

GENERAL INSTRUCTIONS ON SAFE USE OF FOODSTUFFS

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TARGET GROUP:

Pregnant and breastfeeding women, infants and toddlers, schoolchildren and the whole family with children

The foodstuffs known at present to involve potential risks are listed in this Table. The Table is maintained by Finnish Food Safety Authority Evira. These instructions are included in the "Eating together" food recommendations for families with children, issued by the National Institute for Health and Welfare (THL) and the National Nutrition Council.

A balanced, varied and moderate diet is the best way to avoid the effects of any harmful substances contained in food. Good hygiene in the kitchen and in handling foodstuffs as well as correct cooking and storage temperatures help reduce the risk of food poisoning. The instructions for use provided on the labelling of the food product should also be observed.

Foodstuff / food product	Applicable to	Correct use	Basis for guidelines
FISH AND FISH PRODUCTS			
Fish	Whole population	Fish should be eaten 2–3 times a week according to recommendations. The health benefits obtained from fish are greater than the potential adverse effects. Varied use of different species eliminates any concern about levels of environmental contaminants. It is recommended that lake fish, farmed fish and sea fish (e.g. whitefish, vendace, pollock, rainbow trout, Arctic char, trout) are varied in the diet.	Mercury and/or polychlorinated biphenyls (PCB) and dioxins accumulating in some fish, and radioactive substances in some lakes.
	Vulnerable groups: Infants 1–6-year old School children Persons in fertile age	Restrictions for use: - large, uncleaned herring more than 17 cm in length or alternatively salmon or trout caught in the Baltic; 1–2 times a month. - pike caught in a lake or sea; 1–2 a month.	High mercury levels in pike caught in inland waters or sea, and in predatory fish caught in inland waters.
	Pregnant women Breastfeeding women	Pike to be avoided completely during pregnancy and breastfeeding.	Exceptions defined by Evira to general fish eating recommendations: https://www.evira.fi/en/foodstuff/information-on-food/food-hazards/restriction-on-the-use-of-foodstuffs/dietary-advice-on-fish-consumption/
Raw fish, fish in vacuum or modified atmosphere packages, and salt cured fish or cold-smoked at home as well as roe and food containing roe, such as patés and sushi	Pregnant women Infants	Raw fish and salt cured or cold smoked fish, either packed or made at home may only be eaten after heating (internal temperature of the product at least 70°C all over). Sushi and roe and foods containing raw fish to be avoided.	Risk of <i>Listeria monocytogenes</i> bacteria. Food poisoning which during pregnancy carries a risk of miscarriage.

Foodstuff / food product	Applicable to	Correct use	Basis for guidelines
MEAT, MEAT PRODUCTS, POULTRY AND GAME			
Sausages, hot dog sausages and deli meats	Infants	Sausages, hot dog sausages and deli meats are not to be used.	Nitrite used as an additive (E 249, E 250). Large amounts of nitrite may have adverse effects on oxygen delivery in the body of a small child. The hard fat and salt contained in sausages have also been taken into account in the recommendation.
	1–2-year old toddlers	At most one meal containing sausage per week, and at most 3–4 slices of deli meats (one slice weighs abt. 10 g) per week	
	Over 2-year old toddlers	The total weekly amount of sausages, hot dog sausages and deli meats may not exceed 150 g, which means e.g.: 1 meal containing sausage per week and 1 slice of deli meats per day <u>or</u> 2 meals containing sausage per week, no deli meats <u>or</u> 2 slices of deli meats per day.	
Liver, liver foods Liver sausage and liver paté	Infants	Liver and liver products are not used.	High level of vitamin A. Excessive intake of vitamin A may for children result in malfunctions of liver and metabolism. https://www.evira.fi/en/foodstuff/information-on-food/food-hazards/restriction-on-the-use-of-foodstuffs/consumption-of-liver-and-liver-based-foods/children-under-school-age/
	1–6-year old	Weekly consumption of liver sausage and liver paté may not exceed 70 g (abt. 4–5 slices/week), and at most 300 g of liver casserole (3/4 of a processed casserole pan) may be eaten per month. Liver with gravy and liver steaks should be avoided in that case.	
	Pregnant women	Liver foods (whole and ground liver steaks, liver with gravy, liver casserole) to be avoided during the whole pregnancy. Consumption of liver sausage and liver paté may not exceed 200 g per week or 100 g at one meal. If liver sausage or paté is used daily, consumption should not exceed 30 g (= 2 Tbsp. = 2 slices) per day.	
Raw meat, raw ground meat and steak tartare.	Whole population	Meat must be appropriately cooked. Pork, all ground meat foods, such as hamburger patties and meat balls as well as meatloaf, are always served cooked through. Same utensils must not be used with uncooked and cooked products.	Infection risk caused by EHEC bacteria with raw beef, lamb and mutton. Salmonella risk particularly with imported meat, and infection risk caused by Yersinia bacteria with pork.
	Pregnant women	All meat products that have not been heated at any point shall be avoided. Cut meats (steaks, roast) shall also be cooked through.	
In addition to aforementioned, also raw cut meat (steak), non-perishable sausages (salami, mettwurst) and air-dried ham			Risk of toxoplasmosis particularly for pregnant women.
Poultry	Whole population	Only used cooked. Cooking refers to an internal temperature of more than 75°C.	Infection risk caused by Salmonella and campylobacter.
Liver and kidneys of moose older than 1 year	Whole population	Not to be used (not authorised as food).	High levels of heavy metals (cadmium) in the internal organs of moose.

