

"Common nutritional problems in kids"



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**INTERNATIONAL
SCIENCE AND HEALTH
FOUNDATION**



A condition that results from eating a diet in which one or more nutrients are either not enough or are too much such that the diet causes health problems

MALNUTRITION is a global problem

**1.9
BILLION**

adults are
overweight or
obese

**2
BILLION**

people suffer from
some form of
micronutrient
deficiency

**161
Million**

children under
the age 5 are too
short for their age

**795
Million**

people do not get
the food they need
to live a healthy life

UNHEALTHY DIETS

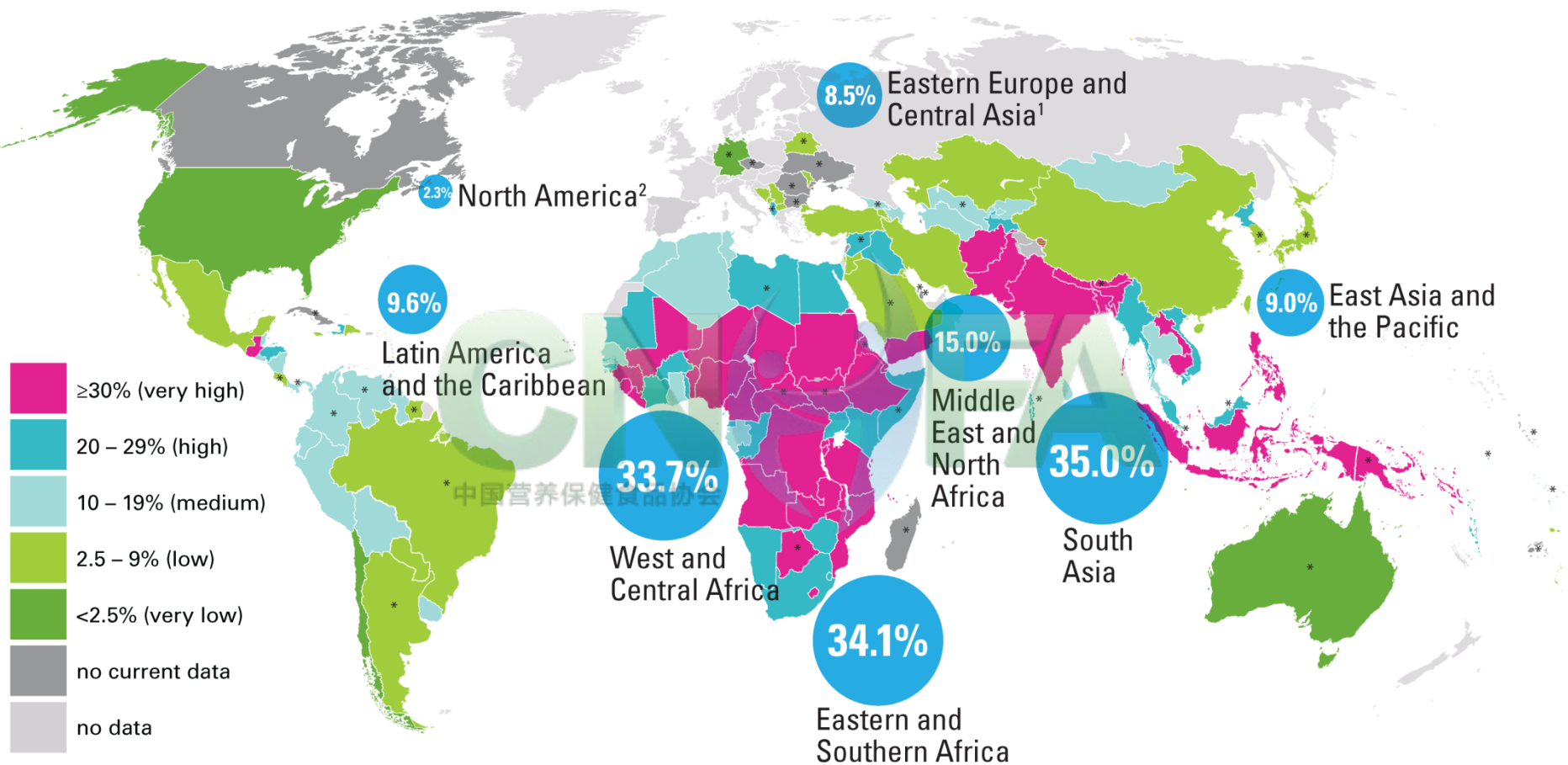
are one of the leading causes of global **malnutrition**



Malnutrition

Despite some reductions in world income-related poverty in recent years, malnutrition remains widespread





UNICEF data



Nutrient
Deficiencies:
Are you at
risk?

Are you nutrient deficient?



