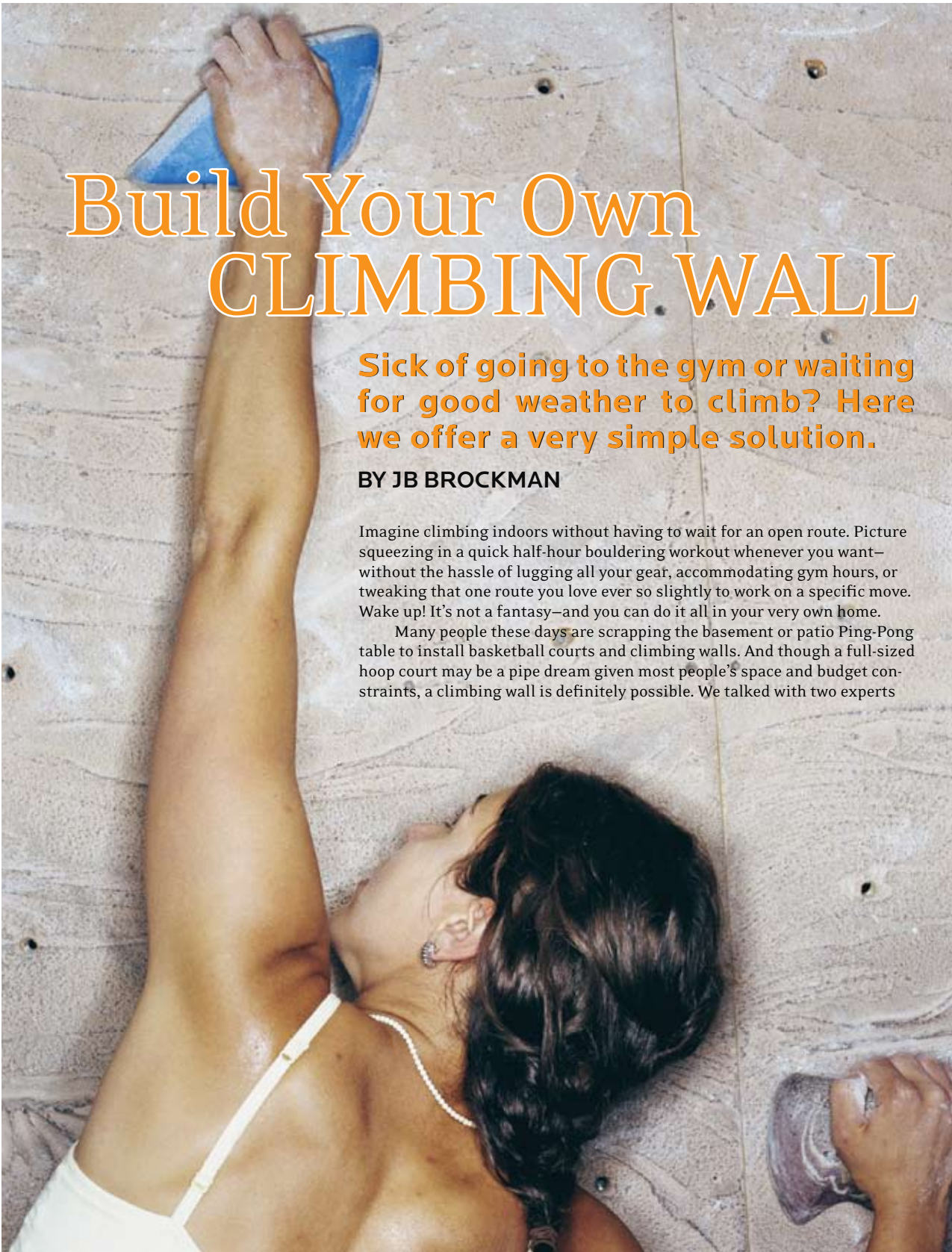


yes, you can



# Build Your Own CLIMBING WALL

**Sick of going to the gym or waiting for good weather to climb? Here we offer a very simple solution.**

**BY JB BROCKMAN**

Imagine climbing indoors without having to wait for an open route. Picture squeezing in a quick half-hour bouldering workout whenever you want—without the hassle of lugging all your gear, accommodating gym hours, or tweaking that one route you love ever so slightly to work on a specific move. Wake up! It's not a fantasy—and you can do it all in your very own home.

