

## Sharpening 101 part 2

The last article we talked about the type of edges and their intended uses, in this one I hope to explore a few ways to sharpen a blade. There is many ways to skin a cat and same applies here. There is no one way to get a sharp blade so Ill explain some of the ways I do it and have done it in the past and why I don't anymore. Remember just because you might not do it this way doesn't mean I think it's wrong.

Firsts let's look at what is sharp and when is it sharp enough. As a custom knifemaker I try to fill the needs of the customer and the intended purpose of the knife was made for. A chopping style knife like a camp knife doesn't need to be as sharp and as honed nor would it be good for it to be as sharp as a chef knife. Wood and rope cutting takes a different edge as slicing a tomato and if you read the first article you should have somewhat of a idea the type of edge needed for specific tasks. As with each style of blade and blade edge are made for different purposes, so does each need sharpened slightly different. I prefer a more aggressive toothier edge for general purpose knives, much of what I may refer to is really only noticed by sight under a microscope and by feel in use so some imagination here is needed or if you really want to explore it, find a 10\$ 100x battery operated microscope at radio shack and have a look see for yourself at the edge of various blade edges, dull to sharp.

To me a knife is sharp when it easily cuts what its intended to cut and that IS sharp enough, often times going past that is just spinning your wheels or for parlor tricks. I once made a knife so sharp on purpose that simply slapping the face of a piece of paper left a slice in middle of the paper, and then a rolled a single newspaper sheet into a tube being careful to not double it up, stood it on end and cut in a single swing into and left the bottom half on the table. Impressive? You bet, scary sharp, and a hell of a impressive trick but it wouldn't hold that edge for very long using it for much else then paper or vegetables. But I had made that knife just for that purpose, why I bet you ask? Simply to see if I could make a knife do it. So the result is if it's sharp enough to do the job it's intended for and do it easily without a lot of force or pressure (think safety here) then its sharp.

The old stand by of testing for sharpness is shaving hair, Ill tell you right off that that is more parlor trick then indication of sharpness. A dull or rolled edge will still shave hair but lay into something like leather and one sometimes quickly notice it doesn't easily slice the leather and sometimes gets worse as you go. Not to say I haven't or don't shave my arm hair, there is constant patch of hair missing on my left arm, this may seem contradictory to my previous statement but I do it more to feel how much pressure it takes to shave hair, very light pressure tells me I'm getting close to where I want to be to BEGIN the sharpening process but use caution. I know of one instance at a knife show where someone picked up a knife off a table to "test for sharpness" and not knowing how sharp the maker's knives were he filleted 3 inches of skin off and was taken to the hospital. Most often I like to test the edge on what its use is for be it leather or what have you. Paper is another indicator, slicing paper especially thinner paper like a newspaper or even tougher cigarette paper is a good indicator as a dull blade will want to fold it over rather then slice it and if you have to slice very close to where your holding the paper to get it to slice means its still not as sharp as it could be.

Another thing I look at for sharpness is sighting down the edge of the blade edge up and look for glint of light reflecting right of the very edge, this shows sign of a rolled or flattened edge. It'll take some practice to see but once you do you'll know it right away. Just sight down the edge with some light above and to one side a bit or another, sunlight works best I have found.

Now that we have touched on that lets take a look at the edge angle, this is almost as critical as the heat treat of the steel, which is the soul of a blade. Most is not all blade edges are from 15 to 25 degree of angle relative to the spine. 22 is what most factory knives come in, and most come dull, not just dull but very dull, fact is I haven't seen a single factory blade of any type, knives, razors, axes, chisels or leather tools that I felt didn't need sharpened to some degree or another. The reason they come like this is, one the factory assumes you know this already or two that if you don't know this, then a super sharp blade shouldn't be in your hands to begin with. Here is a list of the degree and intended uses.

15 to 17 degree is where your fillet and kitchen knives as well as lot of razors are angled at. Very scary sharp but at a price, not a lot of steel behind the edge to keep it sharp with hard use also generally easy to hone back or simply use a steel to straighten the edge back and its ready to go again.

17 to 20 degree is where you'll find the best all around edge for cutting and slicing. I find 19 to be the optimum area for my knives but it requires very good steel and a high performance heat treat for edge holding ability.

20 to 25 degree is where most factory blades are set, they will get sharp, sometimes it takes some work to get then real sharp but tend to hold the edge well once one is, as there is a lot of steel behind the edge. Also a less controlled heat treat of the steel (mass produced) can be gotten away with at this angle. Anything above this is into cleaver, axe hatchet area depending on the type of grind as discussed in previous article. Probably most head knives as well which id like to discuss at some point fall in the 20 degree and up area.

A good trick to figuring and keeping the angle when hand honing is using coins, stacking coins on your stone and laying the spine on the edge of the coins. For instance on a knife if you have a knife blade that's 1.25 inches wide and .25 thick at the thickest part of the spine then the gap from stone to bottom of spine should be 0.282 inches which can be converted to 3 dimes and 2 pennies stacked up. A head knife would be a big different to the radius of the edge but a rough starting point for the front of the head knife could be if 3 inched wide and .25 thick with say 21 degree would come out to 0.95 of a gap or 6 quarters and 7 nickels. If anyone wants to try this and wants the coin stack figured just let me know id be glad to do it. In the next part we will get to the actual sharpening techniques I use and know about as well as some of the tools and gadgets will be discussed.

Until then keep a light rein, a foot on each side and a far away look