

Mercury in Fish

For women planning for pregnancy, expectant and lactating mothers



What is the health concern of mercury in food?

Mercury is a metallic element which exists naturally in the environment in abundance and in different forms. Methylmercury is the most toxic form of mercury. Mercury can be found in fish, particularly larger predatory fish.

Mercury in food may cause adverse effects to the nervous system. Developing nervous system of fetuses and children is particularly vulnerable to mercury, which can cause a decrease in intelligence quotient (IQ).

Why should women planning to become pregnant be concerned about mercury in food?

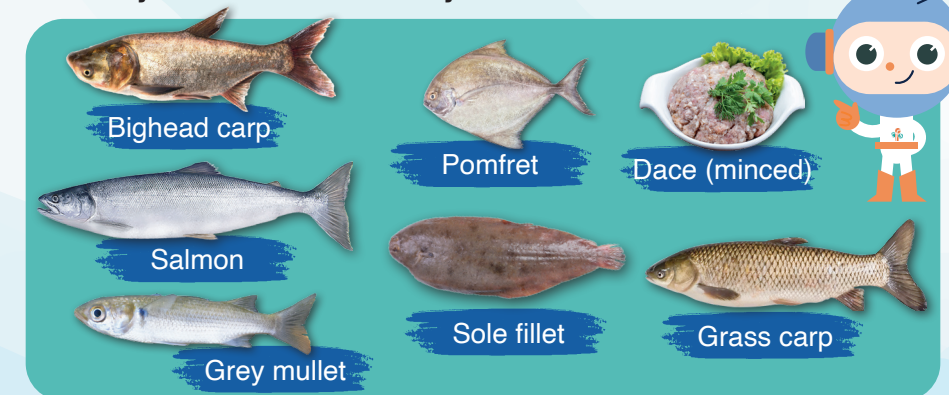
If woman regularly eats fish that are high in mercury, it can accumulate in her body over time, including before her pregnancy. Mercury can be removed naturally, but it may take over a year for any significant drop in level. This is the reason why women planning for pregnancy also need to be concerned about mercury in food.

Do women planning for pregnancy, expectant and lactating mothers need to avoid all kinds of fish to reduce the risk of mercury exposure?

Fish is an excellent source of many essential nutrients, such as omega-3 fatty acids and high quality proteins, for pregnant women and developing fetuses/ babies. A balanced diet that includes a variety of fish is beneficial to the heart as well as to the developing brain of children. Women and young children in particular should include fish in their diets

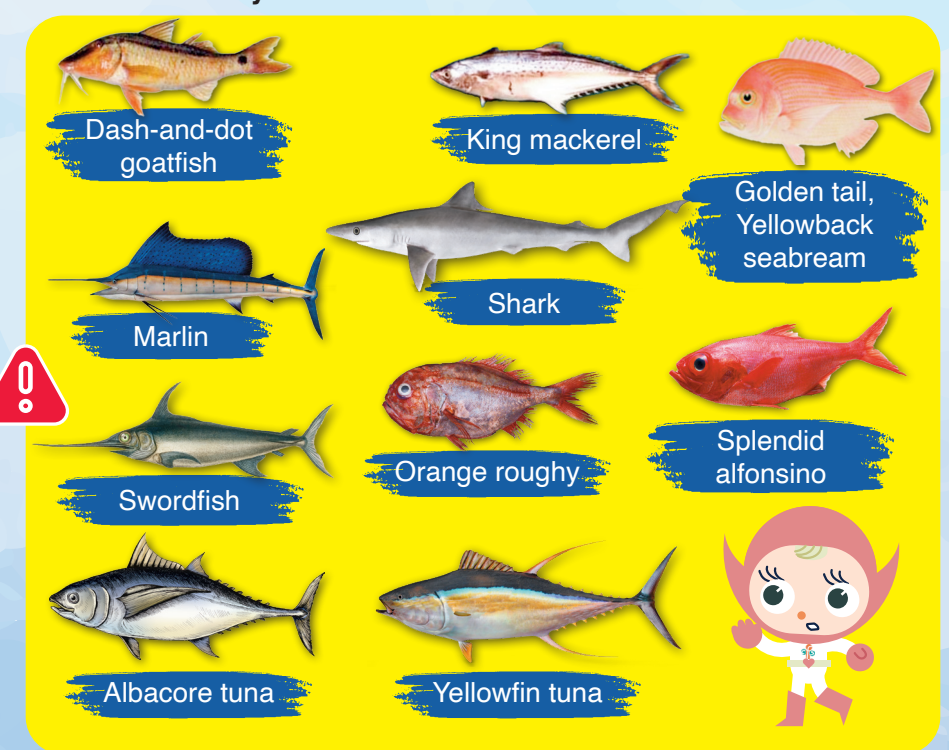
In general, smaller fish (e.g. less than one catty (about 605 g)), farmed fish and freshwater fish have lower levels of mercury. According to the results of the Total Diet Study conducted by the Centre for Food Safety (CFS), bighead carp, pomfret, dace (minced), salmon, grey mullet, sole fillet and grass carp were found to contain relatively low levels of methylmercury.

