Here are some easy to do DIY ideas, using pipe, that require few skills and tools. The ideas I'm posting aren't all that revolutionary, just a few twists. One handy thing to have for this kind of work is cutoff saw like this:

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Some information about pipe. The pipe used in these examples is called black pipe schedule #40. Very common.

Pipe comes in sizes that don't have much to do with actual size. Here is a brief listing of common pipe sizes and their actual outside diameter (everything in inches)

size	diameter	size	diameter	size	diameter
1/2	.840	3/4	1.050	1	1.315
1 1/4	1.660	1 1/2	1.900	2	2.375

They are inexpensive (well under $100 at some stores like Harbor Freight) and can cut through just about any metal. A decent drill is a good investment too.

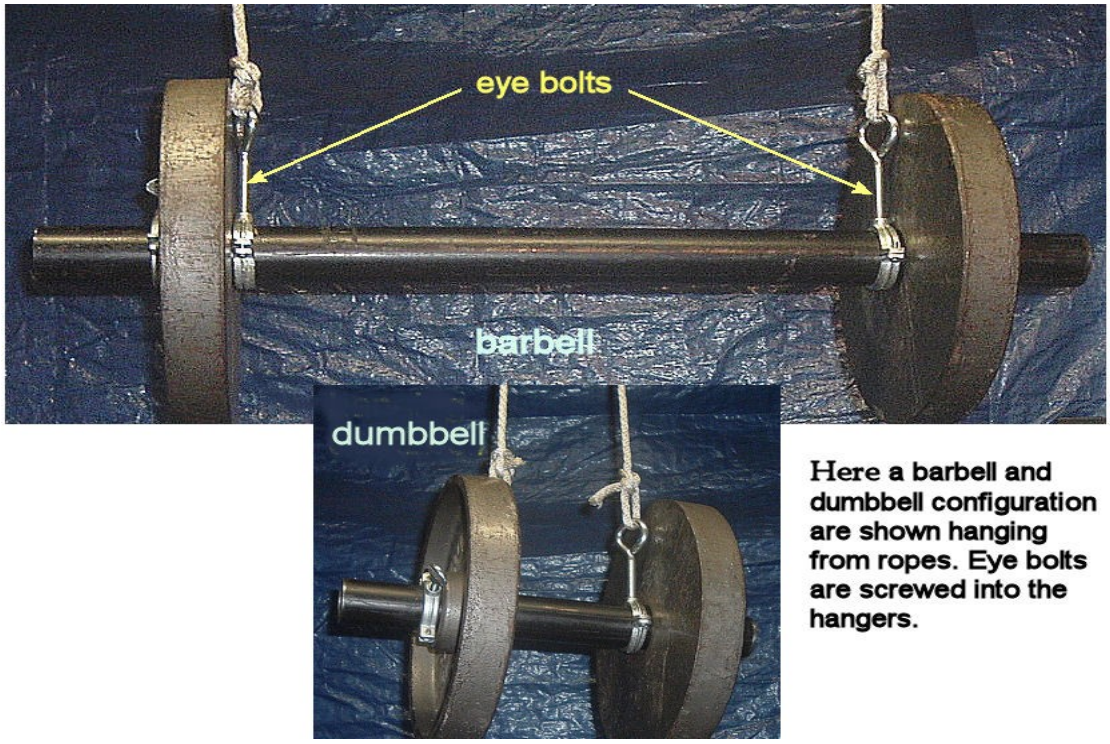
For starters here is an olympic dumbbell handle made from threaded pipe and fittings. The materials are readily available at most hardware stores and plumbing supply stores. This stuff is not cheap. What you see in the pictures cost me over $30 for one handle. There is no right or wrong about my handle, its just to give you some ideas.

For collars I used split ring pipe hangers because they are inexpensive ($2-$3), they hold well, and most olympic collars are too big to grip the 1 1/2" pipe (1.9"

outside diameter).

Here is a pic of the handle with a 250 lb load.

