



BLOOD PRESSURE FACTORS™

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ABOUT BLOOD PRESSURE

Human intelligence has yet to devise a more reliable or more efficient machine than the human heart. This incredible organ pumps more than 1800 gallons of blood a day while the body is at rest! Can you imagine how much larger the amount of blood flowing through the heart is during exercise and strenuous times?

Blood is circulated by the heart's pumping action through the blood vessels, which include arteries, veins, and capillaries. Blood vessels are a circular system of tubes of various sizes -- over an estimated 60,000 miles of them -- which transport blood away from the heart, carrying it to the tissues of the body, and then returning it to the heart.¹

Blood pressure is the force exerted by blood as it presses and attempts to stretch the walls of blood vessels, particularly the arteries. Blood pressure, numerically, is determined primarily by three factors; the rate and strength of the heartbeat, and the amount of blood that passes through the vessels. Resistance of the blood by the arteries is the result of the chemical properties of blood itself and the size of the arteries serving the blood.

STRESS

If stress, either internal or external, causes an increase in heartbeat, the following sequence occurs. The heart increases its beats per minute, pushing more blood through the ventricle into the arteries at a faster rate per minute, which increases the pressure on the walls of the arteries. This higher pressure is detected by the pressure-sensitive nerve cells in the arteries and they send messages, in the form of nerve impulses, to the brain. The brain responds to the message by telling the heart to slow down, which should decrease the blood pressure and defuse the situation. The nervous system continually monitors blood pressure in this manner, in an effort to maintain a normal flow of blood. This is called a feedback system.

FEEDBACK SYSTEM

A feedback system is any circular situation in which information and the status of an operation are continually reported to a central control area. The manner in which the nervous system and the brain interact is a good example of a feedback system. In regulating blood pressure, the input (stimulus) is the information reported by the pressure-sensitive nerve cells (an increase in blood pressure), and the output (response) is the interaction between

the brain and the heart, as the heart decreases its beats per minute and returns the blood pressure to normal.

The monitoring of blood pressure by the pressure-sensitive nerve cells is continual, occurring even after the return to homeostasis begins and blood pressure normalizes. The cells continue to send the monitoring impulses to the brain, and if the pressure is still too high, the brain continues to send impulses to the heart to slow down its heartbeat.

For this feedback system to function properly and maintain the homeostasis of the body, the different elements of the systems involved must be in proper working order. The blood vessels, the nerve cells, and the brain's neurotransmitters all must function together to maintain the homeostasis of the blood pressure.

HOMEOSTASIS AND BLOOD PRESSURE

Homeostasis (*homeo*=same; *stasis*=standing still) is defined as balance and harmony within the body. It is the condition created when each cell in the body functions in an internal environment which remains within certain physiological limits. Homeostasis can be achieved when: (1) the body has the proper amounts of gases, nutrients, ions, and water; (2) maintains the optimal internal temperature and; (3) has an optimal volume for the health of cells. When homeostasis is disturbed, it may affect health.²

NUTRITIONAL SUPPORT

In the complex operation of maintaining a normal blood pressure, the body needs a constant source of nutrients. Nutrients are essential for the proper functioning of the pressure-sensitive nerve cells, the muscles of the blood vessels, and the neurotransmitters of the brain.

Some examples of essential nutrients for normal blood pressure maintenance are:

CALCIUM is a mineral important for its influence in blood coagulation, neuromuscular excitability, and the transmission of nerve impulses.

VITAMIN D is a vitamin important for many reasons, but in this operation it functions well as a participant in the body's ability to utilize calcium efficiently.

VITAMIN B-6 is necessary for the proper function of both nerves and muscles. This includes the pressure-sensitive nerve cells and cardiac muscles important in the body's normal blood pressure homeostasis.



POTASSIUM is a mineral of great importance in the transmission of nerve impulses, an important action in the operation of normal blood pressure. Nerve impulses are essential for the proper functioning of every organ, gland and system in the body.

L-TAURINE is a free form amino acid found in many tissues in the animal kingdom. It is known to affect certain biological functions, including cardiac contractility.³

HOW TO OBTAIN NUTRITIONAL SUPPORT

MICHAEL'S® BLOOD PRESSURE FACTORS™ contains nutrients essential for maintaining the homeostasis of blood pressure, complemented with herbs garlic and cayenne, both known for their healthful attributes.

ABOUT MICHAEL'S® PRODUCTS

Seasoned health food shoppers already know that a combination of nutrients is always more effective than taking single nutrients one at a time. Add in the cost savings of taking combinations, with herbs included, and the math proves to be more efficient, too. Combinations increase assimilation and reduce the amount of binders and fillers. That's why **MICHAEL'S®** created the **FACTORS OF LIFE®** programs. Your life is busy enough as it is. Why worry when synergistically complete nutrition is conveniently at hand?

MICHAEL'S® products include an expiration date to ensure freshness. He personally guarantees purity and specified content. Each product is hypo-allergenic with no artificial colors or flavors. The formulas contain cold-pressed or organically grown (when available) herbs to ensure the highest quality. Additionally there is no sugar, wheat, corn, gluten, sodium, or anything artificial in any of our supplements. These high-potency, all-natural products are even manufactured with food-grade fillers, binders and enteric coatings. Most are suitable for vegetarians and tell you so right on the front label. Every product is double safety sealed with an outer shrink wrap and inner bottle freshness seal. As is normal in all-natural products, some color and texture variations may occur, but do not affect product purity, potency or assimilation.

Above all else, all **MICHAEL'S® NATUROPATHIC PROGRAMS** are designed to produce physical results you can feel, due to the innovative nutritional supplementation with specific, targeted **FACTORS OF LIFE®** programs. As always, the newest developments, the finest ingredients and the most effective formulations for your total healthcare from **MICHAEL'S® NATUROPATHIC PROGRAMS**.

Sources Cited:

^{1,2}Tortora, Gerard J. and Grabowski, Sandra R. *Principles of Anatomy and Physiology*, 7th ed. New York: Harper Collins College Publishers, 1993. pp. 9, 592.

³Shils, Maurice E. M.D., Young, Vernon R. Ph.D. *Modern Nutrition in Health and Disease*, 7th ed. Philadelphia: Lea & Febiger, 1988.



HealthCare Solutions Since 1984

Blood