Nutrient deficiencies of iron, vitamin A, vitamin D, folic acid and zinc are prevalent worldwide, especially in children from low income areas

IRON DEFICIENCY

Iron is an essential mineral for haemoglobin in the blood

The major cause of iron deficiency is an insufficient intake of iron from the diet.



SIGNS AND SYMPTOMS OF

IRON

DEFICIENCY

Fatigue and Tiredness



Restless Leg Syndrome



Shortness of Breath



Frequent Headaches



Depression



Increased Sensitivity to Cold



Hair Loss



Brittle Nails



Warning Signs of Anemia in Kids



IRON RICH FOODS



Soybean



Oatmeal



Raisins



Eggs



Shell Fish



Grain Bread



Red Meat



Chicken and
Turkey



Green
Leaf

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- A healthy balanced diet should prevent iron deficiency
- Iron is found in **red meat, follow-on formulas, fortified breakfast cereals**



Vitamin D

The body makes vitamin D when it is exposed to Ultraviolet (UV) rays from the sun.

FOOD SOURCES:

Cheese
Margarine
Butter
Fortified Milk
Healthy Cereals
Fatty Fish



VITAMIN D DEFICIENCY

Normal

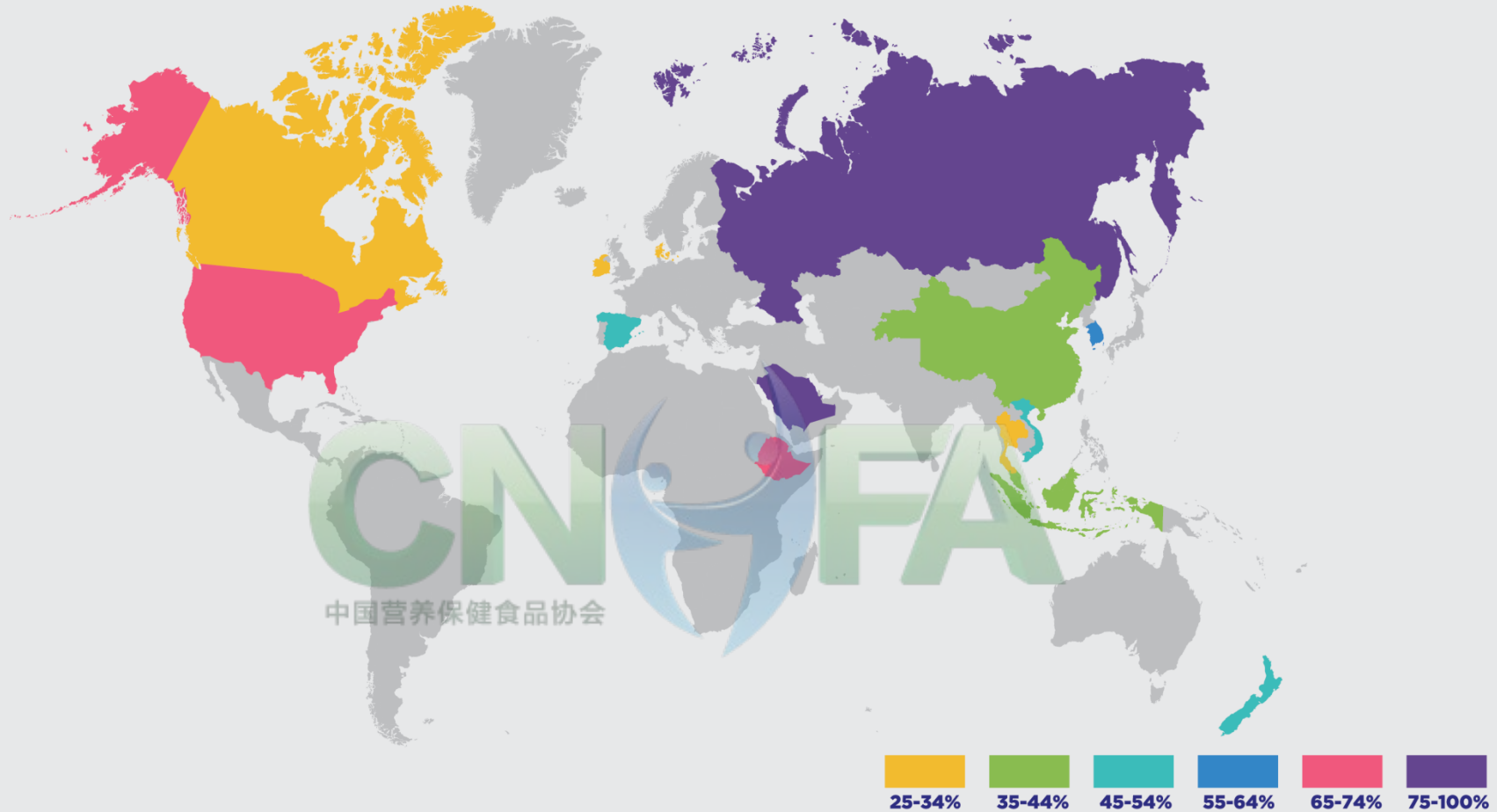


Rickets



- Vitamin D is a fat-soluble vitamin that is essential for bone growth and health.
- Vitamin D deficiency can cause rickets, in which the bones become soft and misshapen.
- Vitamin D is also important in protecting toddlers against infections.

