

Whitepaper Meat

Transport fresh meat: don't give harmful bacteria a chance

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In Europe, we consume on average about **68 kilos** meat per year per person (based on in-store weight). Fresh meat goes a long way before it reaches the consumer's plate. However, when transporting and storing meat, environmental conditions and working methods are crucial for quality preservation. And since eating spoiled meat can be very harmful to health, it is very important to pay enough attention to this. In this whitepaper you can read how you can delay the spoilage of fresh meat as much as possible and which tools you can use for this.

Meat consumption in the Netherlands

We consume quite a lot of meat altogether. The bulk of this is pork, but chicken and beef are also popular. It is striking that on average men eat more meat than women. [Research](#) shows that we can expect a shift in meat consumption: among the younger generation (18-29 years old) more people are vegetarian and the willingness to consume less meat is also higher, compared to older generations. The [EU Agricultural Outlook 2021-2031](#) expects a declining trend in the average meat consumption per person.

About half of the meat we eat each week is so-called processed meat. This is meat that has been smoked,

salted or dried, or to which preservatives have been added. The purpose of this is to improve the taste or extend the shelf life. However, processed meat carries health risks: eating it increases the risk of colon cancer. This also applies to red meat, but to a lesser extent. The Netherlands Nutrition Center and the World Cancer Research Fund recommend a maximum amount of 500 grams of (red) meat per week.

Prevent meat spoilage

Spoilage means that micro-organisms make the food unfit for consumption. You can see micro-organisms as a kind of small blackheads, which are present everywhere. All our food is susceptible to spoilage because its composition attracts microorganisms. Fresh meat too. Fortunately, there are many measures you can take to give micro-organisms as little chance as possible and thus slow down spoilage.



Meat can spoil quickly due to bacteria. To give bacteria no chance, you can take the following actions:

- 1 Provide a clean environment.** Meat can become contaminated through direct or indirect contact with micro-organisms. By creating a hygienic environment in places where meat is processed or prepared, you can limit the presence and growth of microorganisms. We as humans also carry these micro-organisms with us. They can even multiply rapidly in humans. Ideally, you should not let the meat come into contact with the skin if you want to keep it for a while.
- 2 Pack the meat products well.** By properly packaging the meat, you protect it against contamination and moisture, among other things.
- 3 Keep the meat chilled or frozen.** When cooling your fresh products, the growth of the micro-organisms slows down. Different micro-organisms have different characteristics, but almost all of them grow at a temperature between 10 °C and 40 °C. Keeping it in the fridge slows down spoilage significantly. Freezing stops the growth of the micro-organisms (almost) completely – some micro-organisms are known to still grow slowly even below 0 °C.

Store and ship meat chilled or frozen
Fresh meat has a long way to go from slaughter to

