



# Milk and dairy products in human nutrition



# The Nutrition Situation: Where are we?

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- Significant progress has been made in reducing undernourishment in the world during the last 20 years. However, 842 million people are undernourished and the vast majority (827 million) live in developing countries (FAO, IFAD and WFP. 2013. The state of food insecurity in the world 2013).
- 2 billion are deficient in essential vitamins and minerals. (FAO, IFAD and WFP. 2012. The state of food insecurity in the world 2012).
- 1 child in 4 under the age of five is stunted, 162 million under-five year olds were stunted in 2012 (UNICEF, WHO and The World Bank. 2013. Estimates for 2012).
- 1.4 billion are overweight (500 million obese) (WHO. 2013. Obesity and overweight fact sheet).



# FAO's Vision on Nutrition

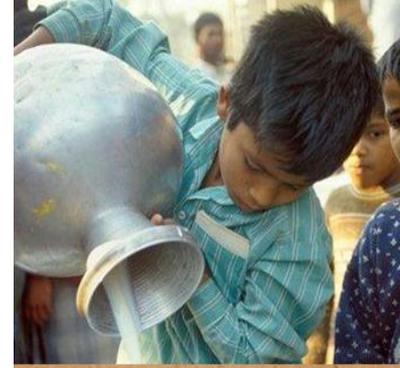
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FAO's Vision is of a world free of **hunger and malnutrition** where **food and agriculture** contributes to **improving the diets** and living standards of all, especially the **poorest** and most **vulnerable**, in an **economically, socially and environmentally sustainable way**.



# Why examine Milk and Dairy Products in Human Nutrition?

- Globally billions of people consume milk and dairy products every day.
- Consumers, industry and governments need up-to-date information on how milk can contribute to human nutrition.
- In pursuing its mission of eradicating hunger and improving food security and nutrition for all, FAO is pleased to present this unique publication on 'Milk and Dairy Products in Human Nutrition'
- The book evaluates current scientific knowledge on the subject, from a global perspective and provides key options for governments, the private sector and others.



In South Asia, the consumption of milk and milk products is expected to increase by 125 % by 2030.

# Why Milk and Dairy Products are important?

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- Source of macro and micronutrients, milk and dairy products can play a vital role in human nutrition in developing countries, where the diets of poor people frequently lack diversity and consumption of animal-source foods may be limited.
- Growing consumption of dairy and other livestock products is bringing important nutritional benefits to large segments of the population of developing countries, although many millions of people in developing countries are still not able to afford better-quality diets owing to the higher cost.



# Why Milk and Dairy Products are important?

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- No single food can supply all essential nutrients. The human diet is complex. Balance and variety is fundamental to healthy eating.
- Milk and dairy programmes show potential to improve human nutrition, especially if targeted to women.
- Some 842 million people continue to be chronically undernourished and a further billion are eating unbalanced diets. It makes no sense to act as if agriculture and nutrition were separate, and this means setting out to build programmes that link the two- as endorsed by the Zero Hunger Challenge by the Secretary General of the United Nations.



# What is the role of milk in addressing malnutrition?

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- Can supply components that are particularly important for supporting child growth, including: protein, minerals and lactose.
- Dietary fat from milk is specially important in the diets of infants and young children with a very low fat intake, where the availability of other animal-source foods is limited. Skimmed milk is not recommended as a major food source during the first 2 years of life.
- Can help prevent stunting during the first 2 years of life.
- Milk-based food products have been successfully used in the treatment of moderate and severe malnutrition in children.

The first 1000 days of a child's life are critical for growth and cognitive development.



# What are the Health Risks?

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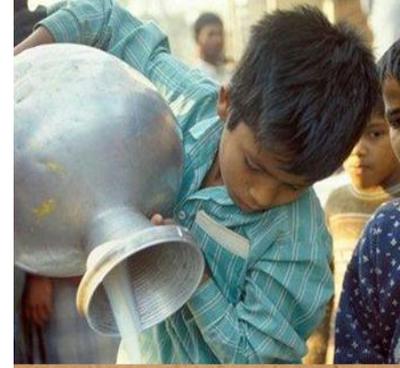
- The link between dairy consumption and non-communicable disease is inconclusive.
- Lactose intolerance can cause significant discomfort and decreased quality of life in people that are affected.
- Allergy to cow milk proteins affects about 2-6% worldwide, occurring primarily in infancy and childhood.
- Cow and other animal milk consumption is not recommended for infants < 1 year.