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MILK AND DAIRY PRODUCTS			
Raw milk and unpasteurised milk	Whole population Note! A food product involving a particular risk to children and pregnant women	To be used as quickly as possible and only after heating.	Risk of <i>Yersinia pseudotuberculosis</i> , <i>listeria</i> , <i>EHEC</i> , <i>Salmonella</i> and <i>campylobacter</i> .
Cheese made from unpasteurised milk and soft cheese made from pasteurised milk	Pregnant women	Not recommended unheated. <i>Listeria</i> bacteria are destroyed when heated to a temperature of more than 70°C, but not by freezing or salting. All cheeses can be used provided they are heated until they bubble.	Risk of <i>Listeria monocytogenes</i> bacteria. Food poisoning which during pregnancy carries a risk of miscarriage.
	Children	Cheese made from unpasteurised milk to be avoided.	Pathogenic bacteria potentially present in raw milk (cf. Item Raw milk).

Foodstuff / food product	Applicable to	Correct use	Basis for guidelines
VEGETABLES, MUSHROOMS AND PROCESSED FOODS			
Vegetables that accumulate nitrate	Infants	Vegetables high in nitrate to be avoided: spinach, nettle, beetroot, various lettuces (including rocket), napa cabbage, kale, kohlrabi, pumpkin (all pumpkin types excluding zucchini), radish, celery, fennel, fresh herbs, sprouts, root vegetable juices	High nitrate levels. Large amounts of nitrate may have adverse effects on oxygen delivery in the body of a small child. https://www.evira.fi/elintarvikkeet/tietoa-elintarvikkeista/elintarvikkevaarat/elintarvikkeiden-kayton-rajoitukset/tietyt-kasvikset-joissa-voi-olla-nitraattia/
Frozen vegetables and processed foods (commercial)	Pregnant women	All frozen vegetables must be heated before use (for salads, brought to boil and cooled before use). Cooled, processed foods designed to be reheated (e.g. casserole) to be heated to boil before consumption.	Risk of infection by Listeria bacteria. Food poisoning which during pregnancy carries a risk of miscarriage.
Foreign frozen berries	Whole population	To be heated before use at 90°C for 5 minutes, or boiled for 2 minutes.	Risk of Noro virus and hepatitis A virus
Early potatoes, new potatoes	Infants	Early potatoes are not recommended to infants who are being introduced to solid foods.	At the early stage of growth, in the early summer, potatoes may contain high levels of solanine and/or nitrate. When the bulbs are fully developed (skin and flesh), these harmful substances have disappeared.
Green, sprouted or damaged potatoes	Whole population	Not to be used	High solanine levels (natural toxin)
Raw tomatoes (undeveloped)	Whole population	Not to be used	High tomatine levels (natural toxin)
Raw beetroot	Whole population	To be properly cooked. Raw beetroot is not to be used.	Risk of food poisoning
Sprouts	Children	To be heated before use	Risk of EHEC and Salmonella bacteria in unheated sprouts
Mushrooms	Whole population	Edibility to be verified, processing according to species.	Natural toxins of some mushrooms
False morel (Gyromitra esculenta)	Pregnant women Breastfeeding women Children	Not to be used	Residues of the toxin gyromitrin despite processing.
Raw grain/seed porridges (prepared by soaking)	Infants 1–6-year old	Not recommended	The hygienic quality of the products may be low.