Many people these days are scrapping the basement or patio Ping-Pong table to install basketball courts and climbing walls. And though a full-sized hoop court may be a pipe dream given most people's space and budget constraints, a climbing wall is definitely possible. We talked with two experts

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from the Boulder Rock Club (BRC) in Boulder, Colorado, about just how to go about building your own climbing wall. Charlie Boas, head route setter at BRC, used to build climbing walls for Eldorado Wall Company. Chris Wall is head trainer at BRC, where he coaches individual clients, two junior bouldering teams, and an adult women's team. "At my house the climbing wall went in before the hot tub," says Chris.

### The Plan

Sketch a plan for how you'll execute the wall to avoid mistakes and improvisation. Keep it simple. There are some basic considerations before you strap on the tool belt:

What do you want to train for (bouldering, steep climbing)?

What kind of material do you want to use (steel, plywood, concrete)?

Where can you install a wall (basement, garage, back yard)?

Weather is the primary factor to consider when deciding on an indoor or an outdoor wall. If you don't weatherproof and seal it well, moisture will penetrate the wall and eventually rot the wood and rust the hardware. Indoors your options are virtually limitless, but note that you'll usually be climbing inside a relatively dark or dank basement or garage. Your plan should include installing adequate lighting and ventilation—don't forget to consider the effects of the ubiquitous chalk dust, which will get all over everything.

And, of course, you'll have to heed your budget. "Steel walls are great if you have the cash and the welding skills," says Charlie. Professional gyms use plywood, concrete, and steel, and they cover a lot more real estate. The majority of home climbing walls are bouldering gyms made with 2-by-4s and steel overhangs. There's no minimum height guideline for building your own wall—pick a comfortable bouldering height at about 12 feet. "You want your feet off the ground," says Charlie, "but your options are limited only by your imagination. Just think about the angle at which you build and what's going to give you the most bang for your buck."

Once your plan is sufficiently sketched out, use it to determine your materials list.

### The Construction Zone

Constructing a climbing wall is pretty straightforward: you build a framework of lumber, cover the framework with plywood sheeting, and then attach it to an existing wall. The existing wall must be strong enough to support the heavy framework in addition to the sheeting covering it as well as the weight of the holds and the climbers. Before you start construction, it's smart to consult an engineer, a general contractor, or even a building-savvy friend to be sure that your existing wall can handle the load.

Plan to build the climbing wall in 8-foot-wide sections—the length of one full sheet of plywood—and the construction will be easier and will ensure that you use materials wisely, keeping costs down. Create one framework section at a time and attach it to the support structure before doing the next one so you can make modifications easily while you've got some working room. Be sure to locate and mark the wall studs and the ceiling joists so that you attach the framework securely to the existing house

framing. Most U.S. construction is built with the studs at 16-inch increments on-center.

Build the individual frame on the ground, hoist it up into place as a unit, and then fasten it with screws to the joists and studs. Once all of the frameworks are up, attach horizontal 2-by-4s between the studs every 48 inches up from the floor (where the horizontal 4-by-8-foot plywood panels will meet); this will reinforce the framework and give you a backing for attaching the plywood panels.

Installing T-nuts with a power drill is the next step. It doesn't matter if you follow a grid pattern or drill holes randomly, but you'll want 100 to 250 T-nuts per sheet of plywood. To install the plywood, attach a couple of jug holds to the panels to help you maneuver them into place. Then fasten the plywood with screws spaced about 6 inches apart around the perimeter and along each stud. The how-to guide from Metolius Climbing on building your own bouldering wall is a fantastic resource for specifics (see sidebar).

After you put up the wall, it's time to texture it—not only to smooth out the corners and for appearance but to give you purchase while you're climbing. To simulate real rock, professional gyms use concrete infused with latex, which allows the material to shrink and expand with temperature swings without cracking. But for home walls, just painting the wall with sand mixed into concrete adhesive works perfectly.

