

HOW TO SHARPEN KNIVES

Cutting edge

There are two bevels to a cutting edge. The primary edge has an included angle of 20 to 30 degrees. The secondary angle is a few degree larger. Sharpening usually involves only sharpening the secondary angle. After repeated sharpening the secondary angle becomes so steep that the primary angle must sharpened to a smaller angle.

A sharp edge may becomes dull from normal cutting use. Often a sharp edge is dulled by contact with a hard object such as a bone, another knife or other hard surface. Contact with a hard object will bend over the sharp edge . A bent sharp edge will be shiny when looking directly at the edge under a bright light. A sharp edge doesn't reflect light. Using a sharpening steel or another knife blade the bent edge can be straightened. by pushing the edge backward across the steel, and bending the bent edge straight. This requires pressing the knife against the steel using moderate force.

If the edge is still not sharp metal must be removed from the secondary angle of the edge. This can be done with a butchers steel , metal file, whet stone, abrasive paper, etc. The butchers steel will remove metal the same way a file does, it cuts the knife's steel removing small shavings of steel. It may require considerable pressure to get the steel to cut the blade. If you can't remove metal the steel is too worn or other wise not sharp, as is the case with cheap steels.

The butchers steel, metal file, and coarse whet stone, will create a cutting edge that is rough and jagged when viewed under magnification. Butchers prefer this edge as it can be quickly re sharpened and it cuts meat quickly due to the saw like edge.

Usually a butchers steel is not needed to sharpen a kitchen knife . Use a medium whet stone instead. The cutting surface of a whet stone becomes dull with repeated use. Small particles of steel and worn abrasive fill in the small spaces between the sharp points of the particles that make up the cutting surface of the whet stone. Sharpness may be restored by using another hard object to grind away the worn surface. A diamond plate is quick and easy. Abrasive paper works . I have used the sidewalk or a cement block. Keep rubbing until the whet stone has a new surface. You can feel the difference when sharpening, there is more resistance when pulling the blade over the stone. Some use kerosene or light oil float the particles of steel off the whet stone when sharpening. I prefer soapy water, especially in the kitchen. Not only does the water help keep the particles floating, but the soap or detergent keeps the particles separated. This makes it easy to keep the whet stone sharp by rinsing the particles away.

Sharpen the blade by rubbing the cutting edge on the whet stone. Lay the blade flat then raise the back of the blade about 1/8". Lubricate the stone and with moderate force push the blade on the stone. Use a cutting action as though peeling a carrot. Rub on one side until a burr of bent steel is formed on the other side of the blade. The burr will be formed

when one half of the old blunt edge has been removed. Turn the blade over and repeat until a burr is formed on the other side. The burr is removed by lightly robbing each side until the burr is gone. A small fine burr can be removed by cutting across the grain of a piece of soft wood.

This edge is quite good. It can shave the hair on your arm, but don't try to shave your face. This edge can be made even sharper by going to finer and finer abrasives. For kitchen knives I use a medium stone followed by using a strop charged with polishing compound, or jewelers rouge. Three or four swipes on each side will further sharpen the tips of the jagged points left from the medium stone. This edge also has a sawing action, helped by the very sharp tips.