



**Increased Availability:** Preservation methods make it possible to enjoy meat outside of peak harvest times or in locations far from where the animal was raised. This increases the variety of meat choices available to consumers year-round.

**Convenience:** Preserved meats are often pre-cooked or prepared in a way that makes them convenient to use. This saves time in the kitchen and is great for busy lifestyles.

**Safety:** Proper preservation techniques prevent the growth of harmful bacteria that can cause foodborne illness. This makes meat safer to consume.

**Enhanced Flavor and Texture:** Some preservation methods, like smoking or curing, can actually improve the flavor and texture of meat.

Overall, meat preservation plays a vital role in our food system by reducing waste, increasing access to meat, and making it a more convenient and safer food.

### Methods of Meat Preservation

**Chilling and Freezing:** This is the most common method of meat preservation today. Chilling (around 3°C or 37°F) slows down microbial growth, which can spoil meat. Freezing (at or below -18°C or 0°F) stops microbial growth almost entirely. Meat can be safely stored frozen for several months to a year.

**Curing:** Salting is one of the oldest and simplest methods of meat preservation. Salt draws out moisture from the meat, creating an environment that is inhospitable to bacteria. Nitrates or nitrites are also often added to cured meats to prevent the growth of *Clostridium botulinum*, bacteria that can cause botulism. Smoking is sometimes combined with curing to add flavor and further preserve the meat. Common cured meats include ham, bacon, sausage, and jerky.

**Drying:** Drying meat removes moisture, making it difficult for bacteria to grow. This method is often used in conjunction with other preservation techniques, such as salting. Jerky is an example of dried meat.

**Canning:** Canning involves sealing meat in airtight containers and then heating it to a high temperature. This process kills bacteria and creates a vacuum that prevents spoilage. Canned meat can be stored for several years.

**Irradiation:** Irradiation uses ionizing radiation to kill bacteria in food. Irradiated meat is safe to eat, but it is not widely available in many parts of the world due to consumer concerns about the safety of irradiation.

### CONCLUSION

Meat is an important factor of a healthy and balanced diet due to its nutritional value. The composition of meat provides an ideal atmosphere for the growth and propagation of spoilage micro-organism and common foodborne pathogens. Microbial growth depends upon the condition of the carcasses at the time of slaughter, the type of packaging and storage conditions. Microbial spoilage looks like in a sour taste, off-flavors, discoloration, gas production, pH change, slime formation, structural degradation, off odors and change in product appearance. Preservation results that the quality, nutritive value and edibility of meat remain intact. For controlling enzymatic, microbial and oxidative spoilage, low temp storage and chemical techniques are the most commonly used in the industry today. It is essential to store the meat at lower temp than 4°C immediately after slaughtering and during transport and storage, as it is critical for meat hygiene, safety, shelf life, appearance and eating quality. As meat is quickly spoiled due to micro-organism, it is advisable that meat should be properly preserved so that it remains in good condition for further use.

### REFERENCES

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