

Veal and Lamb

VEAL IS THE MEAT of the very young calf, and lamb is the meat of very young sheep. Veal and lamb are comprised of mostly tender meat cuts and are expensive. It is essential to know which cuts are tender and which are tough. This is the key to preparing excellent meat dishes, such as the veal chops pictured here.



Objective:



Analyze the veal and lamb primal cuts and recommended cooking methods.

Key Terms:



breast	gremolata	retail cuts
breast-foreshank	gyro meat	rib
carryover cooking	hindshank	shank
chuck	lamb	shepherd's pie
collagen	leg	shish kebab
combination cooking	loin	shoulder
connective tissue	moist heat cooking	silverskin
consommé	mutton	sirloin
dry heat cooking	neck	stock
elastin	offal meat	trussed
fabrication	osso bucco	veal (veau)
flank	primal cuts	veal scallopini
foreshank	rack	wiener schnitzel

Veal and Lamb Primal Cuts and Cooking Methods

Veal and lamb are highly desired meats for various recipes. The results, however, require attention to detail and the proper cooking methods for the various cuts of meat.

VEAL

Veal is a desirable, expensive, and very specific type of meat.

Veal Primal Cuts

Veal (veau) is the meat of the calf when it is killed at two or three months of age, as that is when it is most tender. In some cases, calf meat from animals of less than one year of age is labeled as veal. Calves intended for veal harvesting are fed milk exclusively, with some eggs added near the end of the feeding cycle. This prescribed diet ensures that the flesh remains white to faint pink in color. Any reddish color indicates that the calves were fed solid food. After being harvested, the organs and blood are removed. The bodies are allowed to relax for 48 to 72 hours before butchering begins by cutting the animals into primal cuts. Foodservices may order veal in hindsaddle, hindquarter, or forequarter cuts before it is divided into primal, subprimal, and portion control cuts.

Primal cuts are major cuts of meat. For veal, the primal cuts are leg, loin, rack, chuck, and breast-foreshank. Primal cuts are broken down, or fabricated, into smaller cuts of meat called retail cuts. **Retail cuts** are pieces of meat ready for sale to diners or to the public. **Fabrication** is the process of cutting or trimming primal cuts into smaller or differently shaped pieces than those of the primal cut. Sometimes roasts or other larger cuts of veal are **trussed** or tied before cooking to ensure even cooking.

Veal Characteristics

Veal is quite mild in flavor and is prized for its tenderness. Its delicate flavor adapts well to numerous sauces and seasonings. Much of the calf is quite tender, as the animal has not lived long enough to develop or toughen its muscles. The meat varies in color from white to light pink (similar to pork) rather than the rich red of a full-grown cow. Regardless, connective tissue exists in all land animals, and these areas may be tough despite the age.

Connective Tissue

Connective tissue is a fibrous material that supports the structure of body tissues and may surround organs. It separates major muscles in the animal and sometimes runs through the muscle. Connective tissue is of two primary types: collagen and elastin.

- ◆ **Collagen** is a fibrous protein found in bone, cartilage, tendon, and other connective tissues that give connective tissue rigidity. When cooked, collagen produces gelatin, usually through long, slow cooking with moisture. The primal cut and the amount of connective tissue in each fabricated piece of meat directly impact the preferred cooking methods.
- ◆ **Elastin** is a protein that coils and recoils within the connective tissue and accounts for the elasticity of structures (e.g., the skin, organs, and ligaments). Elastin does not become tender no matter how or how long the meat is cooked. **Silverskin** is a type of elastin; it

has a very tough shiny and silvery membrane that surrounds most individual muscles. The silverskin membrane will not become tender and is removed before cooking.

Veal Cooking Methods

Cooking methods vary based on the cut of meat and the desired results.