Figure 1. Examples of types of fish and fish products that contain relatively low levels of mercury



Women planning for pregnancy, together with expectant and lactating mothers should avoid large predatory fish as listed in Figure 2:

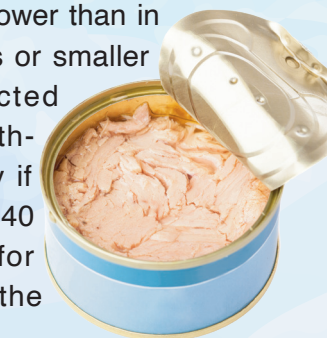
Figure 2. Examples of types of fish that contain relatively high levels of mercury and should be avoided



Many of these fish are large predatory fish and may not be sold as whole on the market. Consumers may refer to the label of the pre-packaged product or confirm with the restaurant when dining out.

Is canned tuna safe to eat by women planning for pregnancy, expectant and lactating mothers?

In general, mercury levels in canned tuna are lower than in fresh tuna, mainly due to different fish species or smaller fish being used. Previous studies conducted by the CFS showed that the relevant health-based guidance value may be exceeded only if a pregnant woman eats 4 to 5 cans (about 140 g/can) of skipjack tuna a week. However, for albacore tuna, 3 cans per week will reach the health-based guidance value.



Since the species of tuna used in canned foods and their mercury levels vary from one product to another, it is prudent for women planning for pregnancy, expectant and lactating mothers to avoid eating too much canned tuna.

Is it safe for women planning for pregnancy, expectant and lactating mothers to drink fish soup?

The CFS has conducted a study on the risks and benefits of fish soup consumption focused on 5 kinds of fish (small snakehead, grass carp tail, flathead, crucian carp and catfish), which are considered common for preparing fish soup for women after childbirth or lactating mothers

in Hong Kong. Results of the study suggested that it is safe to drink fish soup. Nevertheless, women planning for pregnancy, expectant and lactating mothers should avoid eating large predatory fish (Figure 2), include drinking soup prepared with these fish.

Is it safe for breastfeeding women to eat fish or drink fish soup?

According to literature, methylmercury levels in breast milk are not high and breastfeeding has many benefits for infant growth and development. The benefits of breastfeeding far outweigh any risk posed by the small amount of mercury that might be present in breast milk. Therefore, lactating women should continue to eat fish or drink fish soup as part of a balanced diet.

How to reap the benefits of fish consumption while reducing the risk?

Fish is an excellent source of protein, essential omega-3 fatty acids, and various vitamins and minerals. Eating 1-2 servings (1 serving = 150g) of different fish per week in a balanced diet offers significant health benefits. Limit the consumption of predatory fish listed in Figure 2 as these fish accumulate higher levels of mercury.

Ask for information if you are uncertain about the type or name of the fish you want to buy, whether shopping at a supermarket, eating out at a restaurant or ordering takeaway.

Does processing or cooking reduce the content of mercury of fish?

No. The mercury content of fish will not be reduced by processing, such as cooking, canning or freezing.

