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How to Cook Meat

**Chris Schlesinger
and John Willoughby**

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CHRIS SCHLESINGER *and*
JOHN WILLOUGHBY

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**To Roscoe, Jake, and Sherman,
true connoisseurs of finely prepared meat**

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ACKNOWLEDGMENTS

As usual, there are more people who helped make this book than we can possibly thank, but we want to single out a few.

From Chris

Thanks to the staff at my restaurants for taking up the slack so I had the time to do this book. At the East Coast Grill, I'd particularly like to thank Maureen Rubino, my general manager; her assistant, Erin; Owen Tilly, the chef; as well as Eric, Seth, Elmer, Amilcar, and all the rest of the staff. At the Back Eddy, my thanks to general manager Sal Liotta and chef Aaron DeRego along with Nigel, Brian, and the rest of the gang. I'd also like to thank Jimmy Burke and Bob Kinkead, my pals, mentors, and colleagues through the years, for all the teaching, eating, drinking, and laughing. And finally thanks to my coauthor, Doc, for his ability, agility, and intestinal fortitude and for tolerating a sometimes petulant, sometimes confused, and always lazy partner. As usual, a pleasure and an honor.

From John (Doc)

Thanks to all of my colleagues at *Cook's Illustrated* magazine, and in particular Chris Kimball, Jack, Kay, Adam, Barbara, Amy, Dawn, Julia, India, Bridget, and Henrietta for their support and tolerance. Thanks to Mark Bittman for his ever-present comradeship and inspiration. And, of course, thanks to my coauthor, Chris, for his alacrity, perspicacity, all-around ebullience, and ability to put up with my irksome habits and occasionally alarmist nature. The pleasure and honor, truly, are mine.

From both of us

Our thanks to Nancy Kohl and Kirsten Mikalson, without whom this book would not exist—their hard work, diligence, and ability to tolerate ever-changing surface conditions

on the road to completion were essential and guarantee them a bright future in this business; to Kay Rentschler, not only for her indispensable help in the conceptual formulation of this book but also for her expertise in the flavors of the Austro-Hungarian Empire; to our indefatigable agent Doe Coover, an evergreen source of inspiration and encouragement; to her colleague Frances, for always taking our calls cheerfully no matter how grumpy we might be; to Doug Bellow, Dana Van Gorder, Carl Taplin, Tom Huth, and in particular Michael Otten for testing and retesting our recipes in their home kitchens.

At HarperCollins, thank to our original editor, Justin Schwartz, for helping translate our eager enthusiasm into what we hope is a useful book; to the ultimate closer, Harriet Bell, for her drive and vision; to Adrian Zackheim for his support and his inspirational display of two-fisted eating at the East Coast Grill last February; to Leah Carlson-Stanisic for making a complicated concept into a clear and readable design; and to Judith Sutton for coralling our errors.

Thanks also to John Dewar, the world's finest butcher, for his patient guidance at our early morning sessions; to Paul Derber, supplier of high-quality meats, for his lucid explanations; to Dr. Terry Dockerty and the National Cattlemen's Beef Association for generously allowing us to use their expert photographs of various cuts of beef, pork, lamb, and veal; to the National Livestock and Meat Board for putting out clear, concise, and helpful guides that are worth their weight in gold to anyone who wants to know even more about meat; and to Dave Griffin of Texas A&M University for organizing and presenting the highly informative Beef 101 course.

Finally, thanks to our extended family—Rick, Susan, Tommy, Lizzie, Steve, and Chris's wife, Marcy, for their unwavering love and friendship.



All **THE MEAT**
THAT'S FIT *to* **EAT**

Let's face it, meat tastes great. From steaks to chops, ribs to roasts, it has a direct, hits-you-where-you-live appeal that cannot be denied.

So it's no surprise that when we think of our favorite food experiences, meat usually played the major role. Eating that first super-flavorful fat-edged prime rib as a young boy was a culinary rite of passage. Then there was the first spit-roasted whole pig, the crackling-crisp skin contrasting beautifully with the rich, buttery, smoky tendrils of the inner meat. A roast leg of lamb, slathered with a paste of garlic, rosemary, and lemon juice, was the clearest memory of a childhood trip to Greece. And how many times have we celebrated a gorgeous summer day with a cold beer and a perfectly grilled double-thick T-bone steak, rich and juicy inside and charred just right on the outside?

Obviously, we love meat. And with this book, we want to share that love with you, to give you an even deeper appreciation of the flavor that you already savor—because red meat is a bedrock part of our culinary heritage, a taste that is right down in our genes.

But we're not blind to all the nutritional information that is going around today concerning red meat. We agree that the typical American diet probably includes too much of it. In fact, that's how this book got started in the first place. We were concerned about our own meat consumption and decided to try to make the meat we ate really count. This had

the ironic effect of raising our appreciation and our dedication to proper preparation of meat. Once we gave up the lousy ham sandwiches and the fast-food burgers, we found ourselves becoming more enamored of not only roasts and steaks, but also some of the overlooked and less popular cuts. Pretty soon cuts like short ribs, veal breast, and fresh ham began to gain ground as new favorites.

