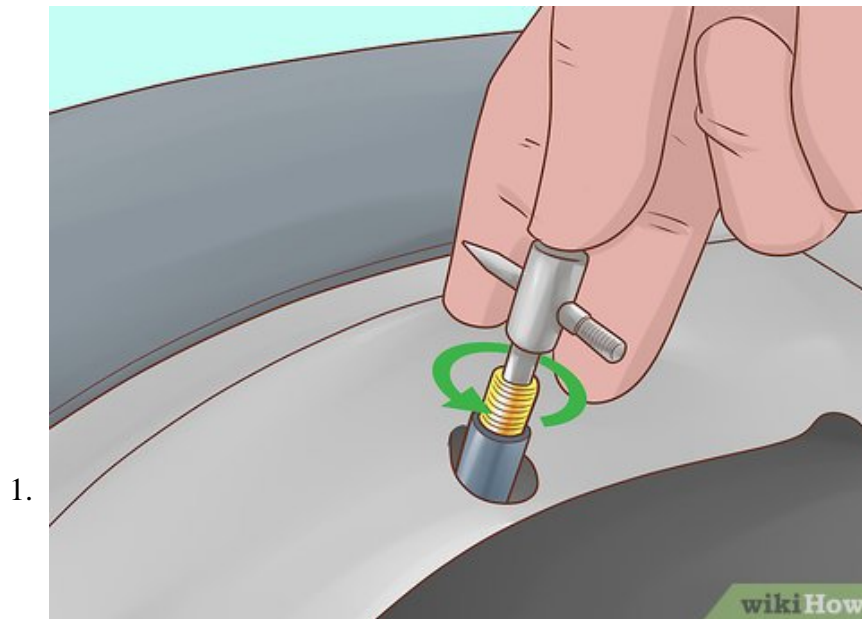


# How to Get a Tire Off a Rim

You do not need an expensive tire removal machine or lots of mechanical knowledge to replace an old tire. Remove any tire by prying it loose from the rim with a few tools. Save money and take off any tire in a pinch with a pry bar and...

Method 1 of 2:

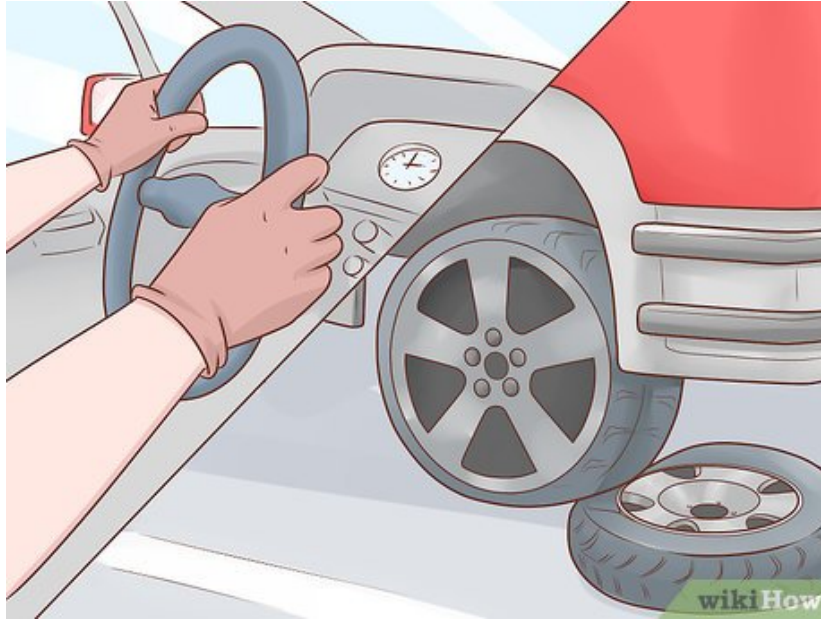
## Removing the Tire by Hand



**Remove the valve core from the tire with a removal tool.** Set the tire on a flat surface and locate the air valve. It will be a small metal or rubber spoke sticking out from the tire. Twist the cap counterclockwise to remove it. The core is a metal cylinder inside the valve, and to remove it, you need a valve core removal tool. Stick the end of the tool inside the valve, then twist it counterclockwise to remove the core.<sup>[1]</sup>

1. The core holds in air, so removing it deflates the tire.
2. The valve core removal tool is a relatively inexpensive item that looks like a small screwdriver. It's available at most auto parts stores.

2.