Foodstuff / food product	Applicable to	Correct use	Basis for guidelines
COFFEE AND OTHER CAFFEINE-CONTAINING BEVERAGES AND PRODUCTS			
Coffee and other caffeine-containing beverages	Pregnant women Breastfeeding women Children and adolescents People sensitive to caffeine	The safe daily caffeine intake limit from all sources is: - 200 mg/day for pregnant women - 200 mg/day or single dose for breast-feeding women - less than 3 mg/kilogram of body weight/day for children and adolescents (3-18 yr). 200 mg of caffeine is obtained from about 3 dl (= about two cups) of regular brewed coffee or 1.5 dl of espresso. About 1 litre of black tea contains an equal amount of caffeine. The caffeine content of cocoa is 3–5 mg/dl. Beverages that contain caffeine can be consumed on a random basis, but the limits specified for daily consumption and single doses should be taken into account, and for children also the restrictions based on body weight.	Caffeine passes through the placenta to the foetus and through breast milk to the baby. There is not much scientific evidence on the safe intake limits of caffeine for children and adolescents. The safe intake limit has been derived from the values specified for adults. Even small doses of caffeine may cause palpitations, tremor and insomnia to people sensitive to caffeine as well as to pregnant women and children, if consumed before retiring to bed.
Cola beverages containing caffeine	-"-	Cola beverages are only suited for random consumption. When the caffeine content of a product is more than 150 mg/l, the labelling of the product shall indicate the caffeine content (mg/100 ml) and present the following warning: "High caffeine content. Not recommended for children or pregnant or breastfeeding women." One can (3.3 dl) of a cola beverage contains about 25–60 mg of caffeine and one bottle (5 dl) about 35-90 mg.	
Energy drinks	-"-	Not recommended for pregnant women or children and adolescents under the age of 15 years. When the caffeine content of a product is more than 150 mg/l, the labelling shall present the same warnings as with cola beverages. Evira has further advised that the maximum daily intake of the product is to be indicated in the labelling. A small can (2.5 dl) of energy drink contains about 80 mg and a large can (5 dl) about 160 mg of caffeine.	
Products with added caffeine, e.g. sweets, bubble gum and chocolate bars, as well as food supplements	-"-	The labelling of food products containing caffeine shall present the following warning: "Contains caffeine. Not recommended for children or pregnant women" and an indication of the caffeine content in mg/100 g. The amount of caffeine varies (6–60 mg/serving). For food supplements, the caffeine content of the recommended daily dosage shall be indicated in the labelling. Caffeine is also used as an aroma. Caffeine is in that case indicated in the product's list of ingredients under aromas.	

Foodstuff / food product	Applicable to	Correct use	Basis for guidelines
ALCOHOLIC BEVERAGES			
Beverages containing alcohol (beer, cider, wine and spirits)	Pregnant women	Not to be used	Alcohol passes through the placenta to the embryo and the foetus and endangers normal growth and development of the child. Even occasional binge drinking increases the risk of adverse effects. The risk limit of foetal alcohol exposure is not known. It is advisable to stop the consumption of alcohol already when planning a pregnancy.
	Breastfeeding women	Not to be used	Alcohol drunk by the mother passes to breastmilk increasing the alcohol content of breastmilk to the same level as that of the mother's blood. A mother should avoid breastfeeding after drinking of alcohol for as long as she has alcohol in her blood. Heavy use of alcohol by a breast-feeding mother is a risk to the safety of the child. More information (in Finnish): https://www.thl.fi/fi/web/lapset-nuoret-ja-perheet/peruspalvelut/aitiys-ja-lastenneuvola/paihdetyo-neuvolas-sa/vanhempien-alkoholin-riskikaytto
	Children and young people (under 18 years of age)	Not to be used Selling alcoholic beverages to and buying alcoholic beverages for young people under 18 years of age is prohibited.	The developing brain and body of children and young people are more vulnerable to the effects of alcohol than adults. Alcohol often reduces blood sugar in young people, which may cause dangerous situations. Alcohol also causes mental, physical and social addiction. More information: Young people and alcohol (in Finnish) http://www.mll.fi/nuortennetti/paihteet/alkoholi/