When we started exploring meat in this way, it led us to both rediscovering some old classics and appreciating the way meat is used in other cultures, where the roasts and steaks of European-derived cuisines are almost unknown. This opened up a whole new world to us, and we want to share that world with you. We want to share the classic cuts, we want to share the international favorites, and we want to share the overlooked cuts, the unpolished gems of the meat world.

At the same time, we want to teach you how to cook every cut exactly right. Because if you're going to eat less meat, then it's even more important that you derive maximum enjoyment from every experience.

There's actually a lot to be said for red meat in a nutritional context too. It remains the single most nutrient-dense, efficient food delivery system available to human beings. It contains all the essential amino acids (those are the ones that our bodies need but cannot synthesize from other foods) and, more important, it contains each in exactly the proportion that our bodies require it. Red meat is also an unrivaled source of iron and crucial trace elements such as zinc and copper, along with vitamins B₆ and B₁₂. As for saturated fat, many cuts are leaner these days, and even within current nutritional guidelines you can eat ten ounces of lean red meat every day and not exceed the recommended fat intake.

Meat is also a core part of the human experience, intricately intertwined with our history as a species. Hunter-gatherers weren't hunting for vegetables, after all, and the need to band together to hunt for meat was the primary motivation for the early social bonds that eventually created civilization. Anthropologists vary in their estimation as to whether the eating of meat represents humans' desire to show their power over animals or to identify with them, but they all agree that it has a deep-seated relevance to our understanding of our place in the natural world.

As Americans, we are particularly meat-oriented, because our country has perhaps the most consummate carnivore history of all. Native Americans had always hunted and eaten meat, and European settlers took to the practice with a passion. In their native countries meat had for the most part been a privilege of wealth. But in this new land, game was astonishingly plentiful, and with the vast amount of land available, the new Americans began raising both cattle and hogs in large quantities. Europeans who visited colonial America consistently marveled at the amount of meat consumed by the average citizen. Like rice in much of Asia, meat became the center of our national dinner plate.

The odd thing, though, is that despite its prominent place in our national diet, many of us don't know all that much about meat anymore.

During the culinary revolution that has swept the United States over the past couple of decades, the greatest attention has been paid to products once less commonplace in the American kitchen. Greens, grains, and vegetables of all kinds have rightfully been praised,

explained, and brought to a well-deserved place of greater significance on our plates. But that led to a certain amount of indifference about some aspects of meat cookery. We know about steaks and chops, and we have some idea about roasts, but braises and stews and many lesser-known cuts have fallen into disrepute or neglect.

As a result, most Americans tend to go to the grocery store and pick out the same cuts of meat they always have, then take them home and cook them the same way their parents did. This is a shame, both because meat has changed in character and because folks are losing out on a whole world of excellent culinary opportunities. It is our fond hope that this book will help remedy that.

To that end, part of what we want to do with this book is to help expand your meat horizons. Steaks are wonderful, but we want to enjoy rich, flavorful stews simmering on the stove as well as juicy roasts coming out of the oven, hearty braised meat dishes and smoky grilled chops with spicy salsas. We want to eliminate the false notion that there is a hierarchy of meats. Stew meat is not worse than tenderloin, it's just different. If you cook it right, it can become a dish that is every bit as enticing and satisfying in its own way as a succulent filet mignon. Remember that a hierarchy of price does not really reflect a hierarchy of value; it's all a matter of knowing which cut should be matched with which cooking method.

When you start looking at meat this way you not only end up with some outstanding food, you get some side benefits along the way as well. The less highly regarded cuts of meat tend to be less expensive, for one thing. For another, they allow you to feel virtuous, because you are being a responsible consumer by using all the resources the animal has to offer, rather than just a select few. Besides all that, these cuts are fun to cook. For a better idea of what we're talking about here, check out our Top 5 Favorite Cuts in the recipe chapter for each meat. There are some super-expensive cuts in those lists, for sure, but you'll also find some of these unpolished gems. We're big fans of pork butts, for example, we love shoulder lamb chops, and we're excited about beef skirt steaks. These types of overlooked cuts are, we believe, one of the real strengths of this book.

The bottom line is that this book is a celebration of meat. We want to help you get the most out of it and enjoy every aspect of it, from buying it to cooking it to eating it. We want to be sure that every time you bring a meat dish to the table, it more than satisfies your memories and your expectations.

What better place to start than at the meat counter?

MEET MEAT

There is a lot of good meat out there, and there are a lot of neat, fun, and tasty ways to cook it. So, walking up to the meat counter should be an occasion for excitement. But even for an experienced cook, it can often be a prelude to bewilderment instead.

And why not? At any given time, there are about a hundred and fifty separate cuts of red meat on display in the meat section of an average large supermarket. Not only that, but

the same cut may have a different name depending on the state, the city, or even the particular shop where you're buying it. Some differences are geographic. Until recently, for instance, butchers in Kansas City called the boneless top loin steak a Texas strip, while those in Texas (and much of the rest of the country) referred to it as a New York strip, and in New York, they called it a Kansas City strip. Other cuts of meat, like Boston butt and picnic shoulder, derive their names from butchering practices of the distant past. There are also plenty of local names that were coined simply because they're more enticing than the more "clinical" names. In much of the South, for instance, the beef chuck neck pot roast is known as a bell roast because it comes from the part of the neck where the cow's bell used to hang. All in all, meat industry experts estimate that there are over a thousand different names used for the three hundred or so standard cuts of red meat in this country.