**Drive a car over the tire to separate its bead from the rim.** The bead is the braided edge of the tire that fits firmly against the rim. The simplest way to remove it without extra tools is to set it on the ground in front of a heavy vehicle. Carefully drive the vehicle onto the rubber part of the tire, not the metal rim. This will push the rubber down, forcing the bead out of its groove on the rim.<sup>[2]</sup>

1. You may need to drive over the rubber a few times to break it. The bead tends to be the most stubborn part, especially with older tires.
2. Another way to loosen a bead is with a jack. Raise the vehicle on a jack, slide the tire underneath the jack, then lower the vehicle down onto the rubber part of the tire.<sup>[3]</sup>
3. If you have a hard time with the bead, you may be better off cutting through it with a sharp knife or saw. Be careful not to cut into the metal rim. This will destroy the tire, but if it is done correctly, it won't damage the rim.

3.



**Pin the sides of the tire down with your feet.** To prevent the tire from sliding, place it on a piece of carpeting, another tire, or a similar object. Begin with the front part of the rim face down. Step down hard on the rubber part of the tire. Standing or kneeling on it is safe and will help keep the wheel in place.<sup>[4]</sup>

1. Doing this gives you more leverage against the tire bead and reduces the chances of scratches on the rim. To reduce the possibility of scratches further, always pry off the back side first.



**Spread liquid dish soap around the rim to lubricate it.** Apply the dish soap directly by hand or mix about 1 tablespoon (15 mL) of it into 1 gallon (3,800 mL) of water. A good grease-cutting dish soap will reduce resistance from debris, grease, and oil on used wheels. Spread the soap under the edges of the rim.<sup>[5]</sup>

1. Some people choose to use cooking oil, WD-40, or similar products. Another option is to purchase tire lube from an auto parts store.



**Lift the tire over the top lip of the rim with a screwdriver and pry bar.** Start on 1 side of the tire. Push down on the rubber so it is beneath the edge of the rim. Slide the pry bar underneath the rubber, then lift it until the bead is above the rim. Then, while holding the tire in place with the pry bar, work around the wheel with the screwdriver. Use it to bring the bead up over the rim on all sides.<sup>[6]</sup>

1. Flatter, wider pry bars and screwdrivers work best for this. They are less likely to scratch the rim than smaller tools.



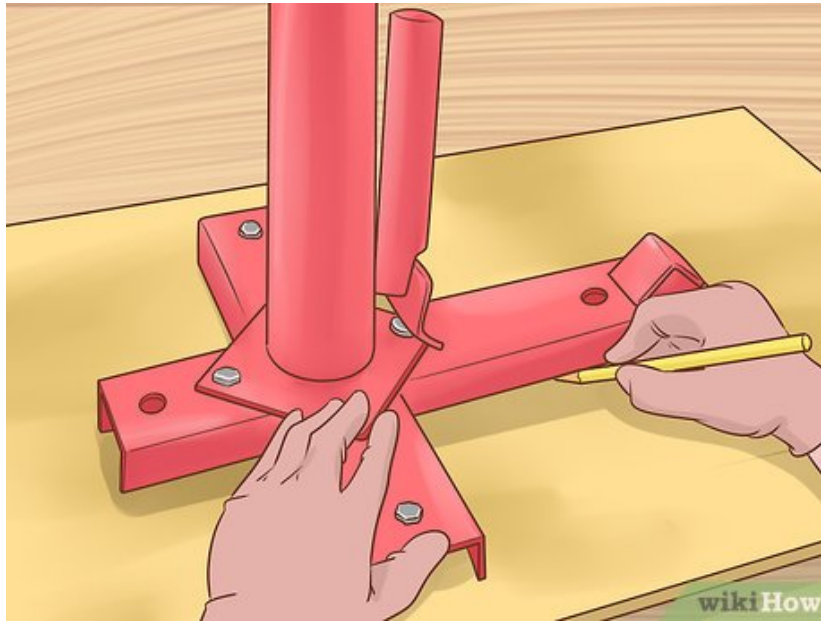
**Use the pry bar and screwdriver to free the rim on the other side.** The bottom half of the rim will be free at this point, but the top edge will get stuck on the tire's lower bead. Pull the rim up as far as you can, then wedge the screwdriver underneath it. Stick the pry bar in next and use it leverage the rim up towards you. Continue doing this on all sides of the wheel until you are able to pull the rim out.<sup>[7]</sup>

1. Apply soap as needed to the other side of the rim in order to lubricate it.
2. If you're having a hard time with it, stand the wheel up or flip it over. Try using the pry bar from a different angle and a wood mallet to strike the tire off of the rim

Method 2 of 2:

