

# UF-Gainesville Beef Cattle News Corner

## Eating meat allowed our brain to grow and made us humans

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It won't come as a big surprise to anybody who knows me personally that I love food, and a good hamburger or a steak more than anything else. It is hard to beat a properly cooked piece of meat in terms of taste! But also, my research for the last 20 years revolved around not only genetics of meat quality (marbling, tenderness) but also genetics of beef healthfulness (fatty acid composition) and mineral content. I read a lot of the scientific literature related to this topic and I published several articles in this very Journal about my take on the controversy which exists around the healthfulness of beef. I strongly believe that beef is an important component in a healthy diet because of the high-quality protein, minerals and vitamins (including iron and vitamin B12), and essential fatty acids it contains.

Although I am making these scientific arguments regarding the positive attributes of beef all the time and to everybody who would listen, I do respect people's choice to eat a meat-free diet. We are very fortunate to be living in a society where we have this option through supplementation, and we can still live a healthy life without meat or on a completely vegan diet. It is a personal choice and if somebody chooses to be a vegetarian or a vegan because they believe this is a healthier option for them, I am the first one to respect their choice.

However, I do have a problem when some activist groups try to push it on the entire world, for environmental reasons or because they believe we were not "designed" to eat meat. The first reason is very easy to defend with some basic agricultural facts which as an industry we should all try to tell more often. I will give you only one and maybe we will revisit other facts in another article: a scientific article concluded that if Americans eliminated all animal protein from their diets, they would reduce US greenhouse gas emissions by only 2.6 percent. The second reason, that we were never meant to eat animal products at all, it is also easy to debunk, but it has been a breath of fresh air to see several articles lately in journals like "Nature" making it clear that we wouldn't even have *become* human—at least not the modern, verbal, intelligent humans we are without eating meat.

More than 2.6 million years ago, we faced a choice: big guts or big brains. The diet of our earliest ancestors was similar to the diet of modern chimpanzees and included fruit, leaves, maybe some nuts and when they ventured down onto land, they added underground tubers, roots and berries. This was a low energy diet and you had to eat a lot of it and have a big gut to digest it to get the energy needed. By at least 2.6 million years ago, some hominins began incorporating meat and marrow into their diet. The first meat eaten by early humans likely came not from hunting but from scavenging. Including meat in our diet triggered a suit of evolutionary

adaptations that in the end made us humans. Our bodies could spend more energy on other things like building a bigger brain. So, eating meat apparently made our ancestors smarter. Smart enough to make better tools which allowed grinding things and by 800,000 years ago, domesticating fire. The tools were important because they were initially used to butcher carcasses, slice raw meat to make it chewable and easier to digest, and crack large bones to access marrow. Our teeth, jaws and mouth changed because we did not need big sharp teeth, and our brain got bigger. Animal fat is rich in long-chain fatty acids which are essential for brain development. I do not have to explain why domesticating fire was important, but from the meat perspective, it made it taste better, killed some pathogens and made it easier to digest.

We are what we are today because about 2.6 million years ago some of our ancestors ventured down from the trees and chose to eat meat. Diet is a powerful evolutionary force and meat was the fork that diverged our lineage from all other primates. We became persistence hunters (the only primate adapted for endurance running) by losing our hair and developing millions of sweat glands to allow for more sweating (and prevent hyperthermia), we developed longer lower limbs with muscles like the glutes and tendons like the achilles for running, and the muscles in our shoulders decoupled allowing us to become rock throwers, then spear throwers, then baseball throwers. And we developed a huge brain!

Meat literally made us human. We can choose to eat what we want, and we can choose not to eat meat, but there is no reason to label meat as dangerous and putting us at risk.