So, the real question is, how do we make sense of all this?

Well, clearly there's no way you can learn every local name for every cut of red meat. And since language tends to evolve, it's very likely that people are going to keep on making up new names for cuts of meat as the years go by. We've tried to make the whole situation as clear as possible by giving you lists of all the names these cuts are presently known by, plus pictures of all of them as they look in the market. But it's also very helpful to learn a few basic characteristics of the various parts of the animals. That way you can make good use of the standard labels applied to packaged cuts of meat in almost every market in this country—and you will also know which cooking method works with which cut.

THE BIG PICTURE

Here's the story, generally speaking.

When an animal is butchered, it is first separated into a number of large sections called the "primal cuts." These are then broken down into smaller sections known as "subprimals," and the subprimals in turn are divided into retail cuts—steaks, chops, roasts, and all the rest.

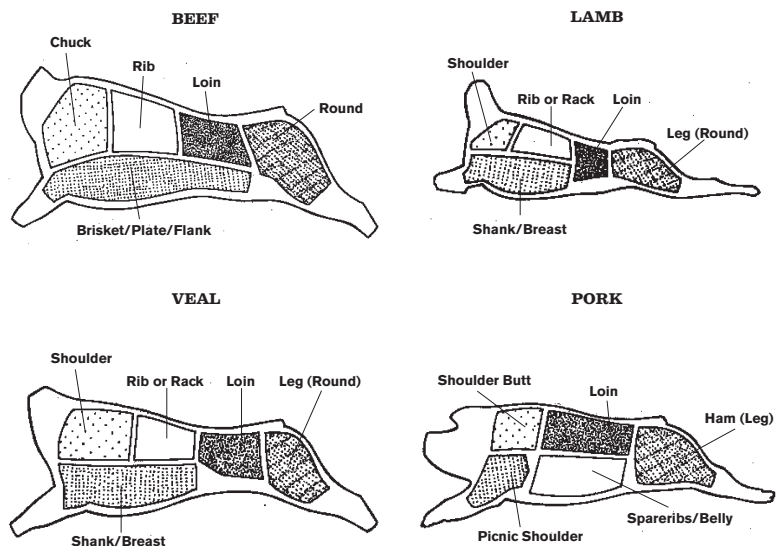
But of course you won't see these primal cuts in the supermarket. Instead, you'll see all those individual retail cuts into which the primals are ultimately separated—the roasts, steaks, brisket, and so on.

So how do you put these two together? Well, we're going to try to make it easy for you, because it actually can be pretty complicated. I (Chris) remember being in culinary school trying to figure out where all the dozens of different cuts of beef came from on the cow and becoming increasingly confused, along with most of my classmates. To make it clearer, our instructor followed a pedagogical plan that is used in cooking schools all over the country—he tried to relate the parts of the cow to parts of the human body. As gross as it may seem, it was pretty effective. I told the instructor that he should get a raincoat and paint it with a diagram showing which part of his body translated to which part of the cow, then put it on whenever we started talking about beef cuts.

Even today, though, after all the years I've spent cutting up and cooking beef, I can

still get confused about what cut comes from which part of the steer. In an effort to simplify this, to make it less abstruse, less obtuse, and generally easier to remember, we recommend you divide each animal into four basic parts and then give each of them a descriptive name. So, for example, we like to divide the steer into the chuck, which we call the Tough But Flavorful section; the rib, or Big Money Section; the loin, which we dub the Steak Section; and the round, known to us as the Roast Section.

Of course, this is an oversimplification with plenty of exceptions and qualifications, but that's how we think of the animal, and it's actually pretty helpful in keeping things straight. Why bother, you ask? Well, because many of the flavor and texture characteristics of a particular cut of meat are determined by the primal cut it comes from. The less exercise a particular part of an animal gets, the more tender the cuts from that part of the animal are going to be. For all four-legged animals, the back, which includes the rib and loin sections, does the least work in moving the animal around and so is the most tender. The most tender part of the animal overall is the section just to the front of the loin, known as the rib section, which produces the prime rib roast. The loin yields those incredibly tender steaks—the porterhouse, the T-bone, the filet mignon, the New York strip. Next on the descending tenderness scale comes the sirloin, which is the part between the loin and the rump. Cuts from the leg and hip (the round) are made up of larger muscles with little fat and a good amount of connective tissue, so they are not all that tender while cuts from the shoulder and neck of the animal are, for the most part, tougher yet. Meat that comes from the foreshank, breast, and side is usually the gnarliest of all.

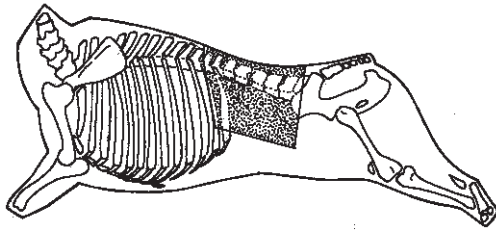


Now for the cooking methods. Tender cuts are best cooked with dry-heat methods like grilling, sautéing, roasting, and broiling, while tougher cuts do best with moist-heat methods like braising and stewing.

