Okay, so you—or someone before you—got replacement double-sash windows, probably 10 to 15 years ago. When they were new, they looked so pretty and were effortless to move. Now they take such work to close and latch, you don’t heave shut the windows until December and then don’t open them again until July.

The reason these windows are hard to shut is the balances have begun to fail. More specifically, the spring inside the balance has stretched and no longer has enough tension to hold the window up. When those balances begin to fail, the upper sash won’t stay where it should anymore. Instead it slides down a bit or “sags,” leaving a little gap open at the top of the window.

To fix this problem you have four choices:
1. Continue to heave the windows shut once a year when ice starts forming on the kitchen sink.
2. Replace the windows again with new replacement windows, and then again in another 15 years when the balances fail again (expect the cost to be between $500 and $1,400 per window installed. Youch!).
3. Install sash props (a piece of wood on either side of the window to prop the upper sash up into the position it’s supposed to be). This is an inexpensive and effective fix, although a trifle inelegant.
4. Replace the balances in your windows. This is harder and more expensive, but longer lasting and allows both sashes to move the way they should.

Assuming that options 1 and 2 aren’t so attractive, we will explain options 3 and 4.
How to fix a sagging upper sash

- Energy savings per decade: Up to $181 and 1,440 lbs. CO₂ per window assuming a 1/2” gap along a 30” window on the top floor

**Sash Props**
- Level of difficulty: Easy
- Cost: $4 per window
- How long it takes: 10 minutes per window
- Tools & materials: Measuring tape, pencil and paper, saw, and two lengths of ¾” lumber as long or longer than the height of your lower sash

With this task, the upper sash is propped up in position while the lower sash opens and closes as normal, allowing you to shut the lower sash easily for the winter months. It’s true that you can’t open the upper sash anymore without taking out the wood props, but you probably never opened that sash anyway.

1. Raise the top sash as high as it will go. Raise the bottom sash all the way up too.
2. On the right side of the window frame, measure the distance from the window-sill up to where the bottom of the upper sash should be—if it didn’t sag.

**Tip:** If you can, have a helper hold the upper window sash all the way up while you measure.

![Sash props prop the upper sash up into position so it doesn’t sag.](image)

We suggest 3/4” lumber for this (a square stick of lumber that measures 3/4” x 3/4”), but you can use any lumber strong and long enough to hold up the window and that fits unobtrusively in the jamb. Try finding some on Freecycle or Craigslist. It’s less expensive and it’s recycling.

**Note:** This task is easier to do with two people.
3. Cut a piece of the ¾" lumber to the length you just measured. If in doubt, make the piece a tad longer, because you can always cut it shorter. This will be the prop you use to hold up the sash in position.

4. After cutting, push the upper sash into the position it should be in if it didn’t sag. Push the prop into place in the jamb (the channel that the sash slides up and down inside of). To do this, first put the top end of the prop under the corner of the sash, then slide the bottom end of the prop into place along the sill. You might need to lightly tap with a hammer to get it in. If it’s too long to fit, cut off a little and then check again.

5. Repeat Steps 2 through 4 on the left side of the window.

Replacing the Balances
- Level of difficulty: Difficult
- Cost: $4 to $100 per balance depending on weight and type of window
- How long it takes: An hour to remove the balances, a week to get the parts, an hour to replace the balances
- Tools & materials: Flathead and Phillips screwdriver, vice grip or channel lock wrench, camera, pen and paper

Note: This is probably a two-person job.

Contact the window manufacturer to see if they have the replacement parts for your window model. The model and window manufacturer company can sometimes be found on the window latches. You’ll also need the window size along with the model number. They will be in a small, almost imperceptible triangular etching on the glass in the corner of the window sash. Write down the etched numbers to give to the manufacturer or parts supplier.

If the manufacturer doesn’t know what kind of balances you need for that model, your first step is to pull out the balances to describe them.

Replacing tube balances on most vinyl replacement windows

1. First take the bottom sash out of the window:
   - Slide the sash up a couple of inches from the windowsill.
   - Holding the sash firmly so it doesn’t fall, depress or slide the buttons or thumb latches on either side of the top of the sash in order to click the top part of the sash out of the window frame (the way you would to clean the inside of the window).
   - Once the sash is parallel to the floor, delicately lift one side so that the bottom of the sash on that side an-
gles up and unseats from the window frame.
* Keeping the sash at an angle, pull the sash out of the frame.

2. In the same manner, remove the top sash. Only this time in step A, slide the sash down a few inches instead of up.

3. Vinyl replacement windows will have a plastic faceplate covering the metal balances on either side of the sash or on the inside of the window channel. Gently remove the plastic faceplate by inserting a finger or screwdriver at the bottom and prying it away from the jamb.

4. Inside you’ll see a long metal balance (typically it looks like a long tube with a spiraled twisty piece of metal coming out of the bottom). Look to the bottom of the balance. There you will see the cam lock (the hardware the sash uses to click into the window frame).

5. If the balance is simply un-sprung and unattached to the cam lock, the balance may not need to be replaced. In this case:
* Push the spiraling piece of metal back into the tube.
* Use a vice grip or regular channel-lock wrench to hold the spring-loaded tip of the balance, while you re-seat the bottom of the balance back into the cam lock.
* If the balance on the other side of the sash looks fine, then reinstall the plastic faceplates over the balances, reinstall the sashes and you are done. The window should be fixed. Re-install the sashes to check if either still sags.

6. If the balance on either side of the sash or the cam lock to which it is attached is broken (usually the balance or cam lock is clearly damaged), then you have to replace the balance and/or cam lock.
a. Take a vice-grip or pliers, and while holding the spiral piece of metal securely a couple inches from the bottom (remember, it is spring loaded), gently remove the bottom of the balance from the cam lock and allow it to slowly retract into the tube (unloading the spring).

b. When the spring load is unloaded, remove the top of the balance from the top of the window frame.

c. Measure the diameter and length of the balance tube and photograph it. Be sure to measure both the length of the unextended and fully extended balance. Measure the height and width of the visible glass in the sash. Taking and giving detailed measurements is critical because there are many types and sizes of tube balances and they relate to the size of the window.

d. If the cam lock is broken, you’ll have to take detailed pictures of it as well for replacement. Repeat steps A through D for the other side of the window sash.

e. Provide this measurement information, along with the window identification information on the glass etching when you call the manufacturer and/or supplier to request the replacement parts.

f. While you’re waiting for the new parts, you can put the window sashes back in place. Have a second person firmly hold the upper sash in place until you can get the lower sash in place and use the window latch to lock the window shut. Without the balances in the side, the upper sash will fall like a rock as soon as you let go unless it is locked securely in place. Tape a big note on it saying, “Don’t open window. Broken.”

g. If the manufacturer doesn’t make the balance anymore or if they have gone out of business, visit Blaine Window (708-345-8400.). They carry a lot of older window parts, and re-manufacture those parts they think people are going to need.

Once the new balances and/or cam locks have been delivered, reverse the above steps to reinstall the balances and/or cam locks.

**Note:** The tube balance must be spring loaded before it is newly installed. Otherwise, it will not hold up the sash. The cam locks typically screw into place.

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Thanks to Bill Donaldson for these directions.

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