

A Stand-up Egg

Raw, raw, raw!

When placed on a tabletop, an egg naturally orients itself with its “long-axis” parallel to the surface of the table. However, with a little seasoning, you can make an egg appear to “stand-up” with its long-axis vertical to a table’s top.



Materials:

- A raw egg
- Some salt
- A hard flat surface



How to do it:

1. Pour a small pile of salt on a flat surface.
2. Place the egg on top of the pile of salt with its longer-axis pointed up.
3. Gently rock the egg back and forth until it feels stable in its upright position.
4. Let go! Your egg should remain standing!
5. Carefully blow the extra salt away from the base of the egg.
6. Check out your egg’s egg-citing new position!



What’s going on?

Everything has a center of gravity, eggs, even you. The center of gravity or “cg” of an object is a point where an object balances left and right, top and bottom, and backwards and forwards. To have something be “free standing”, its cg needs to be positioned directly over it’s base of support. Your cg is located inside your body near your belly button. The center of mass of an egg is located inside itself too.

Just like an egg, you have an easier time lying flat or horizontal on the floor to stay balanced.... you can even fall asleep in this position. This is because your cg is located close to and over a very big base of support (i.e. your back). If you were to stand up on one foot, your center of mass is further from its base of support (your foot) and you’ll have a tougher time balancing yourself because it’s such a small area to keep your cg directly over. Two feet make a bigger base and make it easier for you to stand upright. In the case of the egg, it is much more unstable when upright. Table salt is made of small little cubes. By placing the egg on the salt, you give the egg something to lean against (the salt grains). This, in effect gives your egg’s cg a larger base of support to rest over. This wider base helps keep the egg standing.

This trick is so cool because, your new wider base, created by the small salt grains are hidden under the egg. People don’t notice the grains, which makes the egg appear to be doing something that it shouldn’t be doing.

