

Cadmium in food: understanding the issue

Recent media reports have raised again concerns about cadmium in everyday foods, particularly following statements from French national health authorities. The International Cadmium Association (ICdA) supports transparent communication on food safety and believes it is essential to place these messages in context so that consumers can make informed decisions without unnecessary concern. This is not a new topic. Cadmium is a well-known and extensively studied substance. Guidelines have been developed for workers and the general population on the various routes of exposure from this extensive knowledge base derived over many decades.

What is cadmium and where does it come from?

Cadmium is a naturally occurring metal found in the Earth's crust, typically found as minerals of cadmium sulphide or carbonate. As such, life on earth has evolved in the presence of cadmium and all plants, animals and humans have low but tolerable background levels when, for example, blood or urine is analysed. Cadmium enters the environment through both natural processes and human activities. Small amounts are typically present in soils naturally formed from weathering of certain rocks and can therefore be found at low levels in many foods grown in those soils. Over time, continued weathering, natural volcanic activity and wind-blown sands together with human activities such as certain fertilizer additions in agriculture, airborne deposits from coal and fossil fuel fired power plants and some regulated emissions from manufacturing industries may contribute to increasing background soil levels of cadmium in some environments.

For most people who do not smoke, food is the main source of cadmium exposure, while tobacco smoke is an important additional source for smokers.

Does cadmium in food pose an immediate risk?

Cadmium does not cause immediate or acute health effects from eating normal foods in a balanced diet. Health considerations related to cadmium are linked to long-term exposure over many years or decades, because the body absorbs and eliminates cadmium slowly.

The health benchmarks used by authorities are precautionary tools, designed to guide long-term public health and environmental policy. They do not mean that foods currently on the market are unsafe to eat.

Children are not more sensitive to cadmium exposure

Toxicity of cadmium reveals itself only after a life time of increased exposure and accumulation of cadmium in the body. Hence cadmium related adverse health effects like kidney deficiency and bone fragilisation are only observed in the elderly population.

Strong and harmonised food safety standards across Europe

Food safety in the European Union is governed by strict, legally binding limits for cadmium in foods, set at EU level and enforced across all Member States¹. These standards apply equally throughout most of Europe. Only a small number of countries apply lower national limits for specific products.

Foods that exceed EU maximum levels cannot be marketed, ensuring a high level of protection for consumers.

Differences in exposure estimates between countries may reflect dietary habits, natural soil characteristics, agricultural practices, and biomonitoring approaches. These differences do not imply weaker food safety controls in one country compared to another.

Current discussions at EU and national level focus on long-term preventive measures, particularly reducing cadmium inputs into agricultural soils.

What are the known health hazards of cadmium?

At sufficiently high levels and with long-term exposure, cadmium can affect health. Scientific studies have shown that prolonged exposure over many years may contribute to effects on kidney function and bone health.

These effects are associated with **chronic exposure over decades**, not with normal dietary intake over short periods.

Hazard versus risk: an important distinction

Cadmium has well-known hazardous properties. However, risk depends on the level and duration of exposure. The presence of very small amounts of cadmium in food does not automatically translate into a health risk. Food safety measures are specifically designed to keep exposure at levels considered protective for the population over a lifetime. Stringent limit values are set for cadmium in food by [Regulation \(EU\) 2023/915](#) to ensure there are no adverse health effects.

Practical advice for consumers

- No urgent dietary changes are needed
- A varied and balanced diet remains the best approach
- Sufficient dietary intake of fibres and essential minerals like calcium, zinc and iron decreases uptake of cadmium from food.
- Avoiding smoking is one of the most effective ways to reduce cadmium exposure

These recommendations are fully in line with existing public health advice.

¹ [Cadmium - Food Safety - European Commission](#)

ICdA perspective

The International Cadmium Association supports continued efforts to reduce unnecessary environmental cadmium inputs where feasible, while emphasising that Europe already applies some of the most protective food safety standards in the world.

Clear, proportionate and science-based communication is essential to ensure public confidence in the food supply—while avoiding unnecessary anxiety among consumers.