## Using a Manual Tire Changing Machine

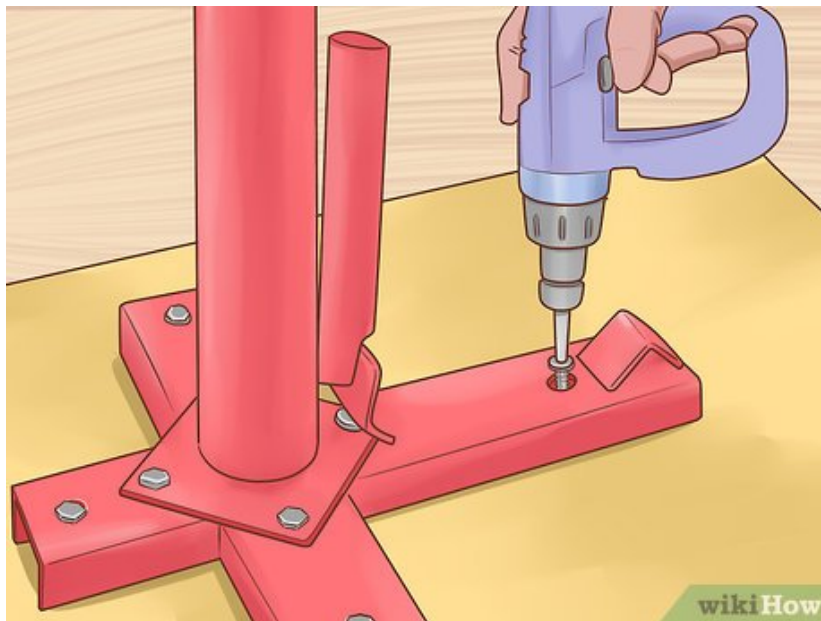
1.



**Trace the tire changing machine's base on a plywood surface.** Get a  $\frac{3}{4}$  in (1.9 cm)-thick piece of plywood, then set the tire changer on top of it. Use a pencil to trace the base, marking the location of the bolt holes as well.

1. Manual tire changers are available online or at many tool shops. They're relatively cheap and are much more efficient than prying the tire off by hand.

2.



**Bolt the machine to the plywood with a screwdriver.** Screw 5 in (13 cm) long,  $\frac{1}{2}$  in (1.3 cm) wide carriage bolts into the wood. Then, set the tire changer on top of the bolts. Secure the machine by placing a washer and nut on each bolt. Twist the nuts counterclockwise by hand to tighten them.<sup>[8]</sup>

1. To position the bolts properly, set the machine on the plywood and trace the base with a pencil. Mark the location of the bolt holes.
2. For more stability, secure the tire changer to a concrete surface. This is a bit more difficult, since you need a masonry drill bit, but otherwise it attaches the same way.

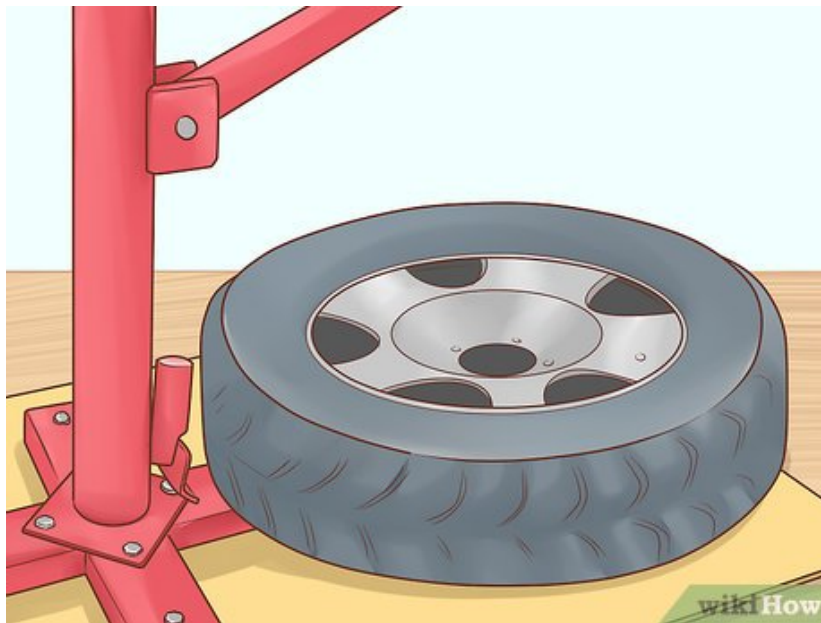
3.



**Open the stem valve with a valve removal tool.** Find the air valve, which will look like a small spoke sticking out of the front end of the rim. It will either be black or metallic. Twist the cap counterclockwise to remove it, then place a valve stem remover into the valve. Turn the tool counterclockwise to pop out the valve stem.<sup>[9]</sup>

1. Set the valve stem aside in a safe place in case you need it again.

4.



**Rest the tire on the base and clamp it in place.** Look for a small, triangular nub on the base. Start with the front of the rim facing upward. Hook the bottom of the rim on the nub, laying the wheel flat. Then, bring the tire changer's arm down and rest it on top of the rubber, right next to the rim. The arm looks like a wedge, sort of like a bulldozer blade.<sup>[10]</sup>

1. Secure the wheel tightly to the base before attempting to remove the tire. Push down on the arm to ensure the hanging wedge is firm against the tire.

