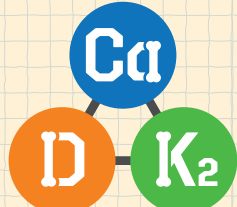


Three Nutrients Essential for Building Healthy Bones

To help build strong bones, it is important to maintain a well-balanced diet containing the three essential nutrients of "Calcium", "Vitamin D" and "Vitamin K₂", effectively absorbing calcium into the body to support its deposits in the bones. These three nutrients are collectively referred to as the "Bone Golden Triangle".



Ca Becomes bone matter

D Improves calcium absorption

K₂ Assists in calcium deposits in bones

The ABCs of Nutrients

Ca [Calcium]

A nutrient critical for bones, essential in all types of cell functions and neurotransmission. Inadequate calcium intake from food can result in weak bones and teeth.

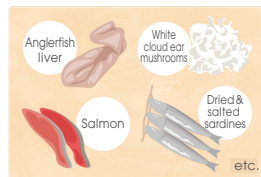
<Major Food Sources>



D [Vitamin D]

Promotes bone growth and calcification. Synthesis in the body is also possible through exposure to sunlight. Vitamin D deficiencies can impede bone growth and become a cause of osteoporosis.

<Major Food Sources>



K₂ [Vitamin K₂]

A fat-soluble vitamin effective in strengthening bones. Also promotes blood coagulation to help close and heal wounds. Vitamin K₂ deficiencies can accelerate bleeding and contribute to osteoporosis. Within the Vitamin K group, it is considered that K₂ serves to support healthy nutritional conditions over longer periods of time.

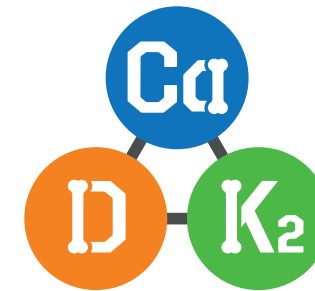
<Major Food Sources>



Key Points



Just calcium isn't enough.



コツコツ骨ラボ

Healthy Bone Laboratory

~"Bone Golden Triangle" Promotion Project~

Healthy Bone Laboratory
Official Website

Expert's Column

Tasty Bone-Building Recipe

The ABCs of Nutrients

Useful Bone Health Information Tips!

Independent Research Data

Bone-Building Exercises

Media Coverage



<Japanese>

5252hone-lab.com

The "Bone Golden Triangle" is a generic term referring to "Calcium", "Vitamin D" and "Vitamin K₂" - three nutrients essential in building strong bones.

For further information, see the back cover.

Eating Habits to Help Build Healthy Bones Great for Adults and Kids Alike!

Bones are built and eroded every day

Bones play three vital roles as the “body’s framework”, “organ protector” and “calcium storehouse”. In this sense, they are important organs for all people - for everybody - adults and children alike.

For the human body, declining blood calcium levels render it impossible to sustain life. Inadequate calcium intake prompts the body to dissolve the calcium stored in our bones, in an attempt to uphold calcium blood density. The common wisdom is that

failure to consume calcium leads to “reduced bone mass”, as well as “brittle bones”.

Even after becoming adults, our bones continue to repeat an endless cycle of “resorption” (breaking down) and “formation” (creation). Under normal circumstances, the body maintains a balance between these two forces. However, when this balance breaks down as a result of menopause, aging or other factors, the onset of osteoporosis will occur.

<Roles of Our Bones>



Framework to support the body



Protector of vital organs

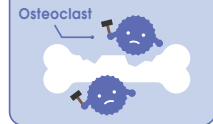


Calcium storehouse

<Bone Metabolism>

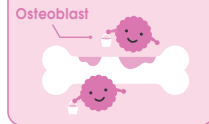
Bone Resorption

When blood calcium declines, osteoclasts break down our bones



Bone Formation

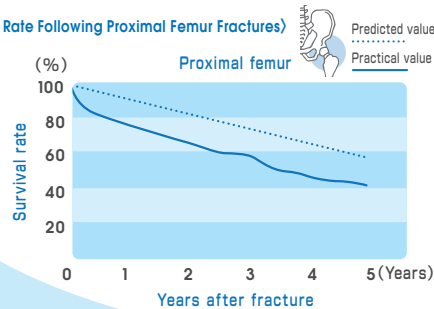
Applying pressure to bones energizes osteoblasts, helping to build healthy bones



Is Osteoporosis a “New Lifestyle-Related Disease”?

Broken bones caused by osteoporosis can also detract from the quality of life, lower survival rates and cause other complications. To curb the risks of further bone fractures, it is important to prevent initial bone breaks to the greatest extent possible. Considering that the symptoms of osteoporosis gradually emerge as a result of many years of established eating habits, lack of exercise and other causes, we feel it is possible to view the condition as comprising one type of lifestyle-related disease.

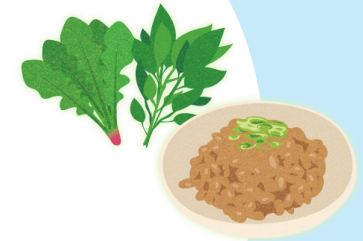
<Survival Rate Following Proximal Femur Fractures>



Active Consumption of Vitamin K₂ Recommended

There has been clear evidence in recent years that Vitamin K₂ is an essential nutrient in maintaining good bone health. However, because Vitamin K₂ acts on the bones only after being used in the liver, the remaining amounts tend to be inadequate to support truly effective bone formation. In this way, Vitamin K₂ deficiencies elevate the risk of bone fracture and osteoporosis.

There are increasing numbers of academic reports taking the position that, even within the overall Vitamin K group, Vitamin K₂ possesses higher effects than Vitamin K₁. Vitamin K₁ is widely present in green vegetables, while rich amounts of Vitamin K₂ are found in natto and other fermented foods. Paying close attention to our eating habits in striving to prevent bone fractures and osteoporosis is a vital key in continuing to enjoy a high quality of life for many years to come.



Tasty Bone-Building Recipe

<Tofu Dressed with Natto>

<Ingredients (for one portion)>

Natto (fermented soybeans) --- 1 pack Firm tofu --- 1/3 of a block Young sardines --- 2 tablespoons
Chopped toasted sesame seeds --- 1 teaspoon Green onions --- As appropriate Sesame oil --- 1 teaspoon

- 1 Slice the 1/3 block of tofu in half, place in a dish.
- 2 Mix the tofu, sardines, toasted sesame seeds and sesame oil.

POINT Adding the toasted sesame seeds and sesame oil raises the absorptivity of fat-soluble vitamins (D and K₂) in the ingredients.

- 3 Dress the ingredients in “①” with those in “②,” heap on green onions.
☆Add grated ginger, soy sauce or other appropriate seasonings.

POINT This combination makes it possible to consume all three required nutrients in a single dish.



Nutritionist recommended recipes available!

See the reverse side for details