WORLDWIDE PREVALENCE OF VITAMIN D DEFICIENCY AMONG CHILDREN



* Vitamin D deficiency in United States and Russia was defined by levels less than 30 ng/ml

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OTHER NUTRIENT DEFICIENCIES



- In recent years diets have changed to contain more omega 6 fats and fewer omega 3 fats with a tendency for children to eat more vegetable oils and margarines based on omega 6 fats.
- **Toddlers need to be encouraged to eat foods containing omega 3 fats, such as oily fish, regularly to maintain a healthy balance of fatty acids**

Deficiency of K

Deficiency of vitamin K

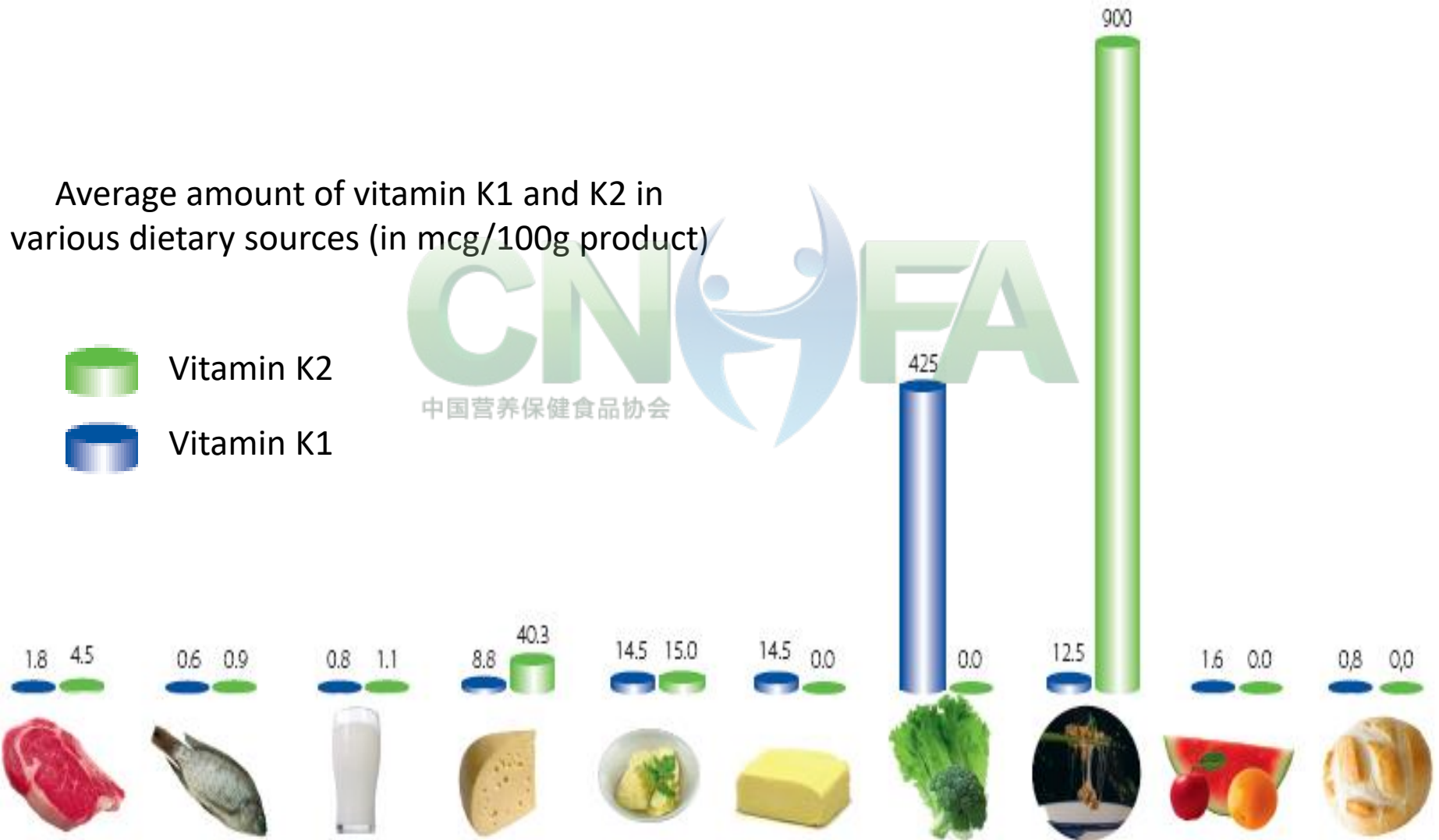


K1 is the major form of nutritional vitamin K in Europe

K vitamins in food

Average amount of vitamin K1 and K2 in various dietary sources (in mcg/100g product)

