



THINGS YOU NEED TO KNOW ABOUT MEAT



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Purchasing Meat – ‘Great Meat isn’t Cheap – Cheap Meat isn’t Great’

Long before you sit down at the table you can spot the clues to the quality of your meat. The first hints come at the retail counter, where a few observations will tell you whether the cut you are considering will make good eating.

Colour: Beef should have a rich, deep red muscle colour. Cherry red beef probably wasn’t aged at all on the carcass, and if you ever have had meat from a freshly killed animal, you know that fresh meat can be terribly chewy. Beef needs some aging on the carcass to tenderise it, and the muscle colour will deepen as it ages. On the other hand, beef shouldn’t be dark or ‘purplish’ which could indicate that the animal was stressed at slaughter (known in the trade as a dark cutter) Dry-aged beef will be dark, but you will know that the colour is from controlled, extended ageing because you will be paying a premium for it.

Pork should be reddish pink, not overly pale. Pallid pork has a low PH and will probably exude a lot of moisture when cooked.

With lamb, you probably won’t see much colour variation. The muscle meat should be a robust red; if it’s uncharacteristically dark, as with beef, the animal may have been stressed at slaughter and the meat quality compromised.

Texture: Give packaged meat a touch test; it should be firm, not flaccid. Firmness is a good indicator that the meat was chilled quickly after slaughter. It’s counter-intuitive but firm meat will be more tender than flaccid meat when cooked. A soft texture suggests the cell walls have collapsed, exuding moisture, and the cooked meat will probably be dry.

Purge: This is the industry term for the undesirable moisture that meat exudes. You want the juice in the muscle, not on a drip cloth or in the frying pan. Beef with a lot of purge probably comes from hormone-fed cattle (hormones make cattle fatty) or from carcasses misted after slaughter. We take steps to ensure Porterhouse Butcher and Grill customers are not paying for added water weight.

Fat: In a word yes. Fat makes meat palatable. You want to see plenty of white flecks within the muscle (marbling) and a layer of fat externally, in the case of steaks, chops and roasts. Fat stores flavour from an animal’s feed and forage and is largely responsible for giving each type of meat its characteristic taste. Fat also lubricates meat fibres, essentially basting meat as it cooks, and thus contributes to a satisfying mouthfeel and

the perception of juiciness.

The external fat on all meats should be hard and creamy white. Yellowish fat can indicate that the meat is old.

Don’t trim off all of the fat from your steaks and roasts. A cap of fat on a piece of brisket or fore rib protects the meat, so the interior can cook through before the surface overcooks. We love the taste of caramelised fat, but if you don’t, you can easily remove what you don’t want after cooking.

Until then, leave a generous amount in place and think of it as ‘moist meat insurance’

PURCHASING STEAKS - ‘90% OF GOOD COOKING IS GOOD SHOPPING’

When buying steaks, buy the best meat you can afford.

Look for steak with a fine texture and that is firm to the touch. You want the colour to be a light cherry red colour (not deep red).

Also look for steaks that have marbling, as it is those thin threads of fat running through the meat that make it prime and delivers wonderful flavour. Marbling is the white fat that you see in cuts of beef. Remember that a substantial amount of evenly distributed marbling is a good thing. Look for small, evenly distributed specks of fat rather than larger and sparser ones.

Marbling are the fine specks of fat within the meat. While studies show that marbling does not significantly increase the caloric count of beef, it greatly enhances flavour and tenderness. Beef that is richly marbled is more prized as it is more tender, juicy, and flavourful because the intramuscular fat melts and bastes the flesh as it cooks. Also, since fat insulates, marbling provides some insurance against overcooking. If you don’t want much animal fat in your diet, then don’t eat steak! To avoid fat in steak is to avoid steak altogether!

Size or thickness matters when purchasing steaks. The best steaks are 1-inch to 1½ inches thick. A thin cut is more likely to get dried out. The thickness of the steak is more important than the weight.

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Handling Meat Safely

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By following basic rules of cleanliness and taking a few precautions, you can enjoy meat with little fear of food-borne illness. Professional chefs observe these practises, and home cooks should too.