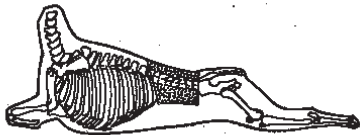
Put these two dynamics together and it means that, in general, cuts from the loin and rib are usually grilled, sautéed, roasted, or broiled; cuts from the leg are often roasted and sometimes braised or stewed; cuts from the shoulder are often braised or stewed and sometimes roasted; and cuts from the foreshank, breast, and side are most often braised or stewed.

Of course, within these general parameters there are many levels of complication. We delve into those in the section of each recipe labeled "The Cut." But in general, these guidelines hold pretty firm.

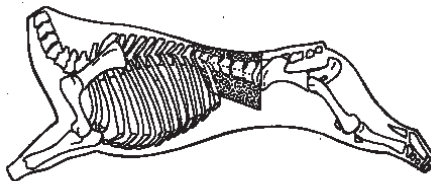
BEEF Short Loin Steaks and Roasts



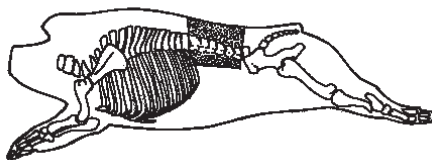
LAMB Loin Chops and Roasts



VEAL Loin Chops and Roasts



PORK Loin Chops and Roasts



In trying to explain all of this, we've found it helpful to compare cuts taken from the same sections of different animals. So let's look at a cut taken from the loin section, also known as the short loin. Let's take the beef porterhouse steak as our point of comparison. From the other three animals, the equivalent cut would be the veal, lamb, or pork loin chop. All four cuts are very tender, all four have portions of two separate muscles separated by a bone, and all four are best cooked with direct dry-heat methods such as grilling or broiling.

It gets more complicated than this for other sections of the animals, but the point is the same: If you understand the way the cut from one animal works, you basically understand them all.

Once you have this down, you can learn a lot from the labels on packages of meat in the supermarket. A few years ago in an attempt to cut down on the confusion about which cut is what, the National Livestock and Meat Board came out with label standards that are increasingly used around the country. In large type—usually at the bottom of the label, below the weight, price per pound, total price, and sell-by date—you will find the type of meat (e.g., pork), the primal cut from which the particular cut came (e.g., loin), and the name of the particular cut (e.g., tenderloin roast). So, in the case of this example, you know that this comes from a part of the animal that is very tender—and therefore should be cooked using a dry-heat method like grilling or roasting.

The dynamic of matching meat to method is so crucial to cooking meat right that we have organized this whole book around it. For each of the four types of meat, the recipes are divided by the size and texture of the cuts. The categories include “Large Tender” cuts such as loin and rib roasts; “Large Tough” cuts such as shoulder roasts and brisket; “Small Tender” cuts such as chops and steaks; and “Small Tough” cuts, which for the most part refer to stew meat, usually taken from the shoulder or leg. (The organ meats such as liver or sweetbreads, also known as offal, have their own separate category.) Most of the cuts of meat within each category are cooked with the same cooking method.

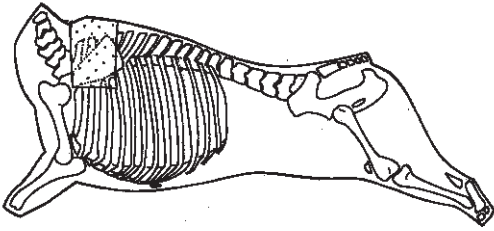
NEGLECTED GEMS

But as with any set of rules, this one has exceptions. Here you will find many of the neglected and underused cuts, the undiscovered gems of meat cookery that bring surprising rewards to the intrepid cook who seeks them out.

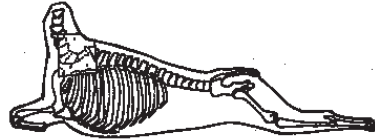
To show you what we mean, let's take a look at another section of all four animals, the upper section of the shoulder. Despite the fact that most cuts from the shoulder are relatively tough and need long, slow cooking, there are a couple of cuts here that are actually excellent for grilling. They are the beef, veal, and pork blade steaks and the lamb blade chop. They all come from the top of the shoulder near the neck, and they all have the same deep, rich flavor as other cuts from this part of the animal, but they are also tender enough to go on the grill. Since not many people know about them, they are also very inexpensive. These blade cuts are particular favorites of Chris's because they are the continuation of the rib, the most expensive section of each animal. Now, the muscles from the rib area

don't stop just because they move into the shoulder; they merely begin to change somewhat in character. So the first couple of blade lamb chops next to the rib, for instance, are actually very similar to your high-priced rib lamb chops, with a little more chew but a lot smaller price tag.

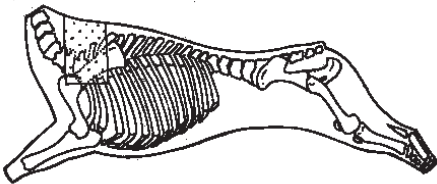
BEEF Blade Steaks and Roasts



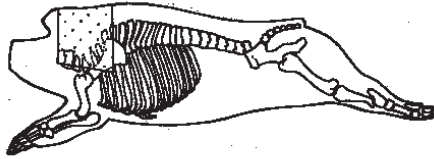
LAMB Blade Chops and Roasts



VEAL Blade Steaks and Roasts



PORK Blade Steaks and Roasts



These types of cuts are among the most fun as well as the most rewarding to cook, and as we go through each animal, we'll point them out to you. Put them together with the more well known popular cuts, and you're going to have a meat repertoire that will keep you going for a long time.

