. Though railings are most often found on the walls of a stairwell, some stairs do not have walls on both sides, and as a result require the installation of a railing that can stand without being attached to a wall.

**Things You'll Need**

- Power drill
- Screws
- Saw
- Measuring Tape

**Instructions**

1. Measure your stairway to see how long a piece of railing you will need. Also count how many steps you have as you will need one post per step to mount the railing on.

2. Measure the length and the height of a step, and using the same proportion, draw a right triangle on a piece of paper.

3. Lay your posts against the paper, and run the sloping line behind the top of the post. Draw the line on your post and cut the post on that angle, to ensure that the railing will run flush against the posts.

4. Measure and mark a spot at the center of the depth of each step and about an inch from the edge of each step.

5. Place the post in the measured spot and use a drill bit to drill into the step.

6. Screw the posts into the step and repeat for every other step, until each step has a post secured on it.

7. When all the posts are complete, place the railing on top of the posts and screw them into place. Once all the posts are screwed in and secure, your railing will be complete.
How to Install a Handrail on a wall

Instructions

Preparing Your Railing

1. Begin by measuring and marking the location of your railing. Usually, railings are located 34-36 inches above stair treads, unless you have special reasons to adjust the location for someone elderly and frail or extremely tall who will rely on the railing for support. Mark your wall at the planned height of your railing, beginning above the first step at the bottom, one or two middle steps and the top step. Using your measuring tape or yardstick, connect these marks with a straight, light pencil line. Follow the line with masking tape for the full length. Measure tape line to determine the length of railing you will need.

2. Sand the rail thoroughly, starting with medium-grade paper, then fine-grade. Smoothness is a priority with railings, especially if it will be used for support. Sand the underside of rail as well as the top. Wipe off sanding residue with damp paper towels or rags.

3. Stain, varnish or paint rail before installing. At the worst, you may have to touch up a scratch or two after installation, but this is much easier than trying to apply finish in place. If you have decided to paint your metal brackets and the staples holding the railing to the brackets, do this at the same time. Touching up is easier than painting in place.

Installing Your Railing

1. Measure the vertical height of your brackets. Place one flat against the wall or on a flat surface and measure from the bottom of the screw plate to the top of the hook -- while the hook doesn't lie flat, you can estimate how tall your brackets are, if you did not find out when you bought them. Most are 3-4 inches tall. Make marks and a line of that depth below your masking tape rail line.

2. Count the number of your steps, including the top landing. For basic stability, use a bracket every four steps; on a flight of 12-13 steps this means three brackets. A fourth will increase security. Divide your total line length into evenly spaced intervals. At each interval, make two spaced dots at the same height from a stair tread. Connect the dots with a short line -- this marks the bottom of your bracket (although your railing goes in at a slant, brackets need to be installed straight up and down). Mark the same evenly spaced intervals on the bottom of your stair rail -- this is where staples go.

3. Using a bracket as a template, mark and drill screw holes in your wall where brackets will go. Using a staple as a template, mark and drill screw holes for the staples on the bottom of your railing.

4. Using screwdriver, attach brackets to wall. Set rail on brackets and attach staples to rail and brackets (this is easiest if you sit down on the stairs to work). Have your helper hold the rail in the middle while you attach it, top first, bottom second, then in the middle.

5. Remove masking tape and erase pencil marks. Touch up any scratches or marks that happened during installation.