5.



**Use the changing rod to separate the tire bead from the rim.** The changer will have a separate metal tube that fits into the open end of the arm. Stick the rod's pointed end into the arm, then gradually push it down. This will push the wedge down onto the rubber, exposing the rim.<sup>[11]</sup>

1. To loosen the bead further, push down on the tire by hand or with your foot. Go around the entire wheel to free the rim.

6.



**Flip the wheel over and separate the other side with the wedge.** Turn the wheel over, hook it on the nub again, then press the wedge against the rubber. Push the arm down to easily separate the tire bead from the rim. Press against the rubber on all sides of the wheel to finish loosening the rim.<sup>[12]</sup>

1. To avoid scratching the rim, place a piece of paper, a rubber mat, or some other material on the changer's base. You only need to do this when you place the front side of the rim face down.



7.

**Lay the tire on top of the changer and lock it in place.** Set the tire on the changer's big spoke and position it so the smaller spoke passes through 1 of the lug nut holes. Wrap an old shirt around the center spoke, over the top of the rim. Then, set the bracket piece and top cap on the center spoke. Twist the cap counterclockwise to lock the tire in place.<sup>[13]</sup>

1. The bracket piece looks like a flat cylinder with 4 spokes.
2. If you don't have an old shirt to use, try placing pieces of rubber between the bracket and the rim. Doing this protects the rim from scratches.



8.

**Pour liquid dish soap around the lip of the rim.** Pull the rim up slightly so you are able to reach under it. Spread generous amounts of soap around and underneath it. The soap lubricates the rim, making the tire easier to remove.<sup>[14]</sup>

1. A regular grease-cutting soap will do a lot of good for used tires. Other substances, including cooking oil and WD-40, may also help. For the best results, get tire lube from an auto parts store.

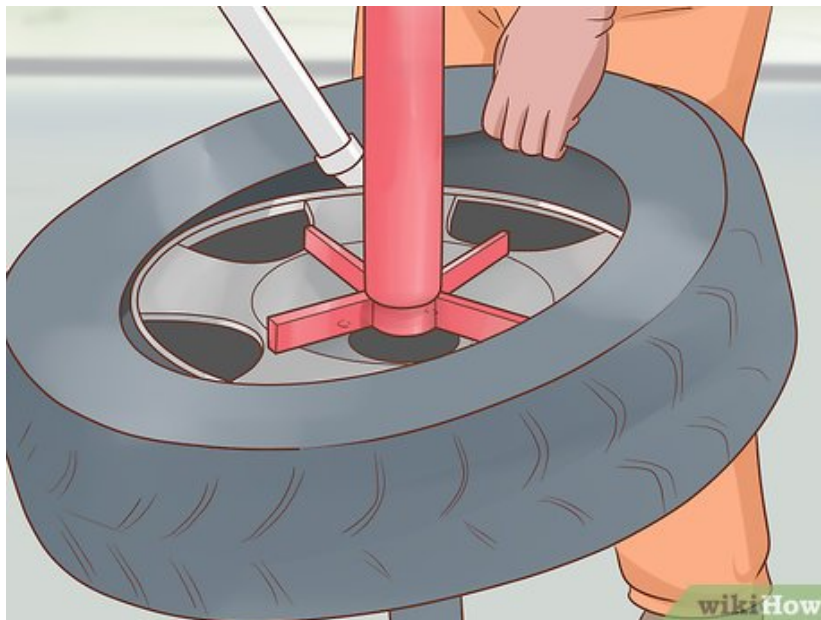
9.



**Pry the tire over the lip of the rim with the changing rod.** Detach the rod from the changer's arm you used earlier to break the tire bead. Slide the pointed end between the rim and the tire. Then, leverage the rubber over the rim. Work all the way around the wheel to do this on all sides.<sup>[15]</sup>

1. Using a pry bar or a similar tool also works well. The best tools to use are ones with wide, flat blades, since they are less likely to scratch the rim. Keep the shirt or other material in place for protection.

10.



**Repeat prying the bottom side of the wheel until you can remove the rim.** Leave the wheel in place on the tire changer. Pull the rubber back so you are able to slide the rod down to the rim's bottom lip. Pull the bar back to lift the tire over the rim. Continue doing this on all sides of the wheel until you are able to lift the tire off of the changer.<sup>[16]</sup>

1. The tire changer is a great way to fit a new tire onto the rim without much hassle. Basically, you do the steps in reverse. You use the arm to leverage the tire onto the rim, then replace the valve stem

and add air.

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