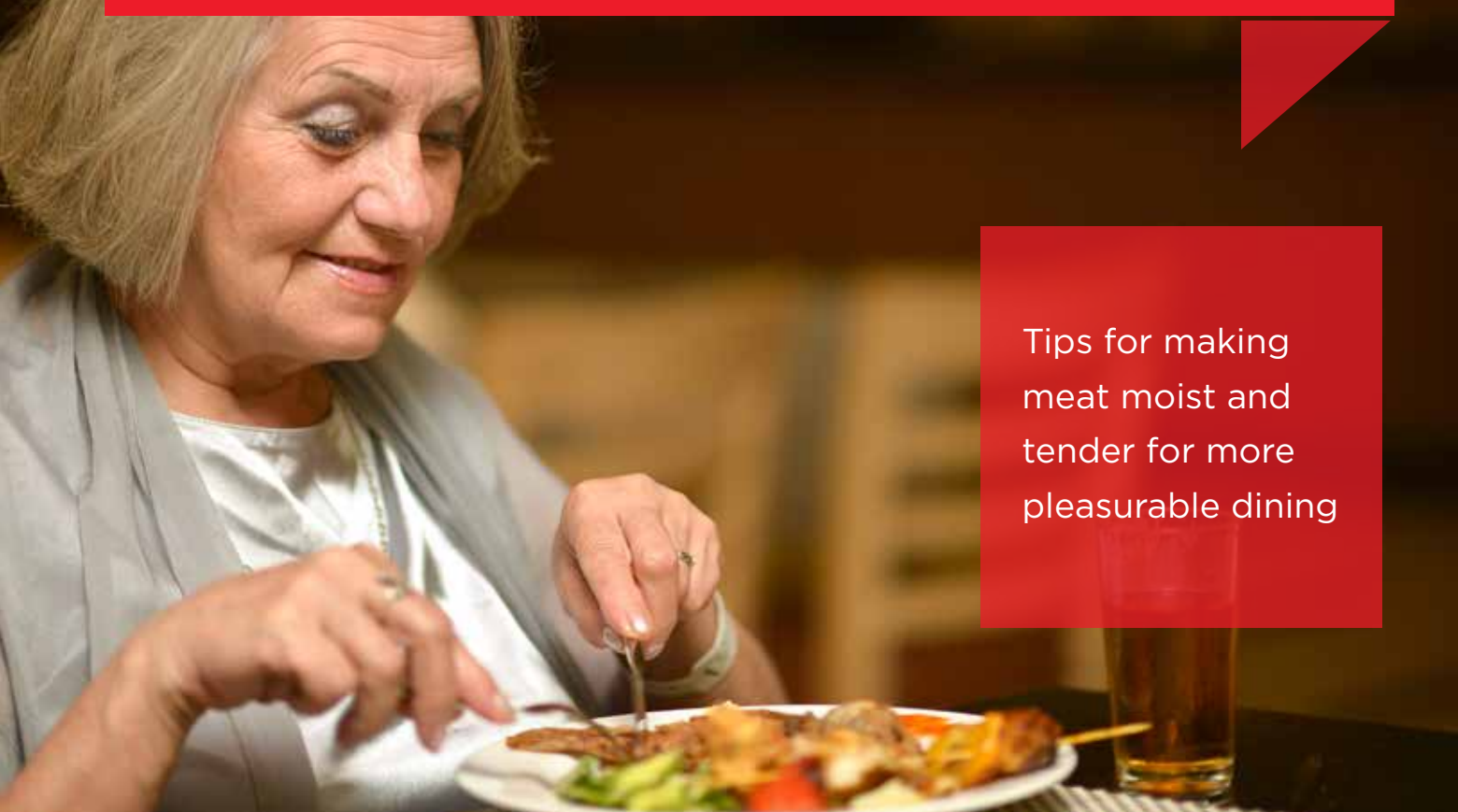


Making Meat Easy to Eat for the Elderly

CULINARY CONNECTION



Tips for making meat moist and tender for more pleasurable dining

“But doth not the appetite alter? A man loves the meat in his youth that he cannot endure in his age.”