魚類中的水銀

給計劃懷孕、懷孕和授乳的女性



水銀對健康有什麼影響？

水銀（汞）是一種大量蘊藏於自然環境的金屬元素，並以不同形態存在，而甲基汞是最強毒性的水銀形態。水銀可以存在於魚類中，尤其在體型較大的捕獵魚類中最常見。

食物中的水銀可以影響神經系統。胎兒和兒童發育中的神經系統較容易受到水銀影響，並因此而令智商降低。

為什麼計劃懷孕的女性亦需要注意食物中的水銀？

如果女性經常食用水銀含量高的魚類，日積月累下，她的體內（包括在懷孕前）可能已積聚水銀。身體雖然可以自然排出水銀，但要水銀含量大幅下降，可能需時一年以上。這是打算懷孕的女性應注意食物中的水銀的原因。

計劃懷孕、懷孕和授乳的女性是否應避免進食所有魚類以減低攝入水銀的風險？

魚類營養豐富，含多種營養素，例如奧米加-3 脂肪酸和優質蛋白質，提供孕婦和發育中的胎兒／嬰兒所需。維持均衡飲食（包括進食多種魚類），對心臟和兒童正在發育的腦部甚為有益。婦女和幼童的膳食尤應加入魚類。

一般而言，體型較小（1斤（約605克）以下）的魚類、養殖魚和淡水魚的水銀含量較低。食物安全中心（中心）進行的總膳食研究顯示大頭魚、鯔魚（鯰魚）、絞鮫魚肉、三文魚、烏頭、龍脷柳和鯨魚的甲基汞含量相對較低。

圖 1. 水銀含量相對較低的魚類及魚製品例子



計劃懷孕、懷孕和授乳的女性應避免進食體型較大的捕獵魚類，如圖 2 所列：

圖 2. 水銀含量相對較高而應避免進食的魚類例子



大部分水銀含量相對較高的魚都是大型捕獵魚類，未必會整條在市面上出售。市民可以參考預先包裝產品的標籤，或在外出用餐時與餐廳確認魚的種類。

計劃懷孕、懷孕和授乳的女性食用罐頭吞拿魚是否安全？

罐頭吞拿魚的水銀含量通常較新鮮吞拿魚為低，主要因為魚類的品種不同，或是罐頭所用的魚類體型較小。中心以往的研究顯示孕婦如每周進食 4 至 5 罐（每罐約 140 克）鯉魚製成的罐頭，攝入的水銀才會超出相關健康參考值。不過，只要每周進食 3 罐長鰭吞拿魚製成的罐頭，攝入的水銀已達到相關健康參考值。

由於各種罐頭食品所用的吞拿魚品種不同，其水銀的含量也不同。為審慎起見，計劃懷孕、懷孕和授乳的女性應避免大量進食罐頭吞拿魚。

計劃懷孕、懷孕和授乳的女性喝魚湯安全嗎？

中心曾經就飲用魚湯的風險和益處進行評估，集中研究通常用作配製魚湯供產後或授乳的女性飲用的 5 種魚類，包

括山斑魚、鯨魚尾、牛鰵魚、鯽魚和塘虱魚。研究結果顯示，飲用魚湯是安全的。雖然如此，計劃懷孕、懷孕和授乳的女性應該避免進食體型較大的捕獵魚類（見圖 2），包括飲用這些魚製成的魚湯。

正在授乳的女性進食魚類或飲用魚湯安全嗎？

根據文獻，母乳的甲基汞含量不高，但哺乳對嬰兒的成長和發展卻有許多益處。母乳餵哺的好處遠超母乳可能含有少量水銀所帶來的風險。因此，餵哺母乳的女性應該繼續吃魚或喝魚湯，作為均衡飲食的一環。

如何得到進食魚類的益處，同時降低相關風險？

魚類含豐富蛋白質、人體必需的奧米加-3 脂肪酸及多種維生素和礦物質。每星期進食一至兩份（1 份 = 150 克）不同的魚類作為均衡飲食的一部分，對健康有莫大益處。圖 2 列出的捕獵性魚類積聚的水銀較多，因此應限制食用。

無論論在超級市場採購、在餐廳用餐或是訂購外賣食物，若不確定想要購買的魚類的品種或名稱，應向相關職員查詢。

加工處理或烹煮可否減低魚類的水銀含量？

不可以。烹煮、製成罐頭或冷藏等加工處理過程並不能降低魚類的水銀含量。