Dry Heat Cooking

Dry heat cooking is preparing food via baking, roasting, sautéing, frying, broiling, or grilling. This method is typically used on tender cuts with minimal connective tissue. Special care is taken to avoid overcooking veal because it is quite low in fat, so overcooking results in a dry and tough product. Lean veal with minimal connective tissue is typically cooked to a medium stage of doneness. Care is taken to pull meat from the heat early enough so “carryover cooking” does not negatively impact its tenderness. Rare veal is cooked to 130°F, and medium veal is cooked to 140°F.

Carryover Cooking

Carryover cooking is the additional cooking that occurs after removal of the meat from the heat. It occurs because the residual heat within the meat continues the cooking process. Additionally, lean cuts are commonly marinated to add flavor and moisture before cooking, particularly when high heat is used (e.g., grilling and broiling).

Moist Heat Cooking

Moist heat cooking is preparing food via boiling, steaming, poaching, and other methods that include liquid in the cooking process. Cuts that contain collagen are typically cooked with



FIGURE 1. The elastin in this veal shank meat is the “white lines” visible on the surface of each piece.



FIGURE 2. Tender cuts of veal are best cooked with dry heat methods—grilling, broiling, roasting, baking, and frying. This grilled center cut veal chop is served with sautéed onions and mushrooms.

moist heat techniques. In moist cooking, the tissue breaks down due to the long, slow cooking. The moisture creates an exceptionally tender and flavorful meat dish. When moisture is used in a long, slow cooking process, the meat will be “well done” in terms of temperature, but it is ultimately required for the meat to become tender.

Combination Cooking

Combination cooking is the use of two or more cooking methods—a dry and a moist method. Stewing and braising are the most common forms of combination cooking. For example, when stewing, meat cubes are seared to brown the outside of the meat (dry heat) and then are simmered in a flavorful broth (moist heat) to tenderize.

Veal Primal Cut Fabrication and Dishes

Making a traditional dish requires the proper cut of meat.

Leg

The veal **leg** is the back end and hind legs of the young cow fabricated (cut or butchered) into top round roasts, steaks, sirloin roasts, and steaks. Roasts and steaks from the leg are best when cooked using dry heat methods (e.g., roasting, grilling, baking, and broiling). The lower part of the veal leg is the shank.

- ◆ The **shank** is a cut of veal that is the basis for the classic braised veal dish “osso bucco.” Braising is a desirable cooking method for the shank, as it adds color and flavor by browning the meat before the slow, moist cooking process tenderizes it.
- ◆ **Osso bucco** (literally translated from the Italian as “hole in the bone”) is a Milanese dish made from crosscut sections of the veal shank (shin) cooked in wine with vegetables and topped with gremolata sprinkled over the dish just prior to serving. **Gremolata** is a condiment of finely minced parsley, garlic, and lemon zest and sometimes anchovy fillets. Osso bucco is typically served with a risotto side dish flavored with butter and sprinkled with Parmesan cheese. An interesting part of this dish is that the marrow inside the bone is exposed and eaten along with the meat, or it is spread on toast or bread as “butter.”



FIGURE 3. Braising veal shank creates a tender and rich meat in a brown sauce.

Loin

The **loin** is an area of the veal carcass with a reasonably low fat concentration. It is fabricated into loin chops, roasts, and short tenderloin. The loin is immediately forward from the

rear of the calf, after the legs. Loin meat is rich and tender. It is prized for its cooking versatility. Roasts are commonly trussed from one end to the other to keep the meat uniform in size and to promote even cooking. Overcooking must be avoided when using dry heat methods. Classic dishes from the loin are exceptionally tender and quick, including veal scalloppini and wiener schnitzel.

- ◆ **Veal scalloppini** is an entrée in which cutlets (thin slices) are pounded thin, seasoned with salt and pepper, dredged in flour, and sautéed in butter. After sautéing, the cutlets are typically served with a simple pan sauce.
- ◆ **Wiener schnitzel** is an entrée in which thin cutlets are gently pounded, dipped in egg, coated with breadcrumbs, and quickly fried on both sides in butter.



FIGURE 4. Wiener schnitzel is a thin and breaded veal cutlet. It is typically cut from the loin section.