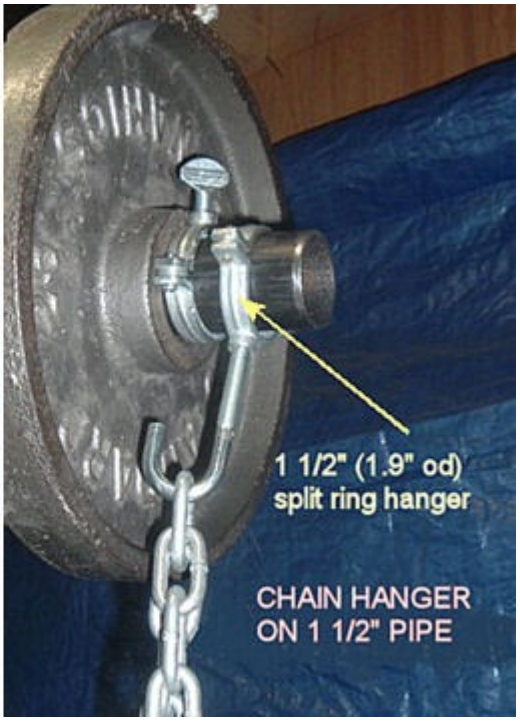
Here is another fail-safe suspension variation for a barbell and dumbbell. As you can see, olympic plates are used in this example. The 1 ½ pipe size used (outside diameter – 1.900”) is the closest to the 2” olympic hole size.



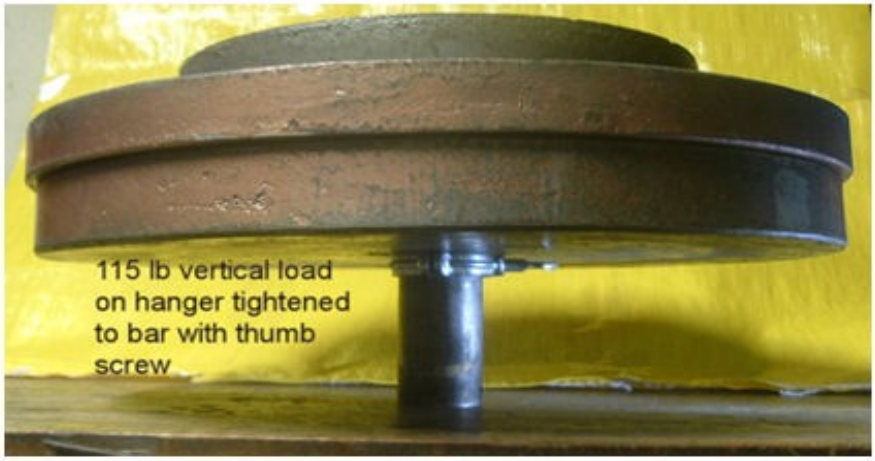
Here a barbell and dumbbell configuration are shown hanging from ropes. Eye bolts are screwed into the hangers.

Here's an idea for making your own pro style dumbbells on the inexpensive using threaded pipe and fittings. Note that the ends have threaded caps. The caps will keep the plates from falling off, even during an overhead triceps extension.

Here are some cheap and quick ideas for hanging chains. (olympic bar and 1 1/2" pipe)



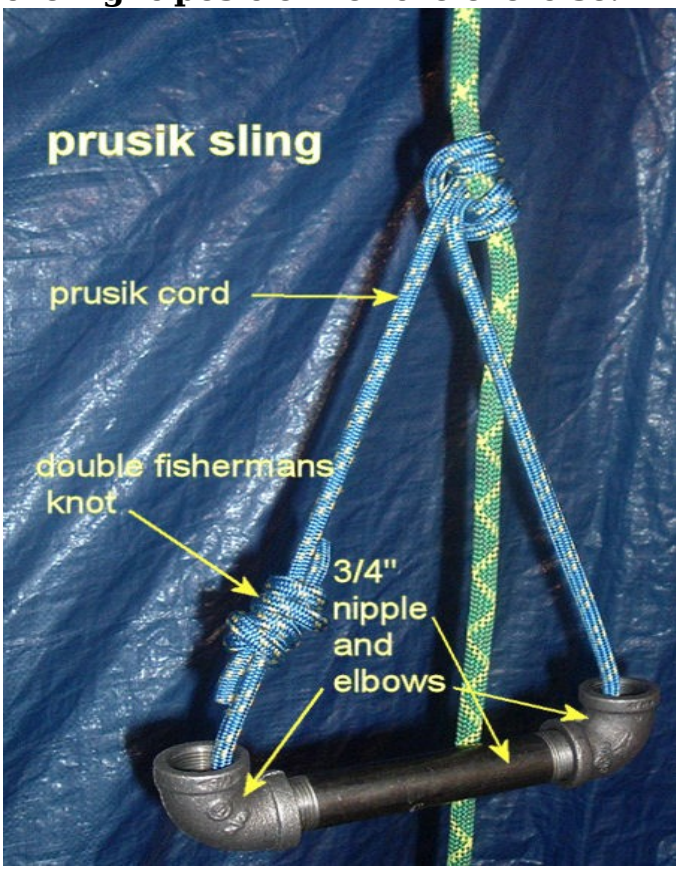
Split ring hangers are not in the same league as the quality collars. But they should be fine for normal lifts. I did some testing and the pic show the maximum vertical loads.



