

Frequently Asked Questions about Easter Eggs

BfR FAQ, 9 May 2018

No Easter is complete without colourful eggs. They are painted, hung up on branches, hidden and, of course, eaten. All the same, when blowing out raw eggs and storing boiled eggs, observing a few simple hygiene rules helps to avoid foodborne infections. The German Federal Institute for Risk Assessment (BfR) has drawn up a few tips on how to enjoy Easter eggs without abdominal pain in the following FAQs:

Is there any health risk related to the blowing out of raw eggs?

During Easter children in particular love to blow out and paint eggs. However, this can lead to an infection with diarrhoea pathogens (such as *Salmonella*, but also *Campylobacter*), particularly if the eggs are blown out by mouth in the traditional manner, as the germs may be present both on the shell and (less frequently) inside the egg.

How can an infection with diarrhoea pathogens be avoided during the blowing out of eggs?

People who want to protect themselves against infection with diarrhoea pathogens should avoid blowing out eggs with their mouth. This applies in particular to children, as they are especially at risk of becoming ill following the intake of these pathogens. One safe alternative is painting hard boiled eggs or eggs made from materials like wood, polystyrene or plastic.

When blowing out eggs, the following hygiene measures should be complied with in order to avoid an infection risk:

- Wherever possible, small children should not come into contact with raw eggs or their contents at all.
- Only ever blow out fresh, clean eggs. The eggs can be washed with lukewarm water and a few drops of washing up liquid.
- The sharp tools used to prick the eggs (for instance nails or needles) should be clean and washed thoroughly after use.
- Wherever possible, an implement should be used to blow out eggs so as to avoid any direct contact with the mouth. The utensils that are particularly suited for blowing out eggs are, for instance, thin straws or disposable syringes with a thick needle. Drug stores or handicraft stores now stock miniature bellows for blowing out eggs, too.
- Before painting, the blown out eggs should be cleaned on the inside and outside with lukewarm water and a few drops of washing up liquid in order to remove any remaining raw egg.
- Any splashes of egg yolk or white should be removed immediately with kitchen paper and the work surfaces cleaned thoroughly.
- Once finished, wash hands thoroughly with warm water and soap.

How can I check that eggs are fresh?

The "best before date" is indicated on the egg packaging. Up to that date the manufacturer guarantees the shelf life as long as the eggs are correctly stored. Even after expiry of the "best before date", eggs can normally be consumed if they have been cooked through.

You can check whether raw eggs are fresh by placing them in a glass of cold water. Fresh eggs remain at the bottom of the glass, old eggs float to the top. This is because of the air pocket in the egg: the larger it is, the older the egg.

What should be borne in mind when storing and using raw eggs?

Raw eggs should be processed as quickly as possible and, until then, they should be stored at maximum 7° C. When eggs are blown out and painted at Easter, the egg yolk and white are normally used. In order to avoid the transfer of germs, they should be stored in closed containers. In principle, neither the raw egg nor its shell should come into contact with other foods.

Raw eggs have a natural protective coating on the shell which prevents the penetration of germs. In order to preserve the protective layer, the eggs should not be washed, particularly if the eggs are going to be stored. If they are to be blown out for Easter, however, then washing is a definite must.

Wherever possible, raw eggs should not be used to make dishes which are consumed without any further heating (e.g. desserts, bakery goods with non-heated fillings, coatings, mayonnaise). If eggs are sufficiently heated during cooking, baking or roasting, any germs that are present are killed. That's why sensitive individuals (infants, as well as sick and senior citizens) should only eat thoroughly cooked eggs. This is the case when the egg yolk and white completely solidify.

How should hard boiled eggs be prepared and stored?

The shelf life of hard boiled eggs depends, amongst other things, on the type of shell, preparation and storage.

The eggs should be thoroughly cooked in boiling water. The egg yolk should also be hard, which means boiling for around 10 minutes depending on the size of the eggs.

Generally speaking, hard boiled eggs spoil more quickly when their shells are damaged and germs can penetrate the egg. For that reason eggs which are not immediately consumed should not be doused with cold water after boiling. During dousing, water and any germs present can pass through small cracks or the porous shell into the egg. This reduces the shelf life to just a few days.

The higher the storage temperature, the easier food perishes because germs multiply more quickly at higher temperatures. Hence, hard boiled eggs should also be stored as far as possible in the fridge and consumed within four weeks.

How long can industrially manufactured Easter eggs be stored?

Hard-boiled, painted, industrially manufactured Easter eggs are processed eggs which may be put on sale for longer than fresh eggs. It is the responsibility of the food business operator to determine the best-before date of hard-boiled, painted eggs. Eggs of this kind are usually treated with a protective varnish which prevents the penetration of germs. They can therefore be kept for several weeks at room temperature as long as their shells have not been damaged. To be on the safe side, however, industrially manufactured eggs should also be stored in the fridge after purchase.

Which paints are suitable for decorating eggs from the health angle?

Commercially available artificial and natural Easter egg colours are suitable for decorating eggs. The E-numbers indicate that they have been authorised as food colours.

One alternative is to decorate eggs with foods of plant origin, for instance onion skins, spinach or beetroot.

About the BfR

The German Federal Institute for Risk Assessment (BfR) is a scientifically independent institution within the portfolio of the Federal Ministry of Food and Agriculture (BMEL) in Germany. It advises the Federal Government and Federal Laender on questions of food, chemical and product safety. The BfR conducts its own research on topics that are closely linked to its assessment tasks.

This text version is a translation of the original German text which is the only legally binding version.