Rack

The **rack** is the top middle section of the calf. The middle and front sections of the calf are comprised of three primal cut areas: two side-by-side areas on top and one below. Fabrication of the rack primal cut results in ribs, rib chops, and rib eye steaks. The chops and steaks are prized for their richness and tenderness; they are the most expensive retail cuts from calves. As with all rib cuts, veal rib cuts can be tough. As a result, they require moist or combination cooking.

Chuck

The **chuck** is the primal cut immediately next to the rack when moving forward on the animal. Chuck primal cuts are fabricated into chuck blade roasts and chops and into bone-in and boneless roasts. Some butchers consider the rack as one large cut that includes the chuck region.

Similar to the cow, the chuck area tends to be tough because it contains connective tissue (though not as much as that of a full-grown cow). Meat from this area is ground or cooked with moisture to tenderize it. **Shepherd's pie** is a classic veal chuck dish in which the meat is stewed, covered with a crust of mashed potatoes, and baked. It is a common way to use minced, chopped, or ground veal bits.



FIGURE 5. Shepherd's pie is a classic veal stew with a mashed potato crust.

Breast–Foreshank

The **breast-foreshank** is a primal cut that includes the front legs and the front underbelly of the calf (virtually up to the neck). This area of the calf carries the bulk of the animal's weight, toughening the meat, and requiring virtually all of these retail cuts to be marinated and/or cooked with moisture to tenderize.

The breast-foreshank cut creates a wide variety of retail cuts, including the brisket, breast, short ribs, flank, additional chuck meat, and the remaining two shanks. Veal breast stands out as a cut atypical of a beef carcass. It commonly has a “pocket” cut into it, separating the meat from the cartilage. The pocket is stuffed with sage dressing before cooking. The moisture of the dressing tenderizes the veal breast.

Veal Internal Organs and Bones

The internal organs are all edible and are often termed offal meat. From calves, **offal meat** is brains, kidneys, liver, etc. (In general terms, offal meat includes the horns, skin, feet, tail, head, tongue, intestines, and pancreas.) These organ meats are high in fat, and all are best cooked using dry cooking methods (and minimal moist cooking options).

Veal bones offer no edible meat, but they are prized for the high-quality stock they produce. **Stock** is a flavorful liquid produced by simmering the bones with water, herbs, and vegetables. Veal stock is the basis for superior sauces, and the best **consommé**—a rich and clear broth (soup).



DIGGING DEEPER...

UNCOVERING ADDITIONAL FACTS: Farming Cruelty and Veal

Millions prize veal for its delicate flavor and melt-in-your-mouth texture, but it comes at a price. Veal may be baby cow, but the tender nature of the meat is not simply based on age. It is truly based on how the animals are allowed to live their short lives before being harvested.

The whitest meat occurs when the animals are kept on a milk-fed diet, and this diet is incompatible with the nutrients needed for normal growth and development. Iron is kept from the diet, thereby promoting tender meat. However, this starves the animals. As a result, the organs, brain, and bodily functions are affected, as are the muscles (the meat).

More troublesome is how the animals are caged. The tender nature of veal is promoted by keeping the calves in upright crates or units that prohibit movement. The muscles atrophy, keeping the flesh tender—but torturing the young animals. As the calves suffer, so do their mothers. They are distressed as the calves are removed at birth (in most cases). Normally, the calves would suckle for a year, developing the mother-calf bond.

Some countries have yielded to public pressure and have passed laws requiring more humane treatment of calves, but many have not. What can people do about it? Learn more about how calves are farmed and what people can do at <http://www.peta.org/issues/Animals-Used-for-Food/veal-a-byproduct-of-the-cruel-dairy-industry.aspx> and http://www.ciwf.org.uk/farm_animals/cows/veal_calves/welfare_issues.aspx.

LAMB

Lamb is a popular choice in many formal U.S. dining establishments and in homes across the globe. **Lamb** is young sheep (less than one year old). In culinary terms, lambs are of two types: milk-fed and those up to the age of 12 months. At 12 months, the lamb becomes a sheep. **Mutton** is the flesh of a mature sheep between 12 and 18 months old. After harvest, the meat is aged (rested) for 48 to 72 hours before fabrication. Aging or resting tenderizes the meat.