—William Shakespeare (1564-1616), *Much Ado About Nothing*

Was Shakespeare onto something? Meat is easily devoured by the young, but with age it becomes more difficult to cut, chew, and swallow. In North America, meat from livestock and poultry provide the lion’s share of our protein, and often represent the biggest chunk of our grocery spending.¹ This means there is a lot of pressure on chefs to get it right. The residents in this age group are not shy about making their feelings known, sometimes with colorful adjectives like “shoe leather,” “tough as an old boot,” or other miscellaneous footwear. The moment you transition from fine dining to

senior living, must you purge the term *al dente* from your vocabulary?²

What is going on with the older crowd that makes them more susceptible to finding meats chewy and dry? We will cover this in the next few paragraphs, and hopefully you will walk away with some techniques to make meats easier to eat for the elderly.

DENTITION AND DENTURES

Humans start off with no teeth, and eventually we develop 32 adult teeth early in life. When they are gone, they are gone forever. Try as we might, even with dentures and implants, the loss of these teeth has a huge impact on the texture of our food. With regards to meat toughness, the number of *original* teeth you have is the single most important factor in how you



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experience toughness. The fewer the teeth, the tougher the meat seems. Adults over the age of 65 have an average of 19 original teeth remaining. A staggering 27 percent of adults over age 65 have *zero* original teeth remaining.³ We are chefs and foodservice professionals, not dentists, but this is important to be aware of. It is no wonder that seniors often prefer canned vegetables for their softness.

MOISTURE AND MASTICATION

A complex little dance is occurring in your mouth when you bite, chew, and swallow. It involves salivary glands, your teeth, tongue, and the muscles in your throat. When any one of these gets out of harmony, it lessens the enjoyment of eating. *Xerostomia* (dry mouth) as a result of *hyposalivation* (low saliva production) affects the elderly at a higher rate than younger folks. Some 30 percent of seniors suffer from dry mouth (Anurag Gupta, Joel B. Epstein, & Herve Sroussi, 2006). Without the saliva present to facilitate the process, it becomes challenging to chew and swallow. The biggest causes of these conditions are side effects from medications, dehydration, and anxiety/depression. About 85 percent of adults over age 65 are on at least one prescription medication, and more than

250 commonly-prescribed medications list dry mouth as a side effect (Craig M. Hales, 2019). Knowing this, it is vital that we serve meats with as much moisture present as possible.

Another issue is *sarcopenia*, the progressive weakening in our muscles as we age. The muscles of the jaws and tongue are resistant, but not immune to this condition, further complicating the challenges already present. Weakening of the hands can also make cutting meat a monumental task. If a resident has



difficulty cutting meat, they will have the perception of toughness before they ever take a bite (Nami Machida, 2017).

A CRASH COURSE IN MEAT SCIENCE

To master meat, you must first understand what makes it tender. Meat is bundles of long protein cells bound together by connective tissues.

It is made primarily of water, which is bound up between long fibers of proteins and amino acids interspersed with fat. These are held together by connective tissues like collagen and elastin. These bundles of fibers form individual muscles, and they are linked to each other, and to the bones, by tendons. This is a drastic simplification, but it is important to our topic for a few reasons. The toughness of a cut of meat, and the cooking methods you can use to prepare it, are determined by the amount and type of connective tissue, the length/

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width of the muscle fibers, the fat marbling, and how often the muscle is used.

With connective tissue, it is important to distinguish *collagen* from *elastin*. Elastin is much thicker, often called “*silverskin*,” and separates different muscles from each other (Purslow, 2005). Under the right combination of heat

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and temperature, collagen dissolves and adds flavor and body to the finished product. *Elastin and tendons will never break down while cooking* (Purslow, 2018). These things are the gristle that people furtively spit into a napkin when no one is looking, and they can instantly ruin a meal.

