

Popular Article

Source of Functional Food: Meat

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- An essential supplier of numerous nutrients is meat. It is particularly rich in high biological value protein, as well as micronutrients like iron, selenium, zinc and vitamin B12. Liver and other offal meats are primary determinants of folic acid and vitamin A. Meat is some highly nutritious food rich in protein, indispensable amino acids, vitamins (especially the B Vitamins) and minerals (like zinc and iron).
- The demand for functional meat products has increased in recent years. These products must now have less salt, nitrites and nitrates, fat, cholesterol, and sodium, and must also have altered fatty acid profiles.
- Some of the essential nutrients which can be considered functional in meat products are Vitamins A, E and C and minerals like Magnesium, calcium and potassium. Non-essential components which can be supplemented with meat include dietary fiber, long chain omega-3 fatty acids, bioactive peptides, conjugated linoleic acid, probiotic bacteria, prebiotics and antioxidants.
- It has been found that many bioactive peptides are also produced during the processing of meat like fermentation and hydrolysis so the generation of these compounds and subsequent enrichment in meat products can prove beneficial for human health
- Different sources were used for making the meat functional such supplementation of antioxidants (α -lipoic acid, α -tocopherol), supplementation of omega-3 fatty acids sources including conjugate linolenic acid (CLA). CLA has importance due to antiobesity, anticarcinogen and ability in the immune-protection. Because meat with excessive fat levels may lead to a number of ailments, the production of low-fat meat products was also crucial for customers.

- The majority of industrially creative research has been concentrated on the creation of low-fat meat products, although there has been some hesitancy toward adding more powerful and active physiological ingredients to meat products.
- In poultry, chicken breast is a particularly good source of niacin and vitamin while 100 g of turkey breast supply 31% of niacin DR and 29% of vitamin B6 DR. Both supply between 6 to 8% of DR. Meat is also one of the best sources for zinc, selenium phosphorus and iron.
- Meat is a valuable source of complex B vitamins, especially B12, the most complex and largest vitamin. Animal foods are considered the major dietary sources of vitamin B12.
- Functional meat production has different objectives. To make the meat more functional, other sources were added, including omega-3 fatty acid sources such conjugated linolenic acid, antioxidant supplements (-lipoic acid, -tocopherol), and antioxidant supplements (CLA). CLA has importance due to antiobesity, anticarcinogen and ability in the immune-protection. As meat with excessive fat levels may lead to a number of ailments, the manufacturing of low-fat meat products was also crucial for customers.
- Supplementation of food products, especially meat products, with proteins from vegetable origin has proved to be both nutritionally and functionally beneficial. Soy proteins contain such typical proteins which provide health-enhancing benefits. They have been associated with health benefits such as prevention from cancer, osteoporosis and cardiovascular diseases.
- Meat has a lower allergenic tendency than popular foods that cause allergies, like as soy, milk, wheat, eggs, peanuts, fruits, shellfish, and tree nuts.
- Various sources, including oilseeds, vegetable oils, and fish oil, are utilised to produce CLA. Manipulation of animal diet with oilseeds high in linoleic and linolenic acids can yield an increase of up to 3 times in dietary CLA in meat.
- Feed modification is an old but still applicable technique to change the fatty acid profile and thus produce a functional meat product.
- Reformulation with omega-3 fatty acids and reducing the fat contents by addition of fat replacers and fiber has been proved to be economical yet effective strategy. Fortification of meat with bioactive compounds like conjugated linoleic acid, carnosine and anserine which are naturally present in meat is an efficient way to address the need for functional meat products.

- Furthermore, it has been shown that functional components, such as the many herbs and spices used in meat products, offer a variety of physiological advantages when consumed. Probiotics can prove to be the trendsetters for development of innovative meat products but there is the need for more human-based studies to establish documented proofs of their advantages and to increase the consumer confidence as a consequence.