Lamb Primal Cuts

Primal cuts are leg (hindshank and foreshank), sirloin, loin, flank, rib, shoulder, breast, and neck.

Lamb Characteristics and Cooking Methods

Lamb is a good source of protein and B vitamins. It is rich in flavor and can be quite high in fat, depending on the cut. The meat is rich and dark red in color. Mutton contains zinc, iron, potassium, and phosphorus. According to recent reports, selenium and antioxidant contents are also found in high quantities in mutton.

Lamb (less than one-year-old sheep) is the most valued because of its delicate flavor and tenderness. Most lamb is of such good quality that little seasoning or marinating is necessary. Excessive (long) cooking makes lamb flesh dull, dry, and tough. In contrast, mutton has a stronger flavor than lamb. Many preparation techniques seek to mask the tangy flavor of mutton with seasonings and herbs (e.g., garlic, fennel, ginger, rosemary, and juniper berries). Marinades add flavor and tenderize mutton by breaking down the connective tissue.

Sheep fat congeals (thickens) quickly as it cools; lamb and mutton dishes are served hot immediately and on preheated plates. As with veal, lamb should be served rare and should be cooked to no more than a medium degree of doneness. Lean lamb is cooked with dry heat. In contrast, lamb and mutton with high levels of connective tissue are cooked with moist heat. The same is true for lamb offal meat.

Lamb Primal Cut Fabrication and Dishes

Being familiar with cuts of meat and how to prepare them properly is essential for success in the kitchen.

Leg

The **leg** is a primal cut beginning from the top rear of the lamb about one-quarter of the way into the animal and about two-thirds of the length of the leg. Leg of lamb is relatively lean and is prized for its superior flavor. It is best when roasted or spit-roasted. Leg of lamb could be baked or grilled, but slow roasting is the preferred method. Leg of lamb can be fabricated into smaller pieces, but it is typical to use the entire primal cut for retail cuts. **Shish kebab** is a dish prepared from boned and cubed lamb leg meat marinated, skewered, and grilled or

roasted with peppers, mushroom caps, pearl onions, and fresh tomatoes. Shish kebab is perhaps the most famous lamb dish.

The **hindshank** is the area of the lamb below the area considered the “leg” and leads down to just above the hoof. Lamb shank is tough. It is filled with connective tissue and is best braised, though any method that includes moist heat will tenderize the cut. Braising adds color and flavor by browning the meat first and then applying slow, moist cooking to tenderize it. The **foreshank** are the front leg sections and are identical in flavor and cooking requirements to the hindshank.

Sirloin

The **sirloin** is located forward of the leg and shank cuts; a rectangular primal cut that extends from the top of the animal (when standing) down to near the rear underbelly. Sirloin is boneless. It is rich in flavor and has enough fat for dry cooking methods, specifically grilling and roasting. Steaks and chops are cut from the sirloin. Some butchers consider this area part of the leg, particularly on smaller lambs. In that case, additional meat is provided on the whole leg.

Loin

The **loin** is tender boneless meat from the top section of the animal located next to the sirloin. The loin has minimal fat, and cuts are best cooked by dry heat (e.g., grilling and roasting). Typical retail cuts are loin roasts and loin chops.

Flank

The **flank** is a primal cut located beneath the loin (and sirloin); the rear underbelly. This area is stringy and quite tough. It can be sold whole as a retail cut or as ground meat. The entire flank primal cut requires braising or some other moist cooking method to sufficiently tenderize it.

Rib

The **rib** is a primal cut on the back and top of the animal. The rib cuts are somewhat fatty and are rich in flavor. This section is prized as the source of classic rib chops and the famous rack of lamb—the entire rib section curled around and pinned into a circle with the rib tips on top or interlaced. The rib area provides some of the most expensive cuts on the lamb, and the meat is ideal for broiling or grilling as chops and roasting as a rack of lamb. Dry heat is the preferred cooking method.