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OTHER BEVERAGES			
Herbal teas	Infants	Not to be used	Safety not known, can contain naturally harmful substances.
	Pregnant women Breastfeeding women 1–6-year old	Not recommended	
Wheatgrass juice, lactic acid fermented juices	Infants 1–6-year old	Not recommended	Hygienic quality of products can be low.
Cocoa (powder and drink)	Infants	Not to be used	Contains tannin which interferes with iron and zinc absorption. (Cf. caffeine under Coffee).
Rice drink	Infants	Not to be used	Nutritional content does not meet children's needs. High levels of heavy metals (inorganic arsenic). Evira's risk assessment report on children's exposure to heavy metals: https://www.evira.fi/tietoa-evirasta/julkaisut/elintarvikkeet/julkaisusarjat/riskinarviointi-suomalaisten-lasten-altistumisesta-elintarvikkeiden-ja-talousveden-raskasmetalleille/
	1–6-year old	Not to be used under 6 years of age as the primary beverage (e.g. at meals).	
Foods (fruit and berry based beverages) containing benzoic acid (E 210) and benzoates (E 211, E 212, E 213)	Infants 1–6-year old	Not to be used Fruit and berry based beverages containing benzoic acid or benzoates as additives are not recommended for daily consumption. Water to be chosen as primary beverage.	Safe daily intake limit can be exceeded (additive use), if consumption of beverages containing benzoic acid (E210) and benzoates (E 211, E 212, E 213) is high or several products with added benzoic acid or benzoates are used.

Foodstuff / food product	Applicable to	Correct use	Basis for guidelines
SWEETS AND HONEY			
Liquorice and salty liquorice sweets	Pregnant women	Not recommended	Liquorice and salty liquorice sweets contain glycyrrhizin for which a safe consumption limit is not known. High glycyrrhizin levels increase blood pressure and cause swelling, and may carry a risk of miscarriage and can be linked with developmental disorders of the child. Small doses (e.g. a serving of liquorice ice cream or a few sweets) are not harmful.
Honey	Infants	Not to be used (Warning in Decree on honey)	May contain spores of <i>Clostridium botulinum</i> bacteria. <i>C.botulinum</i> bacteria can produce dangerous botulinum toxin. Infants run a risk of infant botulism, because the spores can in infants be converted into bacteria capable of growing and producing toxin due to the undeveloped intestinal microflora of the child.

Foodstuff / food product	Applicable to	Correct use	Basis for guidelines
SEEDS, SPICES, HERBS, SEAWEED AND FOOD SUPPLEMENTS			
Oil plant seeds (e.g. flaxseeds and sunflower seeds)	Adults	At most 2 Tbsp. (ca. 15 g) of flaxseeds or other oil plant seeds per day.	Flax as well as some other oil plants have a natural ability to accumulate heavy metals from the soil, particularly cadmium, in their seeds.
	Pregnant women Breastfeeding women	Flaxseeds should not be used as such, ground or soaked during pregnancy and breastfeeding for treatment of constipation. Small amounts of flaxseeds in e.g. bread are not harmful.	
	Infants	Not to be used	
	1–6-year old	At most 1 Tbsp. (ca. 6–8 g) per day using a variety of seeds	
Apricot kernels	Infants 1-3-year old	Not to be used Not to be used	Contain naturally-occurring toxin (amygdalin). Amygdalin converts to cyanide in intestine and pose a risk of cyanide poisoning. Efsa's risk assessment report, 2016: http://www.efsa.europa.eu/en/press/news/160427
	Adults	Maximum 3 pieces of small kernels (total 0,37 g) per day.	
Cinnamon (Chinese cassia)	Infants 1–6-year old	Not to be used 1–6-year old children should not consume cinnamon or products containing cinnamon (e.g. cinnamon sugar in porridge) on a daily basis. In terms of safety, higher consumption of cinnamon temporarily during e.g. the Christmas season is not a concern.	High coumarin (natural toxin) levels in Chinese cassia (<i>Cinnamomum cassia</i> , <i>Cinnamomum aromaticum</i> or <i>Cinnamomum burmannii</i>). Chinese cassia is a commonly used cinnamon. The more rarely used Ceylon cinnamon (<i>Cinnamomum zeylanicum</i>) has considerably lower coumarin levels.
Ginger products and ginger tea, as well as food supplements containing ginger	Pregnant women	Use is not recommended	Contain harmful substances, safe consumption limits are not known.
Seaweed products	Infants	Not to be used	Harmfully high levels of iodine contents have been found in some seaweeds. High levels of heavy metals (arsenic, cadmium and lead) have also been detected in some seaweeds.
	1–6-year old Pregnant women Breastfeeding women	Not to be used, if iodine content is not known or is high.	Excessive iodine intake has adverse effects on thyroid function and foetal growth.
Herbal preparations marketed as food supplements	Infants 1–6-year old Pregnant women Breastfeeding women	Use is not recommended	Safe consumption limits are not known. May contain naturally harmful substances.