Cuts containing a lot of connective tissues with large muscle fibers are inexpensive but must be handled with care. They must be prepped before cooking to remove any elastin or tendons. “Low and slow” cooking methods like simmering, braising, and sous vide are best to tenderize and turn all the undesirable elements into rich flavor. I prefer braising, as I then have a nearly finished sauce just by thickening the braising liquid when the meat is done. I braise everything from bone-in chicken to breaded pork chops. My general rule is that all meat should be fork tender, like pot roast, or it isn’t worth serving.

Cuts of butchered meat containing minimal collagen, a nice “marbling” of fat, and trimmed to be free of any elastin or tendons, are suitable for dry heat (think grilling, pan searing, etc.) or cook-to-order applications. These are fast and easy, but they are the most expensive cuts of meat on the market—your tenderloins and rib-eye steaks. They should be cut thin enough, and against the grain, to make the length of the muscle fiber as short as possible. Then you must find the “goldilocks zone” between safe minimum temperatures and not drying out the final product. Usually, cooking in small batches will fix this problem, but your mileage may vary.

TEXT NOTES

1. The word *meat* didn’t mean strictly animal products until around 1300; the term previously referred to any form of nourishment.
2. *Al Dente* translates literally as “to the tooth” and refers to cooking pasta and vegetables so that they retain firmness. Both pasta and vegetables cooked this way are healthier than their mushy cousins for both nutrient content and their glycemic index.
3. Other factors impact this average; lower socioeconomic groups and less educated individuals tend to have a lower average number of teeth than the norm.
4. Prepackaged gravy mixes are fine, and you can tweak them in a flash by adding some reduced wine, concentrated juice, or fresh chopped herbs. These are quick, inexpensive sauce replacements for things like beef burgundy and chicken marsala.



It is worth mentioning two popular meats lacking in marbling fat. Often called “white” meats, chicken breast and pork loin are best served immediately after cooking. They are prone to drying from overcooking and long hot-holding times, especially when they have been previously frozen.

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SUMMING IT UP

Meat doesn't have to be difficult to eat for the elderly. Remain aware of the physical challenges facing our aging seniors, and take steps to prevent tough, dry food before it happens, which will in turn improve nutrition and overall health.

Take some time to learn about the different cuts of beef, chicken, and pork, and see what preparation methods work best for your operation. Try braising meats after they have already

been portioned; the smaller cuts will reach desired tenderness more quickly. This adds flavor and moisture and it provides a great starting place for a sauce, which you should try to offer as much as possible.⁴ When cooking to order, remember not to overcook, as this will make meats tougher and drier in the short run. With some simple planning and preparation, you can make every bite soft and tender for your residents without spending a fortune. Happy cooking! **E**

CE Questions | CULINARY CONNECTION



This Level II article assumes that the reader has a foundation of basic concepts of the topic. The desired outcome is to enhance knowledge and facilitate application of knowledge to practice.

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Reading *Making Meat Easier to Eat for the Elderly* and successfully completing these questions online has been approved for 1 hour of continuing education for CDM, CFPPs. CE credit is available ONLINE ONLY. To earn 1 GEN CE hour, access the online CE quiz in the ANFP Marketplace. Visit www.ANFPonline.org/market and select "Edge CE Articles" within the Publications Section. If you don't see your article title on the first page, then search the title, "Making Meat Easier to Eat for the Elderly." Once on the article title page, purchase the article and complete the CE quiz.

- Experiencing meat as tougher than expected is commonly linked to:
 - Insomnia
 - Undercooked meat
 - Tooth loss
- Proper saliva production helps individuals:
 - Chew
 - Swallow
 - Both A and B
- Meat is mostly comprised of:
 - Water
 - Long bundles of cells
 - Tendons
- Cuts of meat with large muscle fibers and lots of connective tissue are suitable for what form of cooking?
 - Fast cooking with high heat
 - Braising, simmering, or sous vide
 - Deep frying
- Many elderly individuals prefer canned vegetables because:
 - They are healthier
 - They are high in sodium
 - They are soft and easy to chew
- Elderly people cannot enjoy meat.
 - True
 - False
- Steaks with minimal connective tissue and small muscle fibers are sought-after because:
 - They are inexpensive
 - They are great for stews
 - They can be cooked quickly, and remain tender with minimum preparation