FIGURE 6. The rib primal cuts are some of the most expensive cuts on the lamb. The meat is ideal for broiling or grilling as chops and roasting as a rack of lamb. Dry heat is the preferred method of cooking.

Shoulder

The **shoulder** is a cut located next to the rib area and below the neck. Unlike most land animals, the shoulder contains fairly tender meat and can be cooked using dry methods (e.g., grilling and roasting), though some prefer to braise the shoulder. Since the animal is young and small, the shoulder muscles are not well developed, keeping the meat quite lean and tender. The shoulder primal cut may be boned and rolled into a roast or stuffed and then rolled. Steaks and chops are cut from the shoulder, but they are of lower quality than loin or rib chops.

Breast

The **breast** is a cut located beneath the shoulder and the rib; the front underbelly. This area contains a lot of cartilage and connective tissue, making the cuts quite tough. It is a less expensive cut. While it can be fabricated into smaller pieces, it is often sold whole as a retail cut for braising, stewing, or another moist cooking method. The meat may be used for ground lamb.

Neck

The **neck** is a retail cut filled with cartilage that requires moist heat cooking. Lamb stew is the most common use for lamb neck meat.

Accompaniments and Ground Lamb

Mint jelly or citrus sauces often accompany lamb dishes to offset the richness and fattiness of the meat, especially when the meat is cooked using dry heat. Stews would have their own sauce basis from the cooking liquid, but dry heat does not produce enough liquid. So accompaniment sauces are added to lamb dishes, as the acidic nature reduces the sense of greasiness in the mouth and compliments the flavor of the rich meat. (This is common in other fatty meats, such as duck, goose, and mutton.)

Ground lamb is used as any ground meat would be and may be added to other ground meats to enrich the flavor. In addition, it may be prepared as sausages. It is used as the primary meat source to flavor and compress the giant cylinders of gyros (pronounced “ye-ro”; the Greek word for “turn”) meat that rotates on upright broilers or spits next to a heat source. The compressed meat cylinders—made of raw beef and lamb scraps—are grilled and thinly sliced for the classic Greek sandwich on pita bread. **Gyro meat** is a manufactured meat product sold in a cylindrical



FIGURE 7. Huge cylinders of gyro meat are common sights at Greek restaurants.

shape and designed to fit on the spit of a vertical rotisserie. The traditional gyro sandwich is shaved gyro meat wrapped in a pita and topped with tomato, onion, and tzatziki (yogurt and cucumber sauce).

Summary:



There are many ways to cook veal and lamb, and determining which part of the animal the meat comes from is crucial in determining the best cooking method. Tender cuts typically use dry heat cooking methods. In contrast, tough cuts typically require moist heat cooking methods and/or the addition of tenderizing techniques, such as marinades.

Checking Your Knowledge:



1. What is osso bucco? How is the dish prepared?
2. Which retail cuts of meat come from the breast-foreshank of veal? Are these cuts tender or tough?
3. What is carryover cooking? Why does a chef/cook need to understand carry-over heat?
4. Describe collagen connective tissue. How is knowledge of collagen levels relevant to selecting a cooking method for that meat cut?
5. List three cooking methods appropriate for meat from the lamb “rib” area. Explain why you selected those three methods.

Expanding Your Knowledge:



Lamb products are commonly used around the world. Which countries produce the best lamb? Which countries produce the most? What country exports the most lamb? What country imports the most? What makes lamb meat popular globally? (Think about culture, religion, etc.)

Web Links:



Lamb Primal Cuts

<http://culinaryarts.about.com/od/beefporkothermeats/ss/cutsoflamb.htm>

Lamb Recipes

<http://www.recipetips.com/kitchen-tips/t-29-/lamb.asp>

Standard Veal Cuts

<http://www.vealfoodservice.com/standardcuts.aspx>

Veal Cooking Methods

<http://vealmadeeasy.com/cooking-methods/>