KEEP MEAT OUT OF THE DANGER ZONE

Bacteria proliferate more readily at temperatures between 4°C and 60°C. Don't allow meat to be in this danger zone for more than two hours. Refrigerate leftovers promptly. If meat has been in the danger zone too long, even reheating it to a high temperature won't make it safe. You will kill the bacteria but not the heat resistant toxins they may have produced.

This doesn't mean that cooked beef is unsafe if it's internal temperature measures less than 60°C. Because bacteria thrive on the surface of meat, what's important is the surface temperature (minced meat is another matter). Searing a steak on the grill or in a frying pan will kill those surface bacteria, as will browning a roast in a hot oven. To be safe, recipes that call for slow roasting meat at low temperature (below 160°C) should call for a preliminary browning of the surface in a hot oven or on the stove top.

Thawing meat slowly in the refrigerator rather than on the kitchen bench also helps keep it out of the danger zone.

Never leave meat in a warm car! If you can't go straight home, take a cool bag with you.

Wash work surfaces, all utensils and your hands with hot, soapy water after working with meat.

This step helps prevent cross-contamination, the possibility that bacteria from raw meat could be transferred to another food, such as lettuce, that you might not cook. Professional kitchens maintain separate cutting boards for raw meat, but even then, the boards should be well scrubbed after use.

Cloths and sponges can spread bacteria too. Don't use dish cloths around raw meat, use disposable kitchen paper instead. If you use a sponge, rinse it well with hot, soapy water afterwards.

Avoid cross contamination in the fridge by storing meat wisely. Keep raw meat away from foods that are ready to eat, like fresh vegetables. Put the meat on a plate or a tray to prevent this.

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Dry-heat Cooking: The best approach for tender cuts



A pair of thick, sizzling lamb chops hot off the grill represents the best match of meat and cooking method. Such naturally tender cuts as chops and steaks do best with dry-heat cooking techniques; roasting, pan frying, sautéing, grilling or stir-frying. These relatively lean cuts, many of them from the middle meats like ribs and loins, don't have the tough connective tissue that needs slow, moist cooking to soften.

Dry-heat cooking involves exposing the meat directly to the heat source without the gentle mediation of stock or water. The moist heat in a covered casserole never rises above the temperature of boiling water, but the temperature in an oven, grill or frying pan easily climbs much higher. Thus, dry heat can produce crusty surfaces and caramelised flavours that we seek in steak but don't expect in a braise.

Mastering some basic procedures will help you produce better results when you cook with dry heat. With these pointers, your burgers will be more tender, your steaks more appetisingly browned, and your pork escalope unlikely ever to stick to the pan again.

TEMPER YOUR MEAT BEFORE COOKING

You get a better result with dry-heat cooking if you bring your meat to room temperature before cooking. The meat will cook more evenly, instead of overcooking on the surface before the centre warms up. That said, take care not to leave your meat in the danger zone for more than two hours. Removing steaks, chops or other thin cuts from the fridge an hour before cooking is sufficient.

For thick roasts or other large cuts, give them two hours at cool room temperature but no more.

SEASONING

One of the properties of salt is to extract the juices from meat and in doing so prevents it from browning and forming a crust. It is therefore perhaps better to salt smaller pieces of red meat half-way through the cooking process. With larger pieces, where the meat is carved into slices after cooking it is essential to season with salt and freshly milled pepper a second time after carving. This is because the salt can never reach the heart of the meat during cooking.

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Roasting

ROASTING

Roasting means cooking it by the direct action of heat, without moisture, turning it frequently. To obtain the sealing and browning of the meat it's important to coat the meat sparingly with fat ($\frac{2}{3}$ oil, $\frac{1}{3}$ butter) Roasting is done generally in an oven or sometimes on a spit.

The oven must be heated beforehand; the temperature depending on the type and size of joint. The temperature should be high enough, around 220 - 230°C to sear the food thoroughly and conserve all of its juices. The meat is coated very lightly in fat and put straight into a pre-heated roasting dish on a trivet or a bed of chopped bones.

When the sealing and browning of the bones is complete, lower the heat and baste from time to time with the juices which collect in the bottom of the roasting tin until it is cooked.

THE JUICES FROM THE ROAST

When you roast a joint of meat you can leave a lot of flavour behind in the form of caramelised juices and bits of meat stuck to the bottom and sides of the roasting tray. You can retrieve that flavour by creating a gravy. The roasting juices are never better than they are at home, because the home cook instinctively keeps them simple and straightforward whereas the professional chef inevitably tries to make an elaborate sauce with them.