Not really a much of a pipe thing, but simple DIY substitute for gym rings and webbing. The parts are a simple rope, prusik sling, and handle. The prusik sling is a rock climbing/ mountaineering tool, so it will be safe in the gym. This being a pipe thread, I show a handle made out of pipe parts, but other things will work, like PVC pipe and heavy tubing, and of course real rings. Use 1/2" braided rope. Here are sources of info for the slings:

making a prusik sling - http://www.animatedknots.com/prusik/index.php
tying a double fisherman's knot - http://www.youtube.com/watch?v=O6oJwedcb18
a prusik cord source (one of many) - http://www.rescuedirect.com/Merchant...Category_Code=
Googling "prusik slings" will get you lots more info.

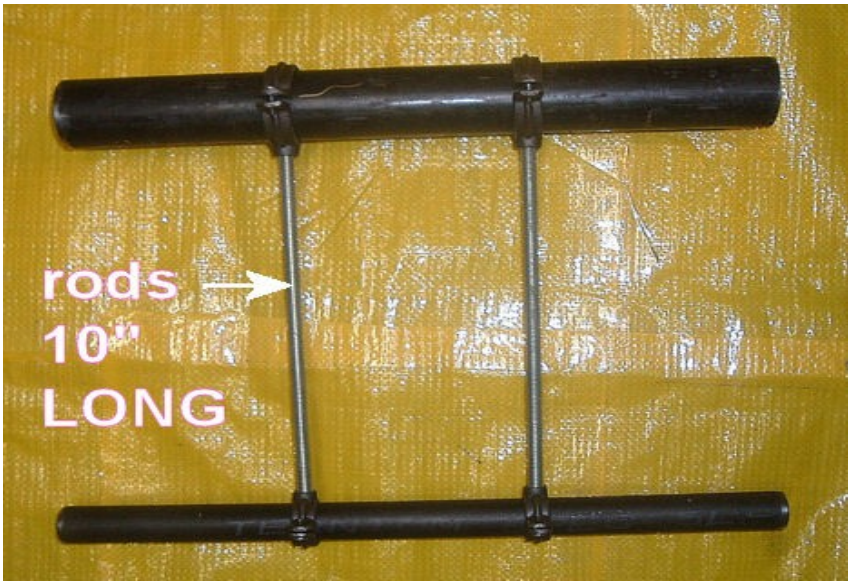
Nice advantages are:
The ropes can be hung anywhere, ceiling beam, tree branch etc
When not weighted the prusik slings can be quickly slid up or down the rope to the right position for the exercise.



Here's hammer. With a little disassembly of the oly db handle I showed earlier, you can end up with something very similar. By placing a plate on the oly end you can vary the load and torque very easily by moving it in and out or changing plates.

Here's one I put together to show some handle ideas. Its quite simple to make and easy to customize to your own needs. For the fun of it I mixed olympic and standard in the same piece. Possible uses: farmers walk, grip development, one handed and two handed bent over rows.

This pic shows the bare frame.

