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Nutritive value of Meat

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Introduction:

Meat is a very nutritious food. It is almost fully digestible. It is appealing to the eyes and pleasing to the sense of olfaction. The nutritive value of meat is attributed to its abundant high-quality proteins which provides all the essential amino acids and various micro nutrients in proper proportion to the human beings, essential fatty acids, some important minerals and B-complex group of vitamins. It remains to be an economically important, nutritionally valuable and organoleptically delicious palate to the consumer. In case of poultry meat, not only the meat from commercial broilers but also the meat obtained from native chicken having high nutritive value and having unique strong flavour, firm and hard texture and lower fat content (Rajkumar *et al*., 2016; Zhao *et al.*, 2007; Chen *et al*., 2008) as a result the demand for native chicken increasing day by day especially in villages to meet the nutritional requirement of body.

Meat proteins:

Meat is a concentrated source of proteins which are more superior to the plant proteins due to very high biological value. Most lean meat cuts contain 16.5-20% protein. This protein is rich in essential amino acids. Among all the proteins Myofibrillar and sarcoplasmic proteins are of high quality because they contain essential amino acids, whereas connective tissue proteins have lower levels of tryptophan and sulphur containing amino acids. Collagen is a connective tissue protein with poor lysine content.

Meat Fats:

Meat fat contains a greater number of fatty acids and the nutritional demand for human body is met by intramuscular fat itself. The calorific value of meat depends on amount of fat present in the meat cuts and is because of fatty acids in tryglycerides. The most abundant unsaturated fatty acid in meat fat is oleic acid, which is followed by saturated fatty acids palmitic and stearic acids. In human diet the essential fatty acids are linoleic, linolenic and arachidonic acids. Pork and organ meats contain high sources of linoleic & linolenic acids, whereas the requirement for arachidonic acid is met by conversion of excess linoleic acid in body to arachidonic acid. Phospholipids are also present in meat fat and are essential components of cell wall as well as mitochondria. Meat fat also contain cholesterol. Organ meats contain high amount of cholesterol compared to skeletal meat.

OCCURANCE OF FATTY ACIDS AS PERCENTAGE OF TOTAL MEAT FAT

Fatty acid	Lamb	Pork	Beef
Palmitic acid (C16)	25	28	29
Stearic acid (C18)	25	13	20
Palmitoleic acid (C16:1)	-	3	2
Oleic acid (C18:1)	39	6	42
Linoleic acid (C18:2)	4	10	2
Linolenic acid (C18:3)	0.5	0.7	0.5
Arachidonic acid (C20:4)	1.5	2	0.1

Minerals:

Meat is a good source of all minerals except calcium. These are present in close association with lean tissue in meat. Among all the minerals potassium is the most abundant mineral followed by phosphorous. Also, meat is a good source of iron which is essential for the synthesis of haemoglobin, myoglobin and some enzymes, as a result playing an important role in maintaining good health.

Vitamins:

Lean meat is an excellent source of B-Complex vitamins, having only traces of fat-soluble vitamins. Vitamin C is absent in lean meat, whereas certain organs contain it in minor quantities. Among all the B-Complex vitamins thiamine, riboflavin and niacin present in quite high concentrations, especially pork meat contains 5 to 10 times more thiamine compared to other meat. Liver is a rich source of iron, riboflavin, niacin and vitamin.

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