

Technical Bulletin #23:

The Nutritional Value of Small Fish

Small fish are a “recipe” for a healthy diet

Small fish such as *chanwa phlieng*, *chanwa mool*, *chanteas phluk* and *kanthrawb* are common species that many Cambodians eat every day whether fried, in soups or in other dishes. As a result, they are getting some of the essential nutrients they need for a healthy diet. For example, women can meet 45% of their daily requirement for iron by eating a traditional meal of rice and sour soup that is made with *changwa phlieng*. An iron-rich diet is important to reduce the risk of anemia among teenage girls and adult women.



The small fish that Cambodians eat are an important source of protein

Fish are an excellent source of protein, a macronutrient that provides all the essential amino acids that your body needs. Proteins are made up of amino acids that are the body’s building blocks. These amino acids tend to break down and need to be replaced on a daily basis by eating foods that are rich in protein.

Protein can be found in both animal and plant foods. However, the concentration of protein is higher in animal foods. For example, 100g of raw fish has 14-20g of protein depending on the species compared with only 2.7g in cooked rice or 8.7g in cooked beans.

Fish and meat are also more efficient sources of protein. This means that your body is better able to absorb the protein contained in these animal foods compared with plant foods. For many households, fish is more accessible and affordable than meat. People can raise fish in small ponds and rice fields or catch wild fish even if they do not have money to buy fish.

Protein Recommended Daily Intake	
Infants	10g
Teenage boys	52g
Teenage girls	46g
Adult women	46g
Adult men	56g
Pregnant or lactating women	71g

Small fish are also good sources of Calcium and Vitamin A

Fish bones are very rich in calcium which your body needs to develop and maintain strong bones and teeth. The popular Cambodian meal of small fish species that are fried and eaten whole including the head and bones is an important dietary source of calcium. Teenage boys and girls need calcium because they



are growing rapidly at this age. A serving of 100g of small fish species such as *chanwa phlieng* or *chanwa mool* will provide 50% of their daily requirement. The same serving will provide 70% of the daily requirement for adult men and women.

Small fish are also good sources of Vitamin A, a micronutrient that is important for healthy eyesight. Species such as *chanwa mool* and *chanteas phluk* have a very high Vitamin A content: 100g of raw fish contains 1.5-2 times the daily recommended intake of adults. Other popular fish such as *chanwa phlieng* and *kanthrawb* are also good sources of Vitamin A. Most of the Vitamin A is concentrated in the eyes and viscera of these fish species, so making soups using the whole fish head as well as frying small fish and eating them whole are good ways to get the benefits of Vitamin A.

How cleaning, cooking and processing affect the nutrition value of fish

- Eating small-fish species whole including the head and bones is an excellent way of ensuring that you benefit from the Vitamin A and Calcium in the fish.
- Frying fish in small amounts of oil enhances the absorption of the Vitamin A found in fish by your body.
- Cooking fish with lemon or tamarind or eating fruits and vegetables rich in Vitamin C during the same meal will help your body absorb the iron in fish.
- Vitamin A is very sensitive to sunlight. For this reason, sun drying fish which is a common practice in Cambodia results in the loss of nearly all Vitamin A found in small-fish species.

Information on the nutritional value of small fish species in Cambodia comes from the following WorldFish Center publications:

WorldFish Center, 2011. Fish and Human Nutrition

WorldFish Center, 2010. The contribution of fish intake, aquaculture and small-scale fisheries to improving food and nutrition security: A literature review.

Photograph: Allan Rickmann

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