food smoking

what is it?

Food smoking is an ancient method of preserving food using wood smoke. It's believed to be almost as old as the use of fire itself. When prehistoric people hung the surplus meat or fish they had caught after a successful hunting or fishing trip from the ceiling of their cave to protect it from vermin and contamination, they would have noticed that the meat exposed to the smoke of the fire stayed edible for longer. If washed with sea water prior to drying and smoking, it would have lasted even longer because of the preserving properties of the salt.

When humans started farming, food smoking was one of the few methods of preserving farmed meats for long periods. Smoke houses started to appear on farms, slightly apart from the main building – due to the smell of the smoke, and the fire risk.

There are many products on the market that have been treated with smoke flavours to make them resemble genuinely smoked foods, that can be sold for higher prices. Dyed haddock is an example. This practice has nothing to do with real food smoking and is banned in some countries, although it is common in the UK, the US and Australia.

Smoked food is usually meat, sausages, fish or cheese, but can also include eggs, vegetables and nuts. See 'what can I do?' for modern methods of smoking.

Bratwurst rings after smoking – the sawdust has completely burnt down and the sausages have changed colour.

Lighting a smoke generator, filled with sawdust.

what are the benefits?

The main benefit is that it's a form of food preservation using a renewable resource, with the added benefit of improving flavour. Before electricity, a smallholder could kill a pig, salt or brine cure, then smoke the hams and make cold smoked sausages, and they'd keep until the next pig was killed, 6 months later. This can still be done today of course, and not only will the meat be preserved without the need for refrigeration, it will have a wonderful smoked flavour too.

We've only recently discovered that wood smoke contains compounds such as phenols that inhibit the growth of microbes that cause food to spoil. Also, salt, used to cure or brine the produce prior to smoking, draws water out of the cells of the bacteria and kills them. More water is lost than salt added during this process, and the flesh will typically lose around 8-10% of its weight.

In countries where fridges, freezers and E numbers are used to preserve food, improvement of flavour is often more important than the preserving properties of the smoke.

Recently, food smoking has been part of a revival of old crafts and traditional foods, and an increase in food awareness – people want to know the ingredients of the food they're eating. The trend is towards high-quality, 'slow food', with local, natural ingredients free from chemical additives.

For farmers, smallholders, hunters and fishermen, smoking is a way of making use of large amounts of meat or fish at certain times of year. For others it's a way of increasing their range and adding quality and value to their products, which is what an increasing number of customers demand.

Cold smoking is the method used for preservation. Cold smoked meats are ideal to take travelling as they don't go off and they're a good source of protein. Fish can't really be preserved for long periods, but with hot smoking, can last a few days longer – although the real motive is to improve the flavour.

what can I do?

Cold smoking: often referred to as 'real' smoking. The temperature is usually lower than 30°C and the smoking time is long – from several hours up to 3 weeks. The smoked product is still 'raw' after cold smoking, e.g. Parma Ham or salami. Many cold smoked foods have to be cooked prior to eating – for example, kippers (smoked herring). Food needs to be cured before cold smoking.

Make sure your cold smoker is in the shade, as sunlight will mean that the internal temperature will probably rise above 30 degrees.

Hot smoking: applies smoke with temperatures of more than 70°C. The smoking time varies from minutes up to a few hours. It's almost barbequing – hot smoking 'cooks' food, e.g. hot smoked trout or kippers. Prior to hot smoking, food is often cold smoked for a period of time to support the drying process and enhance the flavour.

Wet and dry smoking: only done with hot smoking. For wet smoking, put a bowl of water in the smoker to keep the food moist. This is exactly what you don't want if you are cold smoking for preservation however – you want the food as dry as possible.

Barbeque smoking: there's a trend for 'barbeque' smoking in America, which uses barbeques with lids or specially designed smoke barbeques. The method is the same as hot smoking, except that there is no period of cold smoking. It's a flavour-enhancing cooking method, and not anything to do with preservation.

Curing: curing is rubbing the food with salt (dry curing), or soaking in salt water (brining or wet curing). After curing, the food is washed and dried for at least 24 hours before smoking.

A smoke house on a farm in Poland.

Buying / making smokers: you can buy a smoker or make your own – it's very simple. All you need is a metal / wooden cupboard (you can even cold smoke in a cardboard box), some hooks for hanging the food, or racks for cheese etc, a metal tin at the bottom for holding the wood shavings, and some way for the smoke to escape.

Wood shavings: ask a local woodworking workshop for shavings or sawdust. It has to be untreated hardwood, as softwoods contain resin that produces nasty tasting soot. Or find suppliers of hardwood shavings online. A typical smoker uses 50-100g of shavings a day, depending on what you're smoking, so a little goes a long way.

The best way to burn the wood shavings / sawdust is in what's called a smoke generator – a metal / wire frame with a 1cm-wide channel so that it can burn slowly. Making sure that the wood shavings don't burn to quickly or too hot, and that the smoker stays at the right temperature requires practice, and attending a course is a good idea.

Methods: see books and websites for smoking recipes for meat, fish, cheeses etc. (cheese doesn't need curing/saling as it already contains salt from the cheesemaking process.

NB: search online for the dangers of eating smoked food due to potential carcinogens in the smoke, and make up your own mind. However, it's all about assessing risk, which we think is small for relatively low quantities – so over-indulgence is the real problem; plus we advocate other activities that could be considered more dangerous than smoked foods, such as cycling in cities, using chainsaws and felling axes, sailing, wild swimming, foraging for wild mushrooms etc. And as well as living sustainably and changing career, a feature of many Lowimpact topics is that they could prove useful in case of societal collapse. Food smoking, as a way of preserving food when refrigeration is impossible, is one of those topics.

resources

- lowimpact.org/food-smoking for more info, links & books, including:
- Turan T Turan, *Food Smoking: a Practical Guide*
- Monte Burch, *Smoking & Salt Curing*
- Dick Strawbridge, *Smoked Food*
- nchfp.uga.edu/how/cure_smoke.html - articles on home smoking various foods
- bit.ly/3gjobFv – preserve food by cold smoking
- bit.ly/33cmV3r – smoking meat & fish in the wild