After the roast has been removed from the oven and put to rest, spoon off most (but not all) of the fat and 'deglaze' with water and scrape the base of the tin with a wooden spoon to loosen all of the caramelised particles sticking to the bottom. Allow the gravy to boil and reduce, leaving you with roughly two tablespoons per person. Strain through a sieve and swirl in a little soft butter to give the gravy a velvety texture. A drop or two of good red wine vinegar will help bring out the character of the gravy. Roasting your meat on a bed of chopped bones will help you increase the volume of gravy. Using chicken or beef or veal stock will also give your gravy more strength and body.

Large cuts like leg of lamb, an eight to ten rib rack of pork, or a whole beef fillet are good choices for roasting. They take long enough to cook so that they can develop a rich browned surface before the interior becomes overdone.

'Sear then slow' is a favourite roasting technique amongst our chefs. For this method start in a hot, (220 °C) preheated oven. Roast until a crust forms, fifteen to thirty minutes, then reduce the oven heat to about 150 °C to complete the cooking. You get the best of both worlds: a caramelised exterior from the high heat start, yet the muscle is uniformly cooked throughout.

When you rush a roast by cooking it at a constantly high temperature, the muscle shows more gradation. It can be underdone in the centre but overdone just below the surface. Low, slow cooking produces much more even results but without the desirable crust. In any case, it's not advisable to cook a large roast slowly without searing it first, as it may spend too long in the danger zone.

OUR FAVOURITE JOINTS FOR ROASTING

Beef: Prime rib; whole striploin; whole rump; picanha

Pork: bone-in leg; loin; 8-10 rib rack; boneless shoulder, rolled and tied (chine/collar)

Lamb: bone in leg, rack, shoulder (seared and slow)

ON THE BONE?

To my mind there is no question that a leg of lamb roasted on the bone has a more intense flavour.

However, there are certain advantages in removing the bone before cooking. The joint can be seasoned from the inside; it is easier to carve; it gives uniform portion size; it allows a better presentation. It also means you can use the chopped bones to make a quick, flavoursome gravy.

However, the fact remains that a leg of lamb roasted on the bone has that little bit of extra sweetness.

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Grilling

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GRILLING

At '21 at Home' we are big fans of grilling meat over a live fire. A gas grill can produce satisfactory results, but only coals or wood satisfy that primitive urge to build and nurture fire and to feast on meat licked by smoke.

For live fire grilling, you have a choice of fuels. Charcoal briquettes are readily available and easy to use, and they burn evenly. Hardwood charcoal comes in chunky, less uniform pieces, so it's a little harder to manage. Many grillers like hardwood charcoal because it burns especially hot and imparts more smoky flavour, but it can be challenging to control if you're inexperienced.

Some people use a combination of briquettes and hardwood charcoal to get the benefits of both. You can also use chunks of hardwood like oak or ash, they take longer to burn down to ash-covered coals than charcoal does but there's nothing like that whisper of real wood smoke on a steak.

OUR FAVOURITE CUTS FOR GRILLING

Beef: any steak from the rib or loin, rump steak, hanger steak, bavette, picanha

Pork: loin chops; baby back ribs

Lamb: chops, butterflied leg

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Pan Frying and Sautéing



Similar methods, pan frying and sautéing both take place in a pan on top of the stove. Some chefs insist that pan frying uses more oil than sautéing, but the techniques are virtually the same.

The best meat choices for these rapid cooking methods are relatively thin and devoid of any tough connective tissue, such as cutlets, steaks and chops. Thick cuts would over brown on the outside before they cooked through. A popular restaurant solution for those thicker cuts, such as a côte de bœuf or whole lamb racks is to brown them on one side in the pan then turn the meat over and transfer the pan to a pre-heated oven to complete the cooking.

The key objectives of pan frying and sautéing are to create a richly coloured surface and to keep the meat from sticking.

