

to drive a nail or screw through drywall and into a stud, many homeowners have problems figuring out how to secure items to the wall between studs or in hard surfaces like brick or concrete.



Here's what you need to know about using wall anchors and picture hangers in your home.

Wall Materials

The type of anchor you use is often determined by the wall material. Drywall or wood paneling require little to drill or nail into while delicate surfaces like plaster take more finesse and hard materials, like masonry and concrete, require more muscle.

Drywall

Drywall alone has little holding power. When attaching lightweight objects (20 pounds or less), standard picture hangers or wire hangers work fine and do little damage to the wall. For medium weight items (20-40 pounds) consider a spreading type ribbed plastic anchors or threaded anchors. Heavy objects (over 40 pounds) require a fastener that distributes the weight behind the wall, such as a toggle or molly bolt.

Plaster

While a plaster wall may resemble drywall, it's a much harder surface prone to cracking. Always predrill holes in plaster and avoid using fasteners that apply pressure to the sides of the hole. For lightweight objects (under 3-5 pounds) consider adhesive hangers which don't require a hole at all.



Wood

Fasteners attached to solid wood and plywood have great holding power if the material is thick enough. For thinner walls, such as plywood paneling, use robust fasteners like toggle or molly bolts or plastic anchors that spread out behind the wall. While nails do well in wood, screws provide much greater holding power and are easier to remove, though they do leave a larger hole in the wall. When nailing or screwing into wood, always drill a pilot hole first to keep it from splitting.

Masonry and Concrete

Plastic anchors or special hardened masonry nails are your best bet for attaching to these hard materials. Use a special carbide tipped masonry drill bit to predrill a hole for the fastener (a hammer drill does the job much faster and

easier). Drill a smaller pilot hole first, then switch to a larger size bit to finish the job. On brick walls it's easier to drill into the mortar joint than the brick itself, though the brick has greater holding power if it doesn't break.

Wall Anchors and Fasteners

The different types of wall anchors and picture hangers that are commonly available include:



- **Toggle Bolts:** These robust fasteners come in a variety of lengths and bolt diameters depending on the amount of weight they are intended to support and the thicknesses of the wall they are used on. While able to support over 300 pounds in drywall in our tests, toggle bolts require an oversized hole in order to insert the spring loaded fastener. This prevents the bolt from fitting tightly in the hole and leaves a large hole when the fastener is removed.



- **Threaded Toggle:** These self-drilling fasteners are an improvement over standard toggle bolts since the shaft of the fastener fits tightly in the hole. Threaded toggles are easy to install, though they can be a bit tricky to remove, and safely supported over 200 pounds in drywall in our tests. On the downside, they leave a nice sized hole in the wall (though not as large as standard toggle bolts), and are expensive. For increased holding power, and to aid in removal, install with the long arm of the toggle pointing up.



- **Molly Bolts:** These often used fasteners are inserted in a hole drilled in the wall, or can be hammered directly into drywall without drilling. Molly bolts achieve their holding power by tightening up the bolt, which causes the casing to expand behind the wall. While supporting over 100 pounds in our tests, molly bolts have an annoying tendency to spin in drywall when being tightened and are impossible to remove once installed. Like toggles, they come in various lengths depending on the wall thickness.



- **Threaded Anchors:** These new fasteners on the scene are mainly used for drywall, with their deep threads providing increased

holding power. They're available in either brass or nylon, with a picture hook or center screw include with them. Threaded anchors are screwed directly into drywall and supported up to 80 pounds in drywall in our tests. While they provide good holding power and are easy to install and remove, threaded anchors leave a large hole in the wall behind.



- **Plastic Anchors:** While working well in dense materials—like masonry, concrete, brick, or concrete block—plastic anchors don't provide as much holding power in softer surfaces like drywall as other types of wall anchors. If they are used on drywall, choose a ridged type of plastic anchor that flares out behind the wall. Once the anchor has been hammered into a hole drilled in the wall, a screw is inserted into the center that expands to press against the sides of the hole.



- **Picture Hangers:** Standard metal picture hangers have been around for years. They feature an angled nail that fits in the hook to increase their holding power. Picture hangers are inexpensive and available in a wide range of sizes. They supported between 40-60 pounds in drywall in our tests. While they don't hold as much weight as other fasteners, picture hangers are simple to install and easy to remove with little lasting damage to the wall.



- **Wire Hangers:** Sold under brand names like Hercules Hook (http://www.asseenontv.com/prod-pages/hercules_hook.html), and Monkey Hook (<http://www.monkeyhook.com/>), these lightweight fasteners consists of a curved steel wire that can be installed in seconds without tools. While some brands claim to hold as much as 150 pounds, they supported less than 50 pounds in drywall in our tests. Since most pictures weigh considerably less than that, wire hangers work well for light items. They are easy to remove and leave little damage but only work on hollow walls with no obstructions. The PowerHook (<http://www.thepowerhook.com/>) is a more robust hanger that works on the same principle but can hold up to 120 pounds, though it leave a larger hole.



- **Adhesive Strips:** Adhesive hangers and hooks, such as 3M Command Strips (http://solutions.3m.com/wps/portal/3M/en_US/Command/home/), can be used to attach lightweight items without making a hole in the wall at all. . Adhesive strips will adhere to most smooth surfaces but they aren't suited for bricks and other porous materials. They are rated for items weighing less than 3-5 pounds.

Further Information

- Testing Wall Anchors and Picture Hangers (<https://www.todayshomeowner.com/testing-wall-anchors-and-picture-hangers/>) (article)
- How to Hang Pictures Right the First Time (<https://www.todayshomeowner.com/hanging-pictures-right-the-first-time/>) (article)
- Simple Jig for Hanging Pictures in Your Home (<https://www.todayshomeowner.com/video/picture-hanging-tip/>) (video)
- Keeping Picture Frames Level (<https://www.todayshomeowner.com/video/keeping-picture-frames-level/>) (video)

How to Hang Anything on Anything



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