

The influence of meat consumption on human evolution

In ancient Greece, Aristotle used to refer to the human being as a "political animal". Some years later, also in Greece, Galen of Pergamum managed to dissect various types of animals and found that their organs, tissues, veins, arteries, and bones were similar to those of humans. In the eighteenth century, Charles Darwin, Thomas Huxley and Ernest Haeckel conclusively demonstrated that humans are not a product of creation but of evolution. According to recent advances in molecular techniques, chimpanzees share 98% of their genome with humans. So, it is clear that we are part of the animal world, but we are exceptional because we cook our food and grill our meat while socialize with members of our species.

According to the evidence, our ancestors began to eat meat about 2.5 million years ago. Meat was initially obtained through scavenging carrion from dead mammals and then they combined this activity with hunting. As an important feature, these hominids had large teeth and digestive tract to grind and digest food. It is estimated that an individual at that time had to invest 25% of time in chewing food.

Two important events occurred during the evolution of *Homo*. One was the development of sharp tools, which allowed to break the skin of dead animals and get to the meat and other tissues such as bone marrow and brain. Sharp tools improved the ability to access into a larger amount of animal flesh, providing adequate levels of fatty acids that sustained rapid brain evolution. The other event was the domestication of fire, which had a great influence on the evolution of our ancestors. Without cooking our food we would have to spend half our days chewing; just as our closest cousins, the chimpanzees.

Therefore, three things happened when man started roasting meat: 1) a decrease in the size of the intestine -because roasting increases nutrients availability; 2) teeth size also decreased -because roasted meat becomes much easier to chew; and 3) an increase in the size of the skull, leading to a larger and more complex brain, with a greater number of neural connections that improved hunting efficiency, so they could eat more meat. Ultimately, this led to the development of language and much higher cognitive abilities compared to those of other animals -as explained by Richard Wrangham of Harvard University in his book *Catching Fire: How Cooking Made Us Human*.

Considering that roasting played a key role in our evolution, we should encourage research focusing on meat quality as well as innovative and attractive grill cuts. We should also welcome meat traceability and quality seals because they provide safety and quality assurance. Finally, we should welcome meat consumption. Let's not forget that the oldest profession in the world is the cook, and the grillers are part of it.

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