

# **Protein and Human Evolution**

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Human development and evolution is something that has fascinated humans since the beginning of our existence. The desire to know and understand from what we came and how it occurred are fundamental in understanding who we are. Despite many differences in how man came to be, the vast majority of people believe that man has evolved, is evolving, and will continue to do so. One of the many factors in human evolution was the introduction of protein into the diets of humans. Without protein human evolution would have stopped leaving us much like the primates many say we are derived from. Protein, and more importantly animal protein, was necessary for primates to continue evolution, and the tools invented were necessary to obtain and use the protein sources. Animal protein mixed with the diet already existing was ideal to continue progression as a species.

## **The Importance of Protein**

Protein is the building block of all muscle in our bodies. Today many people think of this as the large defined muscles we see in athletes. This is true but there is much more to the story. Protein also helps us develop the other “less noticed muscles” such as our eyes, lungs, brain and other organs. Protein and the right type were absolutely necessary for man kind to continue progression.

Many people know that protein can be found in many food sources, many plants including beans contain protein. Vegetarians argue that plant sources contain enough protein. What many people don't know is that there are complete and incomplete proteins. A complete protein contains all sixteen essential bcaa's (branched chain amino acids) these sixteen amino acids are the most important and can combine and react in

order to create any of the other amino acids. Plant sources of protein are always incomplete sources of protein. They lack all the essential amino acids. The only way to make them complete is to introduce another food containing the missing amino acids into the meal. Animal protein on the other hand is always complete and always contains all and usually a much higher concentration of the necessary amino acids for the body to grow and develop.

The amino acids in animal protein are much more useful to humans. Scientists have studied the bodies' ability to make use of the amino acids found in many protein sources. Proteins are rated on a scale of 1 – 100 (the latter being the best) to determine their B.V. (biological value) First, on the list scoring a perfect 100 is egg whites from chickens. The vast majority of all other animal derived protein sources fall in closely. Protein sources from plants then show up on the list behind all animal protein sources. This is due to substances in the legumes that cause them to pass through the digestive system without allowing the protein to be absorbed. The inability of our body to digest the protein makes it completely useless many times.

Protein was necessary for humans to grow, become stronger and more able to work, and to increase the size and ability of vital organs. Without protein the progression and evolution would have ceased. Primates in many parts of the world had begun eating and benefiting from protein coming from plants. However, in order to achieve the complete benefits of protein a complete and more useable protein source was necessary. Animal protein was the answer.

### **The Necessary Tools**

In many cases obtaining protein from animals was easier said than done. The large beasts roaming the earth were fast, powerful, and would fight back, exactly the opposite of the plants, nuts, and beans that were the diet of the primates. Another major difference in animal derived protein from the plants and beans was its texture. Primate's teeth were ideal for consumption of plants, nuts, and beans. A stark contrast was the flesh of

animals which was chewy and difficult to tear. In order to make this new protein useful, early humans would have to get over these hurdles.

It is very likely that early humans started eating animals as scavengers. The animal was already dead and what hadn't been consumed by other animals was welcomed by humans. However, the problem of separating meat and bones soon arrived. To solve this, primitive knives were made from stone. Several of these tools have been discovered in Ethiopia and are 2.6 million years old. (Haviland et. Al 68) Knives also likely had another use to our ancestors. As scavengers, many times the meat, as we think of it was scarce, but bones containing protein rich marrow remained. Knives and rocks were likely used to break open the bones so that marrow could be sucked or scooped out.

Fire was also a necessary tool to help in meat preparation. As scavengers, primitive humans likely came across animal remains which were old and had begun to decay. In order to make this useable fire was a useful tool. Cooking meat makes it more digestible, easier to chew, and most importantly sanitizes the meat. In order to avoid disease these early humans likely learned that by cooking their meat it was easier to eat and the chances of becoming ill were greatly reduced.

As these people became more evolved and improved in tool making techniques they were ready to actively hunt their meat. Better and fresher meat could be obtained by hunting the animals. Spears and arrows likely evolved to fit this purpose. Now humans could produce their own meat instead of waiting and hoping to come across another animals kill.

By inventing and discovering tools necessary primitive humans were able to obtain animals to better serve their protein need. This improvement in their diet allowed for better health and strength and allowed them to evolve and improve.

### **The Ideal Diet**

Now that these people had become hunter/gatherers their diets had everything necessary to continue evolution. Meat alone never was and never could have been the answer. The vitamins and minerals contained in the plant nutrition often aren't found in plants. Our early ancestors found that a balance was the answer and were able to progress with the new diet. The new and better protein allowed them to grow larger and stronger. Organs had protein to repair themselves and continue to develop. The brain grew and deeper thought and cultural progress started. The plant food sources provided the vitamins and minerals that meat can lack. This allowed humans to stay healthy and avoid diseases. It also contained fiber and other necessary carbohydrates to give them energy to live and do their day to day tasks.

Now that early humans had bodies that were stronger and healthier than ever before they were able to make progress. The introduction of animal protein made primitive humans stronger and helped their brain and other organs to develop. The use of tools made it possible to use this food source and also gave way to many other inventions.

### **Reference**

Haviland W. A. et al. 2005 *Cultural Anthropology: The Human Challenge* 11<sup>th</sup> Edition. Thomas Wadsworth. Belmont, CA.