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Cooperative Extension Service
North Dakota State University
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544.3
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A8
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WHEN YOU BUY KNIVES

A few well chosen, good quality and well-cared for knives are a wise investment. As a master craftsman finds good tools necessary, so the homemaker who accomplishes her many tasks with a minimum of time and effort needs good tools in her kitchen. Good knives help to make meal preparation go smoothly and easily.

In shopping for knives you will find few have informative labels. It is difficult to determine the quality of material in a knife blade just by looking at it. However, good construction is a guide to quality. As you shop, ask the salesman for information. Keep these factors in mind:

- Size and shape to suit purpose
- Well balanced and comfortable to hold
- Well constructed and of good materials

KNIVES ARE DESIGNED FOR SPECIFIC PURPOSES

Knives vary in length and shape of blade and each has its purpose. Shapes and sizes to suit any cutting task are available. To make the job easier, reach for the knife best suited to it.

- **PARING KNIFE** — Blade 2" to 3" long, varies in shape. Indispensable for many kitchen chores - peeling, removing eyes from vegetables, pitting, etc.
- **UTILITY KNIFE** — Blade 5" to 7" long. Used when paring knife is too small. Good for trimming and slicing tomatoes and fruit and for boning meats, fish and fowl.
- **CARVER** — Blade is 8" to 9" long. It is stiff with a comparatively straight back edge and a curved point on the cutting edge. It is used for carving meat or fowl.
- **SLICER** — Blade is 8" to 9" long, narrow and flexible. It is especially suitable for slicing boneless meats and cheese. Its narrow blade does a better job on cold meats, while the wide blade of the carving knife is preferred for hot meat.
- **BUTCHER KNIFE** — Blade 6" to 8" long, is heavy, broad and stiff. Cutting edge is curved and point is sharp. Good for heavy cutting tasks such as large pieces of meat, heads of cabbage, melons and squashes.

- **FRENCH COOK KNIFE** — Blade 8" to 9" long. Heavy, rigid, broad blade, tapered to slightly curved point. Used for slicing, mincing or dicing tasks. It is designed with plenty of space for knuckle clearance.
- **BREAD KNIFE** — Blade 7" to 8" long, is broad, thin, long and fairly rigid. Finely serrated cutting edge or a scalloped edge is desirable. For slicing bread and cakes.
- **FRUIT KNIFE** — Blade 4" long, serrated on both edges and slightly curved to aid in cutting sections and core from citrus fruit.
- **VEGETABLE PEELER** — Has short, swivel blade.

SELECT KNIFE HANDLES WITH DISCRIMINATION

Look for these points in the knife handle:

- Way handle fits the blade
- Way handle is fastened to the blade
- Shape and size of the handle
- Way it balances with the weight of the blade
- Material resistant to water and food

Common materials for handles are wood, hard rubber, laminates or plastics. Wood should be fine grained and finished to a smooth, hard surface that will resist food and moisture. The handle should fit snugly around the blade, with no crack where food and dirt will collect.



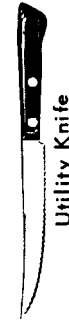
TANG

The tang is the section of the blade that runs back into the handle. The tang can run clear back through the handle or only part way. Handles are made in one or two pieces. Either is satisfactory if the blade is solidly attached with two or three large rivets. Make sure the tang extends at least half way into the handle. Shortening the tang affects the weight and balance of the knife. Avoid a knife in which the tang has been pushed into the handle and fastened with a small nail, brad or metal collar.

The shape and size of a handle is a matter of individual preference. Select one that is comfortable in your hand. A too small handle cramps the hand.



Paring Knife



Utility Knife



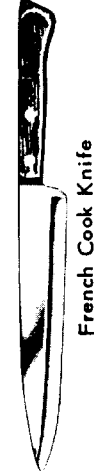
Carver



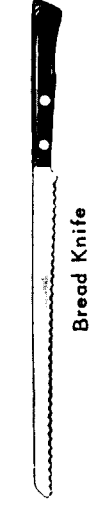
Slicer



Butcher Knife



French Cook Knife



Bread Knife



Fruit Knife

SELECT A WELL SHAPED BLADE OF GOOD MATERIAL

Steel used in knives differs from ordinary steel in being free from impurities and containing a high percentage of carbon to toughen and harden it. Tempering is necessary to give steel enough resilience to withstand side strains. Under extreme pressure a knife properly tempered will bend without breaking and then return to its original straight line.