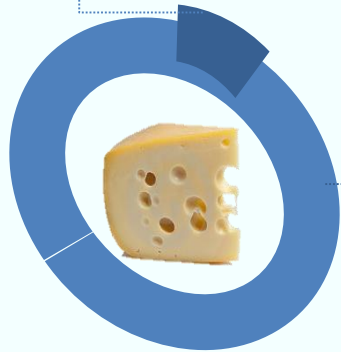
 Vitamin K2
 Vitamin K1



K2 Content in Fermented Food

TRADITIONAL CHEESE

5.0mcg*
VITAMIN K



DUTCH
Farmer's cheese

81.0mcg*
VITAMIN K2

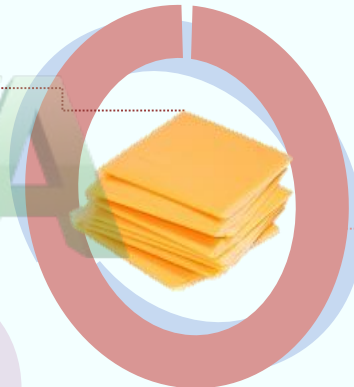
CNFA

中国营养保健食品协会



PROCESSED CHEESE

0.00mcg*
VITAMIN K
VITAMIN K2



U.S.A
Typical cheese

99%
ARTIFICIAL
ADDITIVES



K Vitamin Status & Bone Health in Children

The higher the “peak” bone mass (achieved at age < 30 years) the more you are protected from osteoporosis development in later life

Young bone is highly active and osteocalcin levels are 8 – 10 fold higher as compared to adults → requirement of vitamin K thus also higher



The Vita Kids study

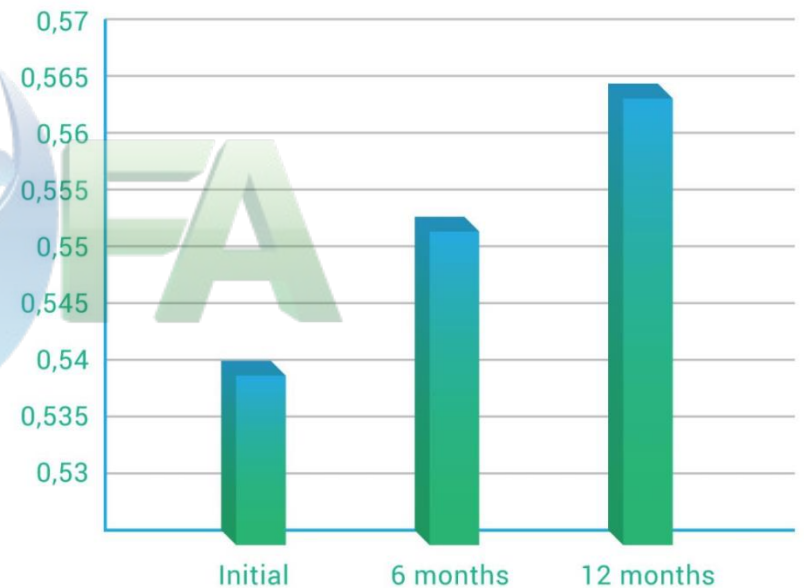


- Randomized, placebo- controlled, double-blind
- 60 children, 6-10 years of age
- Equal boys / girls
- 45 μg of MK-7 daily for 8 weeks
- Measurement of ucOC and cOC to assess the vitamin K status

Vitamin K2 as MK-7 improved activation of osteocalcin

The Efficacy of K2 and Calcitriol Combination on Thalassemic Osteopathy

- The results detected a significant improvement in the bone mineral density and Z-score at the lumbar spine area of the patients at the sixth and 12th month of the treatment.
- A decrease in the ratio of undercarboxylated osteocalcin to carboxylated osteocalcin was found, too.



Low vitamin K status increases the risk of fractures in children



- 20 children (14 boys, 6 girls) aged 5 to 15 years old were included in the study
- There was, a statistically significant difference in the UCR ratio
- Better vitamin K status was significantly correlated with lower rate of low-energy fracture incidence.

Conclusions



Good nutrition during childhood is essential for growth and development, health and well-being, and the prevention of some chronic diseases

中国营养保健食品

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