MAKING A CHOICE

Let's say you know that you're going to be grilling, which calls for a small tender cut of meat, and you want to buy a really good chop or steak to throw on the fire. How do you go about picking one?

There are several factors that go into making this choice. You may want to consider the grade of the meat, you definitely need to check out its physical appearance, you might want to consider "brand," and you should decide whether you will look for it in a supermarket or at a butcher shop.

GRADES OF MEAT

The grading of meat is a concept that most people have heard about but are a bit fuzzy on. The confusion comes, it seems to us, from a popular but mistaken notion that the grade of meat has something to do with whether or not it is safe to eat. It doesn't.

Meat is subjected to far more regulation and official evaluation than any other food in this country. It is a very safe product. (If you want to know about a dangerously unregulated industry, let's talk seafood.) Since 1906, it has been mandatory that all meat be inspected by the United States Department of Agriculture (USDA) at the packing plant to be sure that it is produced under sanitary conditions and is not spoiled or contaminated. But that doesn't have anything to do with grading. All meat, whatever the grade, should be equally safe for consumption.

Grading is a voluntary program. If the producer wants to pay the USDA, a grader will come to the plant and grade the meat. The reason the producer might do this is because grade is an attempt to communicate to consumers the likely palatability of a particular piece of meat—its tenderness, juiciness, and flavor.

Meat grades are based on age (younger meat is more tender and therefore considered better) and the degree of intramuscular fat, or marbling (meat with more marbling is juicier and more flavorful and therefore considered better). There are eight possible grades for beef, running from "Prime" at the top to "Canner" at the bottom. Veal and lamb have fewer grades and pork has a different system altogether.

But grading is actually much less important to your daily meat buying than you might think. Only the top three grades—Prime, Choice, and Select—appear at meat counters or in butcher shops. The others are just not high enough quality for consumers to buy.

And practically speaking, the grade of the meat is only an issue for most of us consumers when it comes to beef. Veal, lamb, and pork all come from animals that are considerably younger when slaughtered, which means that their meat is naturally more tender and intramuscular fat is not so relevant a consideration. You may occasionally see these meats with grades indicated in the market, but that is more the exception than the rule. So, for more on grading, refer to page 41 in our Beef chapter.

PHYSICAL APPEARANCE

More important than grading when choosing an individual piece of meat are muscle color, texture, fat color, and amount of fat, all of which differ somewhat from animal to animal. Pointers and tips about these qualities and exactly what to look for in each type of meat and in each particular cut are included in the individual chapter introductions as well as in the section labeled “The Cut” that accompanies each recipe.

BRANDING

Sometimes you will come across what is known as “branded” meat. As with grading, this is a factor that most often applies to beef. The brand in question can either be that of a specific producer or of a specific breed, such as Angus or Hereford in cattle. We believe that branding will probably become more common for all types of red meat in the coming years. The only way to find out whether a meat bearing the brand name of a specific producer is consistently of higher quality than unbranded meat is to try the meat for yourself. The same is true of breed branding, although that does seem a more reliable guide, at least when it comes to beef.

Before too long, we may well be seeing another more sophisticated type of branding. The technology is at hand that will allow breeders to do an analysis of the genetic makeup of a piece of meat and to accurately predict the tenderness as well as the flavor qualities of meat that comes from animals with that same genetic makeup. All meat from those animals can then be given a branded identity with a virtual money-back guarantee of the quality of the meat. We’re not sure how we feel about applying all this high technology to what should basically be a primal eating experience, but keep your eye out for it in any case.

SUPERMARKET OR BUTCHER?

A more practical question is whether you should shop for meat at a butcher or at a supermarket. The choice really depends on several factors, including what particular cut of meat you’re looking for and how much you want to pay. Butcher shops tend to be a bit more expensive, but they’re also going to have the obscure cuts, and they will be happy to give you really thick versions of even the more commonly available selections. Besides that, the guy behind the counter is going to be very knowledgeable and therefore helpful if you’re a bit unsure of what you’re looking for.

On the other hand, not everyone has a butcher store conveniently close to them, and there are many cuts of meat that you can easily get in perfectly good quality at the supermarket.

We’ve tried to help you with this choice throughout the book by pointing out those cuts of meat that you are likely to find only in the butcher shop, so you will be aware of this in advance and won’t be disappointed at the supermarket. But we also encourage you to venture out there and figure out for yourself when to use each meat-buying option. In our

experience this is a good thing, not only because supermarket butchers and specialty butchers serve different purposes but because butchers are generally pretty funny guys, and if you go in and talk to them you'll often find the experience amusing as well as educational.

To illustrate, let us tell you how we buy meat.

I (Chris) generally buy my meat from John Dewar, a fantastic custom butcher who services many of the finest hotels and restaurants in Boston, including the East Coast Grill, but also has a retail business. So when I want a piece of meat, I'll call up John and order a 2-pound T-bone or a crown roast or a giant loin-end standing rib for Christmas dinner or a steamship round of veal to impress my new in-laws. I know I'll always get top quality and exactly what I want, because John delivers the very best. In your town you probably have an upscale butcher something like this, the guy you can call on the phone who will go out of his way to help you find what you want.

