... just the FACTS

ANIMAL-BASED FOODS ARE TOP SOURCES OF NUTRIENTS PEOPLE OFTEN LACK

STUDY DESIGN:

This study evaluated the nutrient density of various foods against the micronutrients most commonly under consumed.

OBJECTIVES:

To identify the top food sources of 6 priority micronutrients (iron, zinc, calcium, vitamin A, folate, and vitamin B_{12}), in order to identify which foods to prioritize to reduce the burden of undernutrition.

DATA:

Recommended nutrient intakes were calculated for 5 population groups, including adults ≥25 years of age and four groups who are vulnerable to undernutrition including: children 2 to 4 years of age, adolescents, non-pregnant and non-lactating women of reproductive age, and pregnant women.

METHODS:

An aggregated global food composition database was built. Foods were then rated according to their density in the 6 priority micronutrients based on the needs of the 5 population groups.

RESULTS:

The top sources of priority micronutrients (i.e., foods with a very high aggregate micronutrient density) include:

- organ meats - liver, spleen, kidney, and heart
- small dried fish, shellfish, and canned fish with bones
- red meat from ruminants - goat, beef, and lamb/mutton
- eggs
- cow's milk
- dark green leafy vegetables

This study found that **"many foods commonly promoted as nutrient-dense, including most fruits and vegetables, nuts and seeds, whole grains and, even animal-source foods like chicken and canned fish without bones, are not particularly dense in bioavailable micronutrients commonly lacking"** in the diet.

CONCLUSIONS:

In general, foods from animal sources such as organ meats, beef, milk, eggs, small dried fish and shellfish, as well as dark leafy greens are top sources of priority micronutrients. This study highlights that prioritizing these foods can help fill common micronutrient gaps and reduce the risk of deficiencies.

FOR YOUR PRACTICE:

Deficiencies in iron, zinc, calcium, vitamin A, folate, and vitamin B_{12} can have severe and lasting consequences. The authors emphasize there is an urgent need to increase the density of these priority micronutrients in diets in countries of all incomes. Even in high-income countries, deficiencies in micronutrients such as iron are common, especially among women of reproductive age.

Beal T and Ortenzi F. Priority micronutrient density in foods. Front Nutr 2022;9:806566.

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