To achieve those goals, follow these rules:

- Make sure your meat is completely dry. Damp meat won't fry properly.
- Choose a pan that's large enough to hold your meat without crowding
- Preheat the pan before adding fat. This is a critical step to prevent the meat from sticking.
- Add the fat and swirl the pan to coat the base. Heat the fat until it shimmers.
- Add the meat and leave it alone. Resist the temptation to give the meat a stir or move it about. Let it develop a seared crust, reducing the heat if necessary to prevent smoking or burning. When the bottom is richly and evenly browned, turn the meat with tongs and cook the second side until the meat is done to your taste. Avoid flipping the meat back and forth.
- Use tongs not a fork when pan frying or sautéing. You don't want to pierce the meat.

OUR FAVOURITE CUTS FOR PAN FRYING AND SAUTÉING

Beef: Sirloin steak, rib eye steak, fillet steak, hanger steak, flatiron steak

Pork: chops, fillet, escalope

Lamb: chops; noisettes; cannon

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Is it done yet?

For novice cooks, determining doneness is the step most fraught with anxiety. An overcooked roasted prime rib is a costly failure and even an overcooked burger can be an embarrassment.

Fortunately, you don't have to rely on guesswork. A good thermometer will guide you reliably on thick steaks and roasts, and you will learn to 'read' a pressure test for other cuts. Experience will give you confidence, just as it does professional chefs, who boast of the night when every single steak is cooked perfectly.

Meats cooked by moist heat, such as stews and braises are done when the meat is tender. If you stick a fork in the muscle and it still feels firm and 'grabs' the fork the connective tissue hasn't fully softened. Keep cooking until your fork meets with little resistance and slips in and out of the muscle with ease. If the meat is in small pieces, as for a stew, taste to verify that it's no longer chewy.

ABOUT MEAT THERMOMETERS

You don't want to be cutting into your steak or roast to check doneness. You do want to use a good meat thermometer. Some people like the ovenproof types that you can leave in the joint as it cooks, but they are famously inaccurate and hard to read and end up coated with grease. An instant read thermometer can't be left in the oven but it does give you a quick and accurate reading if you use it correctly.

There are two types of digital read thermometers; one with a dial face and the other with a digital read. The latter has its heat sensor in the tip; on the dial-face version, the sensor is further up the stem (you can see the mark where the sensor is). Because the sensor needs to be in the centre of the meat to get an accurate reading, a dial face thermometer only works on thick cuts like roasts.

The digital type in contrast can measure the centre of a steak, burger or chop. Programmable digital thermometers eliminate the need to check regularly. You leave the probe in the meat as it cooks, and the thermometer beeps when it reaches the temperature you have selected.

Whatever type you use, insert the thermometer so that the sensor reaches the centre of the thickest part of the meat. It should not touch bone, fat, the grill, or the pan.

Measuring near the bone will give you the coolest reading.

Check the accuracy of your thermometer occasionally by dipping it in boiling water (100°C) or iced water (just above 0°C).

THE MAILLARD REACTION

Since the discovery of fire, cooks have observed that roasted meats develop attractive browned crusts and rich, meaty flavour. But not until around 1910 did a scientist decipher the cause. French physician Louis Camille Maillard gets the credit for revealing the interaction between carbohydrate molecules and amino acid that produce dark colour, fragrance, and meaty flavour when meats (or coffee beans, malted barley, and other foods) are subjected to high heat.

The Maillard Reaction doesn't get underway until the meat surface reaches 140 - 165°C.

Because boiled foods never get to 140°C they never brown or waft that mouth-watering aroma we associate with a roast in the oven. Many recipes for stews and braised meats call for the browning of the meat first to take advantage of the flavours engendered by the Maillard reaction.

MASTERING THE PRESSURE TEST

Cooking steaks at home can intimidate people; the problems tend to revolve around not being able to figure out when it's done. Different cuts cook at different rates and you need to access each piece of meat individually for thickness, internal temperature and fat content. Then there's the temperature of your grill or the type of pan you are using. Professional chefs rely on a touch test. A rare steak should feel like the fleshy triangle of skin between the thumb and index finger of a relaxed hand. A medium steak will feel like the same spot on a clenched fist and if you want it well done compare it to the tip of your nose. An alternative method would be to use a digital, instant read thermometer. A rare steak would have a core temperature of around 45 °C; medium rare 50°C; medium 55-60°C and well done 71°C.

A point worth noting is that thicker steaks will continue to cook for a while once removed from the pan.