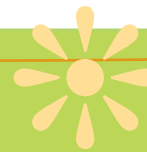
Choosing holds is the next step. Charlie recommends using holds made of urethane (like inline-skate wheels), which are virtually indestructible and will bounce when dropped. Holds made of polyester resin can break more easily, and replacing them can get expensive. "Holds have to be at a certain tightness," Charlie explains. "If they're overtight, they can break—and they might even stay attached to the wall and then fall off when you grab them. If the hold is undertight, it will spin, which is just as unsafe." The solution? Set screws by drilling one hole in the end of the hold so that it doesn't spin. Once the holds are attached, be sure to test them by grabbing them with some effort.

## SAFETY TIP

Remember: Just because you're climbing in the comfort of your own home doesn't mean you're automatically safe. Chris advises learning how to become a good spotter.

"You're not trying to catch the person—you're trying to help them land on their feet or protect their head and back," he explains.


"Awkward falls are the most dangerous, so try to guide the person by the shoulder blades or by the hips."



## The Routing

Once the wall is up, it's time for the fun part: setting the route. "The wall is the canvas for climbing," says Chris. "And it's changing it up that makes the home gym interesting." Just like with any sport, you need to warm up first, so construct a warm-up area (with big holds) on the wall. If you want a bouldering problem, anticipate using six to 10 holds. If you're setting a route, you'll need approximately 20 to 30 holds, depending on the height of the wall.

Experiment with setting routes. Try to stump your friends—or have them join you for a route-setting party. Play a game called "add on," where people alternate putting up holds until you've set an entire route. Or try "take away," where the full route is already established and you take turns removing certain holds to make it more interesting. Colored tape is a great way to mark your routes—and you can create a legend at the bottom of the wall to specify which color distinguishes which route. Brainstorming routes and climbing with your friends not only provides excellent motivation but can also challenge you to get out of your comfort zone. "Unless you know all your weaknesses and work on them constantly," says Chris, "you'll fall into a habit of just strengthening what you're already good at."

The good news is, from here on out you'll be climbing on your very own climbing wall—so you can take all the time in the world to turn those weaknesses into strengths. 



## RESOURCES

To get started building your own climbing wall, both Chris and Charlie suggest talking to the pros at a local climbing gym and checking out myriad resources on the Internet. Here are just a few to help get you going:

**VooDoo Holds** (Flagstaff, Arizona):  
[www.voodooholds.com](http://www.voodooholds.com); 928 526 0993

**e-grips** (Louisville, Colorado):  
[www.egrips.com](http://www.egrips.com); 303 530 3065

**Eldorado Wall Company** (Boulder, Colorado):  
[www.eldowalls.com](http://www.eldowalls.com); 303 447 0512

**Metolius Climbing** (Bend, Oregon):  
[www.metoliusclimbing.com](http://www.metoliusclimbing.com); 541 382 7585 (check out the downloadable PDF on building your own bouldering wall in the How-to-Guides section of the website)

## TOOL TIME

You don't have to be a home-remodeling expert to build your own climbing wall. General carpentry tools and skills will do just fine. Here's a basic list:

### Materials:

- 2-by-4s
- Plywood
- T-nuts
- Framing connectors
- Wood screws

### Tools:

- Stud finder
- Measuring tape
- 4-foot level
- Circular saw
- Power drill or screw gun
- Screwdriver bits (Phillips head)
- Nail gun
- Hex wrenches
- Gloves and safety glasses
- Stepladder
- Pencils

Most climbing-hold companies offer starter kits and sets that include T-nuts with the holds, so you've got everything you need in a cost-effective package. "If you own or can borrow the tools for building a wall, you can probably put up a very basic one for \$150 to \$200, which includes the wood and the hardware," explains Charlie. "At a minimum allocate \$200 for holds." To protect yourself and the floor when you fall, you'll need some cushioning. Although old futons (6 inches thick) and mattresses can work, many companies sell climbing-specific crash pads for \$120 to \$340.