On the other hand, I (Doc) count on John for special occasions, but for the most part I get my meat from Larry, the butcher at the supermarket a few blocks from my house. Our relationship has definitely changed over the past couple of years. The first time I walked in and asked for a skirt steak, for example, he looked me straight in the eye and said, "Buddy, I've been working here for three years and I've never even *seen* a skirt steak."

Now, there were many possible replies to that, but none of them was going to get me the steak I wanted. So I thought about it for a minute, then asked what he had in the case that was really great. He grudgingly allowed as how they happened to have some fresh leg of lamb from Vermont that for some reason no one was buying. I figured I could shift gears and test a few lamb recipes, so I asked him if he could take one of the legs, cut about four thick steaks from the center, a couple of chops from the sirloin end, and the rest into cubes for shish kebab. He cocked his head, gave me a kind of quizzical look, and then said, "Yeah, sure, that's no problem."

At that moment, I think his idea of me changed from pain in the butt to someone who might be interesting to work with, and I knew I was going to get some good lamb for dinner. I've gone back there consistently over the past couple of years, and now when I walk up to the counter—after Larry makes some crack about being fresh out of lamb's brains—we settle down to see what he can get me that will work for the dish I have in mind. I never did get any skirt steak from Larry, but he did once put aside some fresh ham hocks that came in because he figured I'd probably find it interesting to cook with them. He was right.

So our advice is to make the most of the supermarket meat counter. Challenge the guy behind the counter and see if he will rise to the occasion. Ask him specifically for what you want and see what happens. Some butchers may look at you as if you were crazy, but others will be the happiest supermarket butchers in the world because they get to cut something special for someone who will actually appreciate it, rather than putting the same old stuff into the same old plastic wrappers.

Go ahead and ask for the two-inch-thick pork chop. Find out if, when you come in next week, the butcher could have a five-pound boneless rib roast or a giant T-bone steak for two, ready for you. You've got nothing to lose by asking, and there's a fair chance that you could end up with the equivalent of a butcher shop right in your own supermarket.

A LITTLE SCIENCE: GETTING THE BEST FLAVOR FROM TODAY'S MEAT

Wherever you get your meat, it is going to be considerably different from the meat our grandparents cooked. This is good in some ways and bad in others, but in any case, it has definite implications not only for the particular cut of meat you buy, but also for how you cook it.

Over the past several decades, meat producers have responded to consumer health concerns by modifying breeding and feeding programs in order to produce leaner animals. The results of these efforts have been the most dramatic in pork, in which the fat content of some cuts (mostly from the loin) has been reduced by almost 60 percent in the past quarter century. But today's beef and lamb are also leaner. (Veal has always been relatively lean for red meat.)

This is definitely a positive development in terms of healthfulness. But in terms of sheer sensual enjoyment, it has been a mixed blessing, largely because of the various roles that fat plays in meat.

There are two basic types of fat in meat: intermuscular fat, which is found between and around the muscles, and intramuscular fat, which is within the muscles themselves. Intermuscular fat can usually be trimmed off if you wish, with little effect. But intramuscular fat, also known as marbling, plays several important roles in our enjoyment of meat.

First, when the meat is cooked, the intramuscular fat melts and slips in between the muscle fibers, lubricating them and making them tender. Second, this fat stimulates our salivary glands as we eat, which makes the meat seem juicy as we chew it. Finally, and probably most important, intramuscular fat carries flavor. Meat scientists even theorize that it is the fat that most distinguishes the flavor of one type of red meat from another.

In other words, the less intramuscular fat in a given piece of meat, the less flavorful, tender, and juicy it will be. This is why in days past, when having too much fat in the diet was not considered a problem, cooks engaged in a practice called barding, in which they actually inserted long thin strips of pork fat into lean cuts of meat to improve its gustatory qualities.

All of this does not mean that today's meat is flavorless or boring. But it does mean that the leaner cuts of meat—which also come from more tender parts of the animal, the loin and rib areas—tend to have less robust flavor and somewhat less satisfying “mouth feel” than they did in the past.

On the whole, this seems to be a reasonable trade-off for the health benefits, particularly since there are several ways to address this somewhat lower “flavor quotient” in today's meat. To begin with, it's probably best not to cook lean cuts as long as our grandmothers may have. Without fat to lubricate it, the meat dries out faster and also loses some of its flavor. In the recipes in this book, we have adjusted the cooking times accordingly.

Another way to address the issues raised by lower-fat meat is to look for other qualities that make meat flavorful. Here are three good options.

THE FLAVOR/TENDERNESS NEXUS

Americans in general tend to equate tenderness with quality in meat, but that is not the whole story. Don't get us wrong—we appreciate a super-tender beef tenderloin or lamb loin chop as much as the next person. But we would also like to encourage you to look at meat from the standpoint of valuing the whole animal. If you do so, you'll find that most cuts have some excellent qualities you can appreciate.