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Is it done yet... continued

A GUIDE TO DONENESS

The following doneness ranges reflect our tastes and standards at '21 at Home'. You may find that your idea of medium rare would be deemed rare by us; if so, adjust accordingly. Remember the internal temperature will rise 3 – 5°C as the meat rests, possibly even more on a large roast, especially if it cooks at a high temperature. Allow for this residual cooking in determining when to remove the meat from the heat.

The indicated temperatures are after resting:

Beef and Lamb

Rare 45 °C
Medium rare 50 °C
Medium 55 – 60 °C
Medium well 65 – 68 °C
Well done 71 °C and above

Pork

Safe from Trichinosis 58.3 °C
Medium 65.5 °C
Well done 71 °C and above

We recommend cooking pork sausages and cuts from the loin and leg to medium. The interior will be slightly pink.

We do not recommend cooking these joints beyond 65.5 °C

All other cuts (from the shoulder, ribs and belly) should be cooked until tender, which won't occur until the meat is well done.

N.B. These temperatures only apply to meats cooked by dry-heat methods, such as roasting or grilling.

Meat prepared by moist-heat method, such as stewing or braising, is always well done. For those dishes, the proper determination of doneness is tenderness not temperature.

GIVE MEAT A REST

Virtually any cut of meat that's thicker than an escalope benefits from a rest between cooking and serving. The meat will reabsorb juices as it cools, minimising the fluids lost when you cut into the muscle. Give a steak at least five minutes or a whole leg of lamb at least twenty minutes before carving to allow the juices to settle.

As meat rests, its internal temperature typically rises 3 – 5°C from residual heat. This phenomenon is known as 'heat gain' and the hotter the oven or grill, the more heat gain you can expect.

CARVE LIKE A PROFESSIONAL

So you've bought a great piece of meat and cooked it perfectly. Now's the time to carve. For maximum eating pleasure, keep these pointers in mind:

Let the Meat Rest

A cooling period – anywhere from five minutes for a sirloin steak to forty five minutes for a roast forerib will allow the meat to firm up, making it easier to carve. You'll also lose fewer juices to the cutting board because cooling meat retains more moisture

Start with a Sharp Knife

A blunt knife both hacks meat and is dangerous. Have your knives professionally sharpened a couple of times a year and use a sharpening steel to maintain the edge between times.

Carve Against the Grain

Meat fibres are long and bundled lengthways. If you slice with the grain, you will have to chew across it and the eat will appear tough. If you slice across the grain, you can chew with the grain and the meat will seem tender.

Maintain your Knife Angle

For neat, even slices, keep the knife at the same angle for each cut. The narrower the angle the wider the slices.

Cut Tougher Meats Thinly and Tender Meats More Thickly

Cutting a silverside, bavette or flat iron thinly will enhance your perceptions of tenderness. Thick slices would be too chewy. In contrast, a naturally tender cut like fillet can be sliced a half to three quarters of an inch thick and will still melt in your mouth. A tender braise or pot-roast using say: brisket can also be sliced thickly.

Buy good steak knives

It's sad to watch people struggle with a cheap blunt steak knife which will inevitably end up shredding a great piece of meat.

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Ageing / Hanging Meat

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All meat needs to be hung. During this process, the meat's natural enzymes break down the proteins in the muscle tissues which helps the meat to tenderise. It also allows any excess moisture and blood to evaporate and the flavours to concentrate.

Ideally, beef needs to be hung on the bone for three weeks. Unfortunately, commercial pressures mean this vital process is often ignored (meat hanging around ties up cash). A quicker alternative is 'wet ageing'.

The carcass is cut into joints which are vacuum-packed and aged in the fridge. This gives tenderness but not flavour as the moisture is unable to evaporate. Buying at source guarantees you will know how long the meat has been hung.

Failing that, try and buy from a reputable butcher whom you can trust. Any butcher who cares about his produce won't mind if you ask how long the meat has been hung.

In contrast to the painstaking dry aging process, most primal cuts are vacuum packed in heavy plastic at the abattoir. Stored under these conditions the meat does become more tender but the flavour doesn't noticeably improve.

Wet aging as this process is known, saves money. You don't need a dedicated aging chamber, and because the meat is sealed with its own juices, there's no weight loss.

For that reason dry aged beef remains largely a high end restaurant product.