

Lions and all other large felines are carnivores. It was presumed that the most suitable food for them is meat, which was served every day in the recommended dosage of 7.5 – 10 kg of beef muscle with bone per lion. However recent research suggests that this assumption is false. Lions living in the wild consume whole vertebrates, including their muscles, skin, fur/feathers, innards, and bones. They get their minerals, vitamins, and fatty acids from various sources like organs, fat, bones, and connective tissue, not just from meat. In the wild they have a balanced diet, as they consume animal protein, which is easier to digest, making them able to break down lesser amounts of glucose, and have a faster protein metabolism. Their food contains many premade amino acids, fatty acids, and vitamins. It is difficult to supplement their natural diet in zoos, however it is not impossible.

We were forced to ponder this problem after a tragic event. In 2019, our young lioness Damali fell sick with an illness called Stargazing, which sadly proved to be fatal. The cause of the illness lies in vitamin A deficiency, which is especially damaging for young and growing animals, as it causes a metabolic bone sickness. It is imperative for the healthy growth of the animals to have an abundance of vitamin D3, thiamine (B1) and copper, so supplying all of the necessary nutrients in their food became our highest priority.

One of the ways to supply all the necessary minerals and vitamins is giving them supplemented meat. While the dosage of supplements is very complicated, eating supplemented meat can also lead to an imbalance of the Ca:P ratio, which should be kept between 1:1 and 2:1. The dosage of the fat--soluble vitamins (A, E, D3) can be tricky, as they can become toxic in high doses.

Feeding lions and other large felines suddenly becomes alchemy. One easy solution remains though – feeding the felines with whole animals. After Damali died, we decided to thoroughly test this solution. The lions are given entire ungulates, which are no longer needed in the zoo either because of injury or overpopulation. The lions are therefore given the most natural and fresh prey possible. Aside from undulates, they are also given sheep, goats, rabbits, chicken, and beef. We of course abide by all the necessary veterinary rules and regulations.

# The Lion Menu

### Monday Fasting

### Tuesday

Freshly slaughtered sheep or antelope, or beef or venison with hair

Wednesday Finishing leftovers from the main Tuesday menu

### Thursday Finishing leftovers from the main Tuesday menu

Fasting

Friday

# Saturday

Freshly slaughtered bunny or chicken

## Sunday

Fasting

Meat is always fresh and of the highest quality.