In fact, we have found that there is a pretty strong inverse relationship between flavor and tenderness. In other words, the tougher the cut of meat, the more likely it is to have deep, rich flavor. There is a reason, for instance, that osso buco, made from the tough shank, is among the very most popular veal dishes. And, in our experience, you'll never get more satisfying beef flavor than from tough cuts like short ribs or oxtail.

This flavor/tenderness trade-off is familiar to chefs and food scientists alike, but the reason behind it remains somewhat mysterious. In his seminal book *On Food and Cooking*, for example, Harold McGee observes that exercise, which toughens the muscles of animals, also contributes to their flavor. He ascribes this phenomenon to some combination of the nature of tissue cells and the concentration of fat, but he also admits to being somewhat mystified.

Taking advantage of this flavor dynamic usually requires long, slow cooking with moist heat to make the meat more tender. Sometimes, as with the lamb shoulder chops we mentioned earlier, it also means accepting a bit of chewiness. That is a different quality from stringiness or toughness, and it is one we actually enjoy in many cuts of meat.

Some people recommend marinating tougher cuts as a means of making them more tender, but we don't agree. In our experience, marinating only makes the surface of meat mushy and does little to tenderize the interior. We occasionally marinate for flavor, but don't expect it to tenderize.

BETTER ON THE BONE

Another flavor-enhancer is to cook meat on the bone. Apart from the pure primal satisfaction of the bone-in approach, we believe it actually makes the meat taste a little better.

We spent a fair amount of time trying to figure out just why this might be, but without much luck. We asked dozens of scientists, butchers, and just plain old meat eaters about this. Almost to a person, they agreed with our assessment of this issue, but they had little in the way of scientific explanation.

Culinary experts and laboratory scientists at the National Cattleman's Beef Association suggested that it might have to do with the marrow in bones. Marrow has highly concentrated flavor, and they theorized that some of the marrow might seep from the bones into the surrounding meat during cooking, intensifying its taste. This makes sense to us, but when we tried this theory out on some of our butcher friends, they pointed out that even thinner nonmarrow bones, such as those in a rib or a porterhouse steak, sweeten the flavor of meat.

Professor William Mikel of the University of Kentucky thought perhaps it might have to do with differing rates of heat transfer around the bone. In other words, since bone does not heat up as quickly as the meat itself, it may provide the juices with a place to concentrate during the most intense heat of cooking. This squares with our own personal theory, which is that since the bone is surrounded with more capillaries than other parts of the meat, you end up with more juices, and therefore more flavor, in the meat nearest the bone.

Whatever the scientific explanation, it is far less important than the simple pleasure of eating meat on the bone. Try it and we bet you'll agree.

BROWN IS GOOD

There is one final flavor booster that is perhaps the most important of all. Whether you are eating meat bone-in or boneless, whether you choose tough cuts or tender ones, it is crucial to give the meat a good sear at the beginning of cooking.

Despite what you may have heard, searing does not seal moisture inside the meat. What searing does do, though, is create an intense layer of deep flavor on the outside of meat, which in turn adds an unbelievable amount of flavor to the whole dish.

This is one of the secrets of people who cook for a living. Hanging out with professional cooks, two things you notice is that every time they approach a stove they're not only going to make a huge mess (which they generally clean up, to be fair) but if there is meat involved in the meal, at some point you're going to have to open the kitchen windows and turn off the smoke alarms. Unfortunately, we have found that many home cooks tend to shy away from browning meat really well, either from fear of overcooking the outside of the meat or from a dislike for the spattering that sometimes accompanies high-heat searing. Get over it. You really need to sear meat (except veal) until it has a good dark brown coat on all sides.

The reason for this has to do with the ways that sugars and proteins act when they are heated together. The name for this phenomenon is the "Maillard reaction," after the French doctor who first analyzed it back in 1912. Busily investigating amino acids, Maillard stumbled across the fact that when carbohydrates and proteins are heated together, sugars (from the carbohydrate) and amino acids (from the proteins) combine to form new but unstable chemical structures. As the heat continues to be applied, these compounds in turn break down, producing literally hundreds of new by-products, each of which has a distinctive taste and aroma. As a result, food subjected to this process gains a whole new layer of rich, deep, complex flavors.

So start to think of a well-seared, slightly crusty, brown exterior as a forecast of deep flavor rather than a reproach for overcooking. To aid in browning, always dry the meat well before you sear it. To cut down on spattering, use a pot with sides at least five inches high when browning meat for stews and braises; when using a sauté pan, you can always try using one of those mesh spatter shields. And if you become faint of heart, just repeat to yourself the flavor mantra, "Brown is good, brown is good." You're going to have much better meat dishes if you do.

WHEN IS IT DONE?

Knowing when something is done to your liking is perhaps the single most important aspect of being a good cook. Like every other food that is subjected to heat, meat will be underdone, underdone, underdone, done, then overdone. In other words, the window of perfect doneness is a small one, and you need to learn how to jump right through it when it opens.

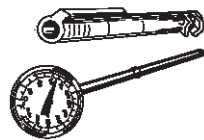
The way to do this varies depending on the cut of meat you're cooking. For roasts, you need a thermometer; for braises, a fork is still the most reliable tool; for smaller pieces of meat, we favor the classic "nick, peek, and cheat" method. The details of each of these methods are explained in the individual sections in "Methods of Meat Cookery," below.