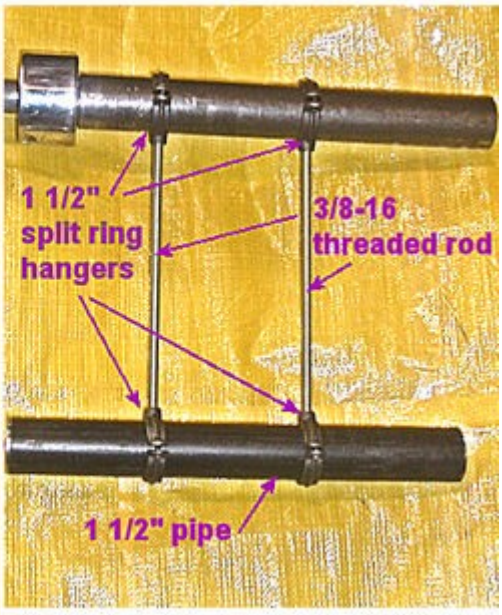


oly plate with a standard handle

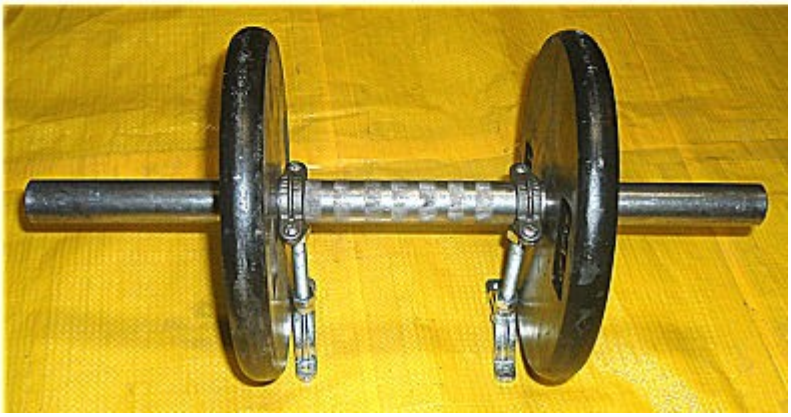
standard plates with a thick handle

This rig is for doing a standing overhead press in a low ceiling room.

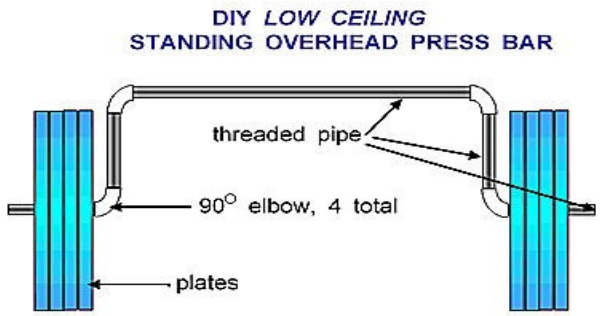
The 1/1/2" hangers are a bit small for olympic collars. If each half is widened a little by squeezing it in a vice, the hangers can be made to fit.



Here are some ideas for putting legs on dumbbell handles so that when the dumbbell is put down, the plates are slightly off the floor. Might make it quicker and easier to change plates.

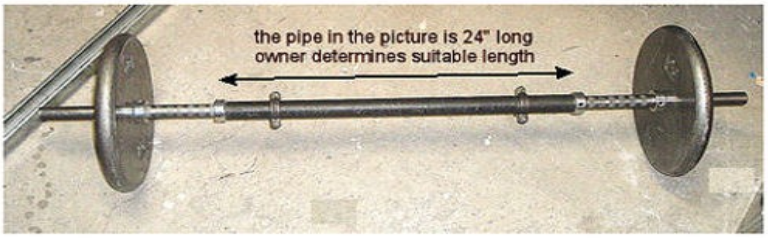


Here is a simple DIY pipe solution for doing standing overhead presses where the ceiling is too low. I'll leave the pipe sizing and dimensions to the builder to customize.



Here's a way to switch your dumbbell handles into a barbell, and back again. The assumption is that you have dumbbell handles with a one inch diameter. That diameter slides nicely into 1" pipe schedule 40 pipe (which has an inside diameter of 1.05").

Holes are drilled near each end of the pipe, and the hangers are placed so that the threaded holes in the hangers line up with the the drilled holes. The thumb screws (could be any kind of 3/8-16 fastener) screw through the holes and contact the handles, keeping them in place.



Lots of good designs for DIY lat pulldowns. This is an idea for stabilizing the pulldown load to keep it from swinging around during a lift. A "tee" design is used for this purpose. This design is good for quick plate changes.