While high-carbon steel takes and holds a sharp cutting edge, it stains easily and will rust. To make stainless steel, part of the carbon in the steel is replaced by chromium. It must be just the right amount of chromium or the stainless steel will not hold a keen edge. Most quality blades are made from high carbon steel or from stainless steel. The highest quality cutlery is made from an alloy steel such as chrome vanadium.

Sometimes steel is plated with chromium so that the base metal is exposed only at the cutting edge. If the chrome is removed or scratched through careless sharpening or storing, the blade may rust or tarnish where the steel is exposed.

BLADES ARE MADE BY FORGING, BEVELING AND STAMPING

Forged blades are made by heating round or flat pieces of steel to a high temperature and shaping them in forging dies with a drop hammer. A forged blade tapers from the back to the cutting edge and from the handle to the point. Blades are tempered by controlled heating and cooling. Because forging requires skilled workmanship, forged blades are relatively expensive. However, they give long service.

Beveled blades are stamped from a metal bar, thicker in the center and tapering to the sides. Two blades back to back are cut at one time. These blades taper only from the back to the cutting edge. Many good medium-priced knives have beveled blades.

Stamped blades are cut from sheets of metal. Stamped blades are uniformly thick, except for about 3/16 of an inch at the cutting edge. Blades stamped of fairly high-carbon steel give good service.

GRINDING AND FINISHING THE BLADE

All blades, whether forged, beveled or stamped, must be ground to give the proper taper from back to the edge and from the handle to the point. A well ground knife is flexible at the point and stiffer near the handle. The method of grinding determines both its sharpness and its durability.

The hollow grind is one in which both sides of the cutting edge are ground away as in a straight-edged razor. Then the blade is sharply beveled to the cutting edge. The edge stays sharp but, because of the thin edge, it is easily

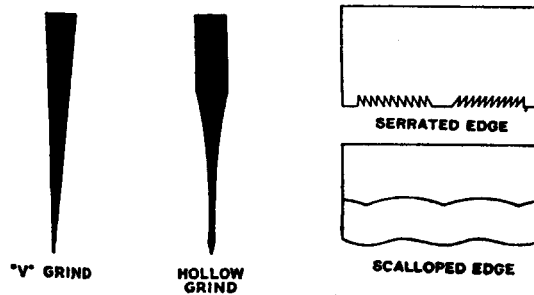
damaged. When sharpening a hollow ground blade, hold the blade off the stone so that the chrome shoulder is free. Let only the cutting edge touch the sharpening stone.

The flat grind, also called the "V" or taper grind, is a long, even grind from top to bottom with no curvatures. It is the simplest and least expensive grind, but blades ground this way need frequent sharpening. A flat grind knife is used for heavy work. In sharpening a blade of this type, be sure to sharpen well back from the cutting edge, from 1/8 to 1/2 inch. This will maintain the original thin edge.

Knives may also have a scalloped, serrated or saw-tooth edge which offers special advantages in certain cutting jobs and holds its keenness indefinitely.

Finishing is primarily the removal of all grinding marks to give a clear "mirror finish" or, where desired, a frosted finish. While it is impossible to recognize the quality of steel by the grind or finish, manufacturers who devote particular care to these features generally use only the highest quality steel.

DIFFERENT KINDS OF GRINDING



CARE OF KNIVES

- Wash knives separately, not piled in pan with silverware and utensils. Do not leave knives standing in hot water.
- Do not use a knife as a pancake turner, nor subject it to the heat of a flame. The heat destroys the temper in the steel.
- Store knives in slotted holders, partitioned drawers or magnetic holders designed to keep sharp edges from being dulled by contact with other objects.

544.3
A8
no. 450
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- Use a cutting board for dicing and chopping, never a metal or tiled surface.
- Use the knife best suited to the cutting task at hand.
- Never use the cutting edge of any kitchen knife to pry off bottle caps, lift tacks or whittle wood.
- Do not try to crack or cut hard bones with a knife. Use a cleaver instead.
- Keep the cutting edge of knives sharp by frequent stroking on a steel or fine stone. Sharpen knives before the edge has worn off. On the market today are many mechanical knife grinders which are easy to use. You simply draw the blade through them. Electric grinders act on the same principle. Sharpening is accomplished by two abrasive wheels which hone simultaneously at exactly the same angle on both sides of the blade edge.

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