We realize, too, that the point at which something is "done" is not the same for all of us. We believe that you should eat meat the way you like it, not the way you're told to like it. If you want your meat well-done, by all means cook it that way. After all, you're the one who paid for it.

On the other hand, this is our book, so the recipe instructions are generally given for cooking meat the way we like it. We prefer beef rare to medium-rare, but on the rare side; veal medium-rare to medium, but on the medium side; pork medium; and lamb medium-rare. So that's what you'll find in our recipes. But we also give guidelines for those of you who want to cook any of those meats more or less.

It's also true that one person's rare may be another's medium-rare. The table below shows what we mean when we use these terms. The temperatures are the temperatures at which the meat should be removed from the heat; the temperature will rise 5 to 7 degrees as the meat rests—an important reason why you should be sure to give the meat a rest before eating it.

	TEMPERATURE WHEN REMOVED FROM HEAT SOURCE	FINAL APPEARANCE
Rare	120°F	Raw center
Medium-Rare	126°F	Red center, slightly warm
Medium	134°F	Pink center
Medium-Well	150°F	Hint of pink in center
Well-Done	160°F	Cooked throughout; no pink in center



PUTTING THE FIRE TO IT: METHODS OF MEAT COOKERY

Determining when meat is done is the end of the cooking process. Selecting the right method for the particular cut of meat is the beginning. In between is another critical part—applying the principles of the particular cooking method correctly.

The sections below explain the hows and whys of each of these techniques. Most of the principles are at least as old as Escoffier, but we've tried to highlight what we have learned over the past couple of years about just how to apply each method to the cooking of meat. We've included a little science when we thought it would make the reasons behind the procedures clearer. In many ways, this is the heart of the book. Read it, and you'll be a great meat cook in no time.

ROASTING

To us, there's nothing more mouthwatering than a big, juicy, perfectly seared roast emerging from the oven. From medieval times, when a "joint" was the center of every banquet worth attending, right on down to the Sunday dinners and holiday feasts of our youth, roasts have always had a special standing as not only luxurious and celebratory, but completely delicious. Not to mention that they often produce some very high-quality leftovers.

Another reason for the enduring popularity of roasts is that they are very simple: Just put that meat in the oven and go about your other business as it cooks.

Despite this simplicity, though, the ability to roast well has long been considered a crucial test of a cook's skill. Brillat-Savarin, the famous and very influential nineteenth-century French gourmand, even went so far as to say that roasting was an innate skill that determined whether you would be a good cook or not; if you were unlucky enough not to be born a roaster, there was no way you could be taught. Even though at that time "roasting" meant turning meat on a spit over an open fire, we still think that Brillat-Savarin was off-base. Instead, we go along with that other celebrated Frenchman of the nineteenth century, Auguste Escoffier, the chef who basically codified Western culinary techniques. "One may become a good roaster," he said, "with application, observation, care, and a little aptitude."

Actually, we don't even think you need much aptitude if you just pay some attention to what you're doing.

The first step is picking the right cut of meat, which is very simple. As a dry-heat cooking method, roasting is suitable only for relatively tender cuts. Because it is a rather slow cooking process, it is also best for large cuts of meat, those that take a while to cook all the way through.

With the meat chosen, you are ready to roast. Our approach, which we think will give you excellent results, may be a little different from the style that you're used to. It may seem a bit mysterious. But it is actually quite simple. The three key points are: Sear the meat at a high oven temperature, finish roasting at a low to moderate temperature, and estimate the cooking time not by weight, but by mass.

Let's take the last point first. One culinary myth that has resulted in many an unsatisfactory meal is the idea that you should cook a roast for "X" minutes per pound. Please forget that. It just doesn't make sense. What matters in determining roasting time is not so much the weight of the roast, but its size and shape. This is particularly true of roasts from the loin and the rib, which tend to be oblong in shape. For roasts from the round and chuck, which are usually rolled and tied, there is a closer (although far from exact) correlation between weight and cooking time.

Here's an example. Say you have one tenderloin that is six inches long and about two inches in diameter, and another that is a foot long and also about two inches in diameter. The second one weighs about twice as much as the first, but do you really think it will take twice as long to cook? No way. It will actually take almost exactly the same amount of time, because it is about the same thickness. If, on the other hand, you took two tenderloins, stacked them on top of each other, and tied them together, it would indeed take about twice as long to roast as a single tenderloin, because the combined pieces of meat would be twice as thick. It is the mass and shape, not the weight, that is the best indicator of cooking time.

So from now on when you look at a roast in the market, don't think of it as so many pounds; instead, think of how it relates in size and shape to a familiar object like a milk carton. That will be a much better rough guide to how long it will take to cook. Of course, its exact cooking time will vary depending on the degree of doneness you are looking for, but this will provide you with a general idea. More importantly, it will start you thinking about mass rather than weight when cooking roasts. So here are approximate cooking times, geared toward having the meat medium-rare, for roasts that look like they are about the size of these containers, assuming that you use our approach of searing hard and then cooking low:

CONTAINER SIZE	APPROXIMATE COOKING TIME
1 quart	30 to 40 minutes
½ gallon	45 minutes to 1 hour
Gallon jug	2 to 2½ hours

Milk carton art will go here

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