

Title: Addendum to Research Project- Salt affects  
How tofu turkey and organic turkey differ?  
Writer: Carol Brunk  
Date: July 8, 2014

### **What does salt do to the circulatory/cardio system in causing Edema? (negative affects)**

Salt may cause Edema in some individuals. Edema causes the constriction of blood vessels called vasoconstriction. Vasoconstriction is the tightening of capillaries. Salt can cause vasoconstriction when intake of salt exceeds the body's limit. When the blood vessels are tightened it causes the heart to work harder in expelling more heart beats per minute to push blood throughout the body increasing blood pressure. Many individuals experience high blood pressure problems when this happens and in others it may maintain a healthier pressure depending on the overall physical health of the individual.

Edema is lymph fluid that has accumulated /trapped in the tissue waiting to be expelled from the body. It shows up as an abnormal amount usually very noticeable on the body pictured as swelling when described to a doctor. Lymph fluid is a concentration of mostly water (like blood) but contains two kinds of white blood cells called lymphocytes and monocytes that fight disease – part of your immune system that is your first aide response system.

### **Why does the swelling occur for some when salt is used for some individuals?**

The body's natural defense system is called upon to an injury. The body recognizes the constriction of the blood vessels (vasoconstriction) as an injury. When an injury is registered by the body the body calls upon the first aide response system of the lymph system. The lymph system sends out the first aide of the disease fighting white blood cells contained in the lymph fluid to aide in recovery to put the body back on normal track. The over accumulation of fluid is caused by osmosis- a transfer method of fluid that can penetrate and easily transfer through a cell membrane-an over accumulation that needs to be released.

When the first aide of the response (lymph fluid) is over abundant additional assistance to remove fluid may be needed. A doctor may prescribe a diuretic that comes in a pill form, a food or beverage (or a combination) to help eliminate the extra bodily fluid. There are a few beverages that contain diuretics that help in aide of removal of the extra fluid; coffee, tea and alcohol- these should be reviewed with your doctor if you have problems with edema.

Below is a basic chart for understanding of how salt can work negatively on the body:

#### **Human Body (negative effect)**

<b>Element Causing injury</b>	<b>Body Injury</b>	<b>Body First Aide Response</b>	<b>Result (that may happen)</b>
Salt =	(Constricted blood vessels) =	(lymph fluid)	= Over accumulation of lymph fluid results in Edema

#### **Salt (negative affects on body):**

**Damages to the body that show up as an Injury could include one or more of the following:**

- \*Constricted blood vessels
- \*High blood pressure
- \*Heart attack

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### **Sodium/Salt Table -**

According to the **American Heart Association**, the new recommended 2010 daily allowance for sodium is 800 mg a daily (as of 2012).

\*Chart according to the American Heart Association is as follows:

\*How much sodium is in salt?

1/4 teaspoon salt = 600 mg sodium

1/2 teaspoon salt = 1,200 mg sodium

3/4 teaspoon salt = 1,800 mg sodium

1 teaspoon salt = 2,300 mg sodium

1 teaspoon baking soda = 1000 mg sodium

Since 1/4 of a teaspoon of salt equals 600 mg of sodium and 1/2 teaspoon of salt is 1,200 mg of sodium, it would be recommended that a little over a 1/4 of a teaspoon but much less than a 1/2 a teaspoon of salt would be recommended for a daily allowance. Note: salt and baking soda both contain sodium.

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## REFERENCE MATERIALS

Reference Book (library):

Taber's Cyclopedic Medical Dictionary, 20<sup>th</sup> Edition, F.A. Davis Company, Dictionary terms, Lymph, Leukocytes, Monocytes and Vasoconstriction.

Reference Book (library):

Ganong, William F. (2005) In review of Medical Physiology, 22<sup>nd</sup> Edition, Chapter 30, pg 594-595, Interstitial Fluid Volume (Edema).

### **Article on the Web**

*Suggested Servings from Each Food Group.* (2010). American Heart Association. Retrieved April 5, 2012

from <http://www.heart.org/HEARTORG/GettingHealthy/NutritionCenter/HealthyDietGoals/Sugg..>