



What are Natto and Nattokinase?



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Why are Natto and Nattokinase Highlighted?
What are the Benefits of Natto Essence Containing Nattokinase?
Natto Essence Containing Nattokinase vs Urokinase
Nattokinase (Nattoesse <small>HYPERLINK "http://www.nattokinase.co.jp/en/natto.html"™</small>)
HYPERLINK "http://www.nattokinase.co.jp/en/natto.html") is a Food and Safe.
Nattokinase Intake Before and After



Experiments with Natto and Nattokinase

What are Natto and Nattokinase?

TOP



Natto is produced by natural fermentation of soy beans with *Bacillus subtilis* (natto) which lives naturally in rice straws like soy source and miso from soy beans. "Natto essence containing Nattokinase", generally called "Nattokinase"(Product Name: Nattoesse™) is simply extracted from fermented soy beans, refined, and freeze-dried in cGMP complied facilities. Natto has been popularly eaten in Japan as a traditional Japanese diet since more than 2000 years ago.

A fibrinolytic enzyme nattokinase was found in natto (Dr. H. Sume, 1987). Nattokinase enzyme has no trace in soybeans but is produced during the natural fermentation process. 100g of natto contains 0.1g (1000 IU) of Nattokinase of which potency is equivalent to 1600 IU of Urokinase, a thrombolytic agent. 100g of natto per pack is marketed at food stores and is eaten by Japanese at breakfasts, at least a few meals a week.

Why are Natto and Nattokinase Highlighted?

TOP

There are some foods like Korean ginseng, red bean which are known to suppress blood coagulation. They, however, have no thrombolysis activity to dissolve blood clots in blood vessels. Only one food is reported effective to lysis of thrombus by oral administration. That is natto.

Natto has very strong fibrinolytic activities and are well-known in Japan as a folk food medicine for heart and vascular diseases mostly caused by a blood circulation obstructed or narrowed by accumulated fatty deposits or blood clots. Typical thrombosis cases are not only myocardial infarction, angina pectoris, cerebral infarction but also senile dementia which is triggered by ill blood circulation deriving from arteriosclerosis.

Length of the blood vessels from heart to peripheral blood vessels in human body is said to be 100,000 Km (2.5 times of the earth equator). Disturbance of the blood flow occurs not only in

Nattokinase (Nattoesse™) is a Food and Safe

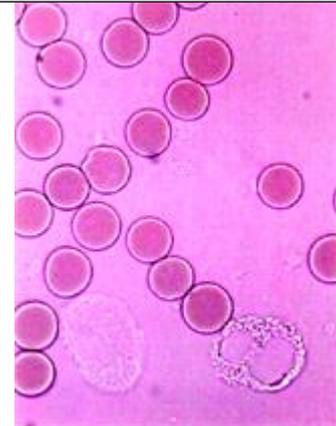
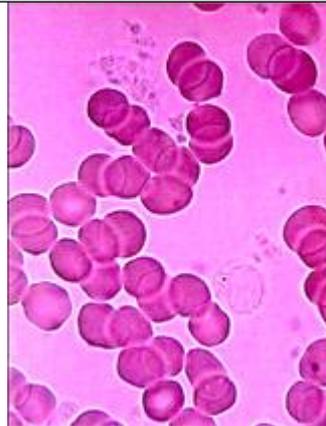
TOP

Natto has been eaten more than 2000 years and is still being eaten in Japan. 100g of natto contains 0.1g (1000IU) of Nattokinase. 100g of natto is packed for serving a meal. Nattokinase densely exists in sticky substance covering the surface of natto beans. Natto essence containing Nattokinase mostly derives from the sticky substance. It is a natural product and is not enriched nor pure enzyme. In an acute toxicity test with nattokinase in mice, no abnormal behavior of the mice was observed. The results indicate very low acute toxicity: LD50 could be considered above 2g/Kg. Mutagenicity test was negative.

Nattokinase Intake Before and After

TOP

1. Treatment with Nattokinase



Y.T. Female 70 years old
Cholesterol : 270

Before intakes of Nattokinase:
Blood is not clean and thick.

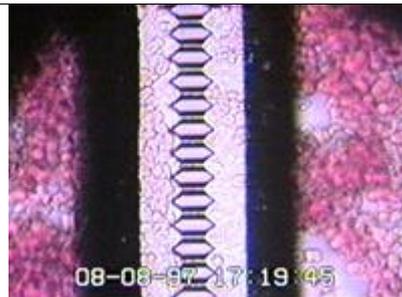
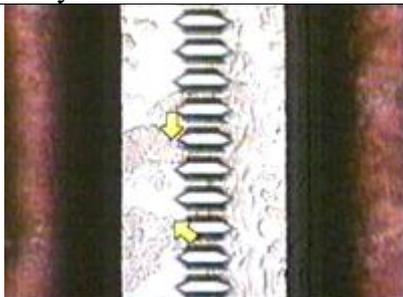
One month **After** intake
Blood is clean and red cells
are in good shape.

2. Improvement of Blood Flow

LBA Method is to visualize the live-blood on a TV screen as it is in the body. Most of blood vessels in human consist of 99.9% peripheral vessels.

Diameter of some periperal vessels are 0.005 mm which is smaller than 0.007~0.008 mm of red blood cells. Red blood cells are flowing through the peripheral vessels by squeezing the cells. It was believed that the blood was circulating smoothly all over the body. Since the LBA Method has been employed, we find in the most cases (n=200) that the blood streams are not smooth but are muddy blood.

Disadvantage of the sticky blood is to disturb smooth blood flows with not only oxygen and nutrients but also drug component to the organs and brain. Furthermore such sticky blood can be a substantial cause of the sclerosis in all the circulatory system. Smooth, clear stream of the blood diagnosed by LBA Method is a milestone for our healthy life.



Before intakes of Nattokinase
Blood flow is stuck

After
Blood is clean and
smoothly flowing.