Keep your products chilled with **Original gel packs**

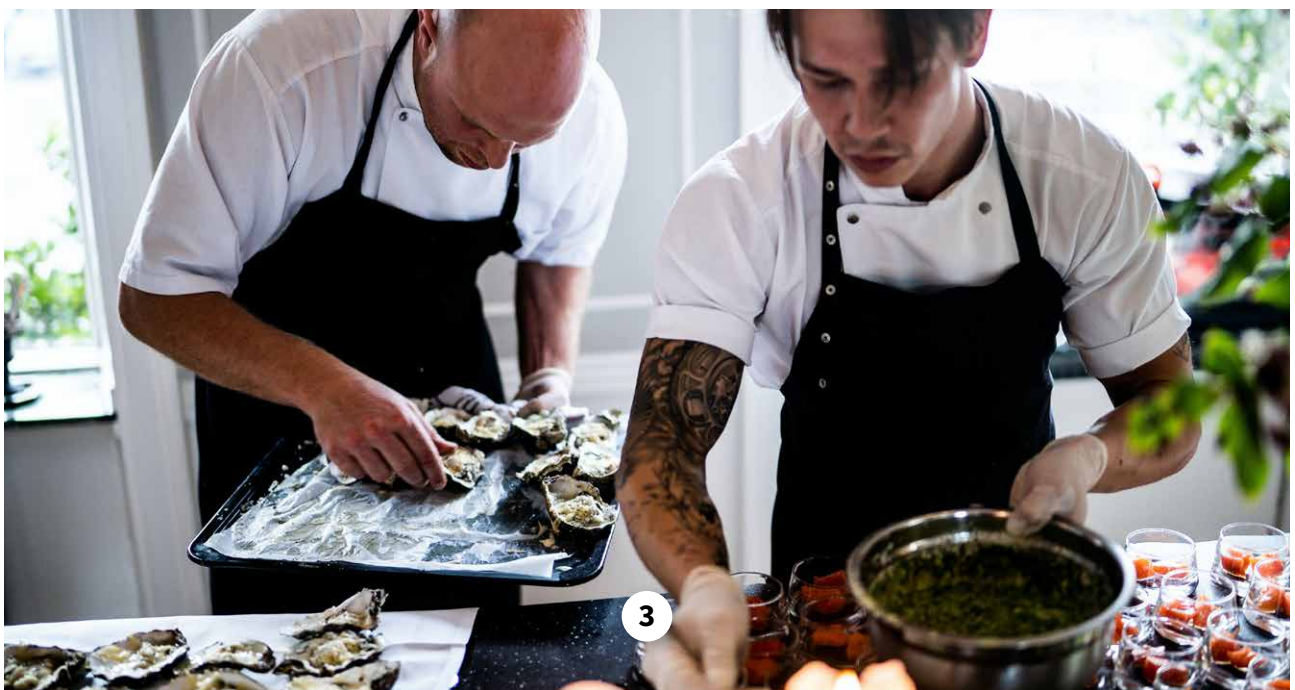


[View products](#)



consumption, so measures must be taken to prevent spoilage along the road. For example, hygiene, insulation and cooling are of great importance in every step of the way. Depending on the animal from which the meat comes, the meat must be processed, stored and transported at a different temperature. For poultry, for example, the maximum temperature is 4 °C, while for game meat the maximum is 7 °C.

Sending the meat chilled can be quite a challenge. Cooling and freezing vans are often used. However, for smaller quantities of meat that are delivered directly to the consumer or the need for various temperature ranges (like frozen and chilled) in the same van, other solutions may be more attractive.





Appropriate packaging materials for refrigerated shipping

By combining refrigerants with well-insulated packaging boxes, you can create a kind of mobile refrigerator. This solution is usually used for transports of up to 24 hours. When your transport procedure involves one-way traffic, it is best to choose refrigerants that are suitable for single use. After all, you will not get the packaging materials back for reuse.

You can use [gel packs](#) to cool the meat products to a temperature of 2 to 8 °C. Gel packs are leak-proof polypropylene bags filled with a refrigerant. You cool the gel packs to the desired temperature beforehand. For an optimal cooling result, transport your products in a well-insulated packaging box. A popular variant is the [EPS box](#): a light polystyrene

box with a thick, insulating wall. A newcomer to the landscape of insulating packaging boxes is the EcoCoolBox. This box is made entirely of compostable materials so that it can be thrown away with the old paper after use. For example, the insulation material in the walls is made of paper fibers and the material absorbs moisture well.

Ship frozen meat

If you wish to transport the products below the freezing point, you can use gel packs filled with the so-called Phase Change Material (PCM). By changing the recipe of the cooling gel in the gel packs, the freezing point can be lowered. This is reflected in our frozen gel packs with a melting and freezing point of -21 °C and -16 °C. At this temperature, the energy storage is highest and the gel pack therefore remains stable for the longest time. This way you can be sure that your shipment will remain below the critical limit of -12 °C for food during transport for 24-48 hours.

Sustainable transport materials suitable for reuse

For transports with a return procedure, where you can reuse the packaging materials, other tools are more interesting. For example, you can choose to use shape-retaining [cooling elements](#). These are made of strong material and therefore have a long life. It is also important when transporting meat that the form-retaining cooling elements are easy to clean. You can also fill it with regular cooling gel or PCM as desired, in order to determine at what temperature you want to transport the meat products.

The insulating packaging box that is perfect for transport with a return procedure is the [EPP cool box](#). This packaging box is made of Expanded Poly Propylene, making the box light, strong, easy to





clean and highly insulating. The EPP boxes are easy to stack and have a long lifespan. This way you are assured of a sustainable shipping solution!

Tailored solutions for you

Are you curious about the possibilities for your specific issue? At Coolpack we have more than 50 years of experience in supplying the best cooling materials. Our product range varies from standard to custom-made refrigerated packaging, gel packs, ice packs, absorption mats and EPS boxes to total solutions for refrigerated and conditioned transport. Everything to ensure that your meat products and other goods arrive at their destination in optimal

condition. Our experts are happy to provide you with specialized advice.

Thanks to our own production facilities on site, tailor-made solutions can be delivered that are specifically designed for your application. Coolpack's products are of excellent quality and meet all legal requirements.

Do you have questions, do you want to place an order or would you like to receive advice? Please feel free to [contact us](#) using the details below. Our team is there for you.