# What are dairy value-added products?

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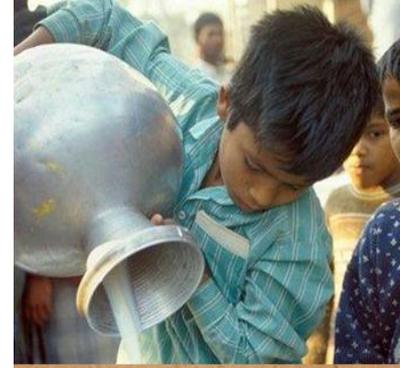
- Technological developments have increased the variety of dairy products available to the consumers.
- Fermented dairy products can be better tolerated by lactose intolerant people.
- Specific bacteria present in fermented products have been associated with immune enhancing and cholesterol lowering properties, but more research is needed.



# What are dairy value-added products? Cont...

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- Milk products can be fortified with additional vitamins, minerals or essential fatty acids, according to specific needs (e.g. fortification with vitamin D to address rickets).
- Modern health claims of some dairy products should be interpreted with care, since many have no strong scientific support or can be misleading.
  - Low fat dairy products can be very high in sugar content
  - No added sugar products
  - Specific component-related claims (e.g. whey, bioactive peptides)



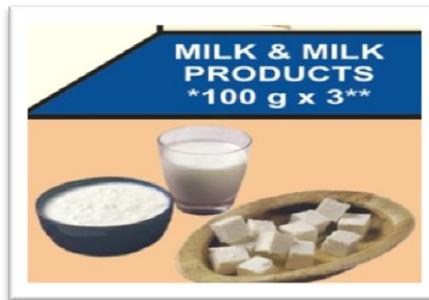
# Is there a recommendation for milk/dairy consumption?

- No global recommendations.
- Developed countries: recommendations are for the consumption of lower fat options of dairy and milk.
- Country level: food based dietary guidelines (Recommendations vary from 1 to 3 servings per day). Reference: [Milk and dairy products in human nutrition table 4.7 pp 201-203](#). Some examples:

Thailand



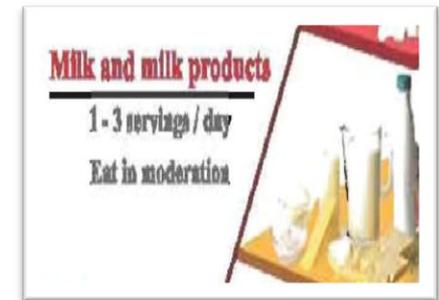
India



Japan



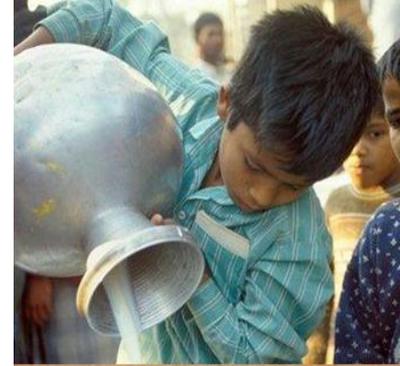
Malaysia



# What are the main aspects of food safety?

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- Ensuring the safety of milk and dairy products is essential for consumer health, especially of vulnerable consumers.
- The quality of milk can be affected by microorganism contamination, chemical additives, environmental pollution and nutrient degradation.
- Milk is very rich in nutrients and provides an ideal growth environment for many microorganisms.
- Raw, poorly processed or handled milk can lead to cases of foodborne illness in humans.



# What are the current issues concerning milk production?

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- Rapid increase in consumption and production of animal products worldwide (population growth, income growth and urbanization)
  - Expanded livestock production causes higher demand for feed, increased pressure on land and water resources.
  - Increased impact on climate change through high greenhouse emissions.
  - Higher risk of disease spreading between livestock and humans, caused by more intensive production systems and concentration of animals.
  - Social implications caused by potential marginalization of smallholders.



# How can dairy industry programmes contribute to development?

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- In developing countries, nearly one billion people live on dairy farms, smallholdings or in landless households keeping one or more animals.
- Dairy industry programmes can contribute to increased household food security, nutrition and to improved rural livelihoods through income generation and employment along the dairy value chain. Particular benefits for women and young people from rural areas.
- There are increased opportunities as market demand follows rising incomes, especially in emerging Asian economies.
- Future programmes should monitor nutrition and agro-ecological impact using clear performance indicators.



# How can links between dairy development and nutrition be enhanced?

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- A multisectorial coordinated approach is needed (government, development agencies and private sector).
- A high level political commitment with a strong nutrition enhancing promotion environment, increases the effectiveness of nutrition-sensitive dairy industry development.
- Social contribution by the dairy sector in the developing world is needed to campaign for healthy diets and to put milk and dairy products, within reach of low-income populations.



# For more information...

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Publication

<http://www.fao.org/docrep/018/i3396e/i3396e.pdf>

Milk and Dairy Q&A

<http://www.fao.org/news/story/en/item/203977/icode/>

Contact:

Ellen Muehlhoff

Senior Officer

Nutrition Education and Consumer Awareness Group

Nutrition Division

[Ellen.Muehlhoff@fao.org](mailto:Ellen.Muehlhoff@fao.org)

