

Changing a Flat Tire (...and avoiding a pinch flat!)

This method will guide you through changing a flat tire while on the road or in your garage without the need for more tools than a set of tire levers and a way to put air back in your tire. This method will help you avoid a pinch flat, thus preventing you from ruining tubes.

Step 1:

- Remove your wheel from your bicycle.
- Inspect the tire by looking at it as you feel around the circumference of the tire for anything sharp or noticeable that might be where the flat occurred. If you see or feel anything, make note of this to either repair or replace it if damaged beyond repair.
- If there is a nut on your valve stem, remove it.
- Working your way around the wheel, squeeze the tire on both sides to loosen the bead of the tire from the rim.

Step 2:

- Using the valve stem as the 12 o'clock position, position your wheel so the 6 o'clock position is upright. [See Figure 1 and Figure 2](#)



- With one hand, push the tire away from you and using a tire lever, slide it under the bead and apply a downward pressure with the lever, lifting the tire bead up and over the rim and attach the end of the tire lever with the hook to one of your spokes to hold it in place. The tire should now be partially removed at that location. [See figure 3](#)

- About 4-5 inches to the left of this tire lever, using one hand, push the tire away from you to expose the bead and slide a second tire lever under the bead, pulling that part of the tube up and over the rim towards you and locking it with the hook to another spoke. **See Figure 4**
- In many cases, at this point, you will notice the first tire lever has become loosened. You can grasp the first tire lever and gently slide it along the bead in a clockwise rotation to remove the tire all the way around the rim.

Note: Sometimes, a third tire lever is needed to get the tire loose enough to remove. If you have only two tire levers, using one of them, continue to work the tire off the rim. You may find it easier to alternate which tire lever you use so the other tire lever continues to hold the tire off the rim as you work your way around the wheel.

Step 3:

- With the wheel in the 12 o'clock position (using the valve stem as 12 o'clock), leaving the tire on the rim, remove the inner tube.
- Inspect the tube, looking for the area that leaked air.
- If found, you'll be able to line up that area with the tire still in the 12 o'clock position and feel inside the tire itself for any sharp debris that might be the cause of the flat. If felt, then remove that debris.
- Then, feel around the circumference of the tire for anything abnormal or sharp and remove if necessary.
- Once you've determined there is no debris or anything poking through your tire, remove the tire completely from the rim.
- Inspect the wheel. Look at the rim tape to make sure it is covering all



Figure 3



Figure 4

the spoke holes and feel the rim itself for anything sharp.

Step 4:

- Lining up the label of the tire with the valve stem opening (the 12 o'clock position), install your tire onto the rim half way. See Figure 5



- Take your new tube put a small amount of air into the tube using your hand pump or simply blow air into the tube with your mouth.
- Put the valve stem through the opening and tighten the nut half way onto the stem (if your tube has a nut on the stem). See Figure 6



- Gently tuck your slightly inflated tube into the tire all the way around the wheel. Your goal is to seat the tube into the rim to avoid a pinch flat when you start to push the tire back onto the rim. See Figure 7
- Starting at the 12 o'clock position, making sure your tube is seated into the tire far enough to avoid pinching it, push your tire onto the rim and begin working your way around, clockwise and counterclockwise at the same time, pushing the tire onto the rim. When you get to both the 4 o'clock and the 8 o'clock position at the same time.....STOP! See Figure 8a
- You will notice that from the 4 o'clock to 8 o'clock position, your tube will not be seated into the rim. See Figure 8b If you continue, this will likely cause a pinch flat. TO AVOID THIS, follow the next step exactly...



Step 5:

- Starting at the 4 o'clock position, begin removing the tire from the rim and go all the way back to the 11 o'clock position. You will now see the tire removed from the rim from 8 o'clock to 11 o'clock. **See Figure 9** You'll notice at this point that your tube is still seated neatly into the rim, with no risk of a pinch flat. You are now ready to seat the remainder of the tube from the 8 o'clock position to the 4 o'clock position by gently seating the tube into the rim.
- Now, starting at the 8 o'clock position, working your way counterclockwise, gently seat the tube into the rim and pushing the tire onto the rim completely until both the tire and tube are seated onto the rim. **See Figure 10**



NOTE: Some tires are more difficult to work with. You may have to be patient and give it a little more effort to seat the tire. In some cases, you might find it necessary to use a tire lever to leverage the last few inches of tire up and over the rim to seat it properly. **If you do, be careful to not pinch the tube with the tire lever.**

Step 6:

- Inspect the wheel and using your hands, feel around the wheel to make sure the tire is seated properly all the way around the rim.
- Pump the tire to the recommended pressure.
- Lastly, tighten your valve (if a Presta valve) and tighten the valve stem nut all the way.
- Install your wheel on your bike, making sure the wheel is properly seated into the fork and lock your skewer (or for much older bicycles, tighten the bolts).
- Continue your ride and have fun!



Practice makes perfect! Follow this procedure a few times at home and you will have no trouble changing a flat and avoiding a pinch flat when you are out on the road, perhaps miles away from home.

Now let's ride together!

Robert J. Vano
President, Premier Bicycle Club, Inc.
www.PremierBicycleClub.org