

# Authentic Naturally Distilled and Aged Awamori is Effective for Thrombus Dissolution, and is Excellent for Blood Vessel Circulation

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Born in Nara Prefecture in 1945. Professor Yoko Sumi graduated from Post Graduate School of Medicine, Tokuyama University. Presently Professor of the Department of Industrial Technology, Kurashiki University for Art and Science. He studied enzymology at the Fermentation Chemical Research Institute, Yamanashi University. Professor Sumi researched on the relationship between authentic naturally distilled and aged awamori and thrombus dissolution enzyme at Miyazaki Medical University and published “*On activity of thrombus dissolution enzyme after consumption of alcoholic drinks*” on a British medical journal in 1988. This attracted worldwide attention to the fact that authentic naturally distilled and aged awamori had a strong effectiveness on improved blood circulation. Professor Sumi is presently a Doctor of Medicine and Chairman of the Research Committee of Materials for Natural and Physiological Functions.

Q: You told us in a TV interview that Type B (Otsu-rui) authentic naturally distilled and aged awamori contains more fermenting materials beneficial for the human body than those of Type A (Ko-rui) Shochu and other distilled spirits. I can tell from tasting various awamori that there is a distinct difference of taste and that awamori has a variety of different tastes. Can you explain this in more detail?

A: Type B authentic naturally distilled and aged awamori involves a single round of distillation while Type A goes through several distillations. Type A is highly distilled and is composed mostly of water and ethanol only. On the other hand, Type B (authentic naturally distilled and aged awamori) contains a large amount of components other than alcohol. For example, at the separation test of authentic naturally distilled and aged awamori components in a research room, the decompressed distillation process at the temperature of 40C~60C produces distilled components (water and alcohol) and undistilled components. We discovered that the undistilled components (called “ingredient factors”) contained ingredients effective for thrombus dissolution and are excellent for blood vessels and the circulatory system. This is the phenomenon seen only in the authentic naturally distilled and aged awamori.

## **The test to separate effective ingredients began**

Q: Does this mean that the effective ingredients are at higher boiling point than that of alcohol?

A: Yes. However, among alcoholic drinks, the difference is very slight. With the taste of authentic naturally distilled and aged awamori, the boiling point of which is higher, is called fusel oil. Too much fusel oil destroys taste. Fusel oil contains isopropanol and various types of ester. The scent of this is good. As a test result, these ingredients themselves are considered not effective. However, the components separated by the above-mentioned test and containing isopropanol and various kinds of ester are considered to contain very effective ingredients. There are more than two hundred scents in alcoholic drinks, but the experiment to separate the ingredient effective for thrombus dissolution has just begun.

**The combination and balance of ingredients are good.**

What many consumers are concerned about are the reasons why the authentic naturally distilled and aged awamori is good for the body, and how to extract the individual ingredients, and how to judge which ingredient is effective. Is that correct?

A: That is true. At present we are making progress in separating effective ingredients. However, I think that the effectiveness for the body comes from multiple elements. In other words, it is not a function of one element but the combination of several materials which produces a certain effect. In another test, while separating an ingredient with the hope that it would be effective, its effectiveness disappeared at a certain point.

Q: In a nutshell, that means that the authentic naturally distilled and aged awamori has a good combination and balance of ingredients, doesn't it? By drinking the authentic naturally distilled and aged awamori, everybody gets its benefit. Is this what you mean?

A: When one hundred people drink the same amount, there are people whose constitution does not fit. There are epidemiological studies about its effectiveness for thrombus dissolution. At present there is a study to see if after cultivating blood vessel cells, whether the ingredient to dissolve thrombus is secreted or not and when the ingredients of the authentic naturally distilled and aged awamori is added. Another study uses ears of pigs (since the blood vessels of pigs are similar to those of human beings, sometimes ears of pig are used for transplanting purposes.) In this study, it is real thrombus, and conduct epidemiological tests to see how the ingredient to dissolve thrombus among the ingredients in the authentic naturally distilled and aged awamori is secreted and how thrombus is dissolved. As seen in the following table, the authentic naturally distilled and aged awamori secretes thrombus dissolution enzyme two times more than that of any other pure alcohol or Japanese sake.

**Secretion Amount of Thrombus Dissolution Enzyme vs. Ears of Pigs**

Type of Alcohol	Number of Times Tested	Amount of Secretion of Plasminogen and Activator (%)
Subject	6	11 + 6
Ethanol	6	36 + 8
Awamori ingredients (Ingredient factors after volatilization)	6	82 + 13
Japanese Sake (Ingredient factors after volatilization)	6	41 + 10
Density: Ethanol 100 mmol/l		Awamori and Japanese Sake 100ug/ml

**There are negative theories to claim that polyphenol obstructs thrombus dissolution.**

Q: Is this effect limited to the authentic naturally distilled and aged awamori?

A: Most alcohol drinks in general are known to have this effect. However, the effect of the authentic naturally distilled and aged awamori is much larger. Red wines that are recently much talked about are often treated as negative factors to thrombus dissolution. This is based on a study result indicting that the ingredients such as polyphenols in wine obstruct the dissolution of thrombus. More concretely, the polyphenol is highly effective in preventing thrombus, but is not effective in dissolving the already formed thrombus. On the other hand, the authentic naturally distilled and aged awamori can dissolve the already formed thrombus. This is the big difference.

## **The authentic naturally distilled and aged awamori is effective in treating myocardial infarction and ischemic heart diseases.**

Q: What can you say in relation with these diseases?

A: The Japanese people are subject to thrombus diseases. Cerebral infarction, myocardial infarction and ischemic heart diseases are all thrombus diseases. As I said before, polyphenol is strictly for prevention. After thrombus is formed, even a small amount, the authentic naturally distilled and aged awamori is very effective. Among the researchers, there are those who claim that the volume of plasmin production cannot be explained, and they also claim that since there are only a few who experimented, this is not meaningful in the name of science. However, I feel there is a big clue. At any rate, the figure that increases after you drink is the volume of urokinase that comes into the blood. Urokinase made for medicine is enzyme produced from urine, and this is widely used as a thrombus dissolving medicine worldwide. When attacked by myocardial infarction, this is injected. The volume of this enzyme increases when you drink the authentic naturally distilled and aged awamori.

## **Preventive effect for cerebral infarction, dementia and heart attack**

Q: Does urokinase dissolve thrombus by entering into the blood?

A: The authentic naturally distilled and aged awamori has the effect of activating or refreshing cells. Actually, the recent study revealed that almost all cells in the living body produced enzyme protein, and young and strongly growing cells produced it even more. Thus, especially in the case of thrombus, it depends upon how much blood cells can control urokinase. Naturally, when the volume of urokinase is little, it causes cerebral infarction or thrombi dementia in the case of the head, and heart attack or myocardial infarction in the case of the heart. The authentic naturally distilled and aged awamori is very helpful in preventing these diseases.

## **If you drink an adequate amount continuously, the blood vessels become healthier.**

Q: Then, does the authentic naturally distilled and aged awamori cure these diseases?

A: To say “cure” is a big exaggeration, but at the early stages, this will dissolve thrombus and improve the bad flow of blood. If you continue to drink moderately, cells of blood vessels become healthier and the body constitution may become harder to get thrombus. The adequate amount per day of the authentic naturally distilled and aged awamori is equivalent to 30 ml of pure alcohol, or in other words, about 120 ml of the 30 degree authentic naturally distilled and aged awamori. Of course, excessive drinking is very bad for your body. However, there is an old Chinese proverb, “Moderate alcoholic beverages are the best among one hundred medicines,” there is good in every living substance only if it is combined and balanced with the right sources. Finding the right sources to balance it is the big challenge.

Q: There are people who are not prone to consuming alcohol, what can they do?

A: I would advise these people to use awamori in their cooking, since the effect of authentic naturally distilled and aged awamori does not change much even if its alcohol evaporates from cooking. As my test using the ears of pig’s shows, the “ingredient factors” after the alcohol is evaporated from the heat are what makes awamori effective. Thus it is not necessary at all for those who are weak in consuming alcohol to get intoxicated with the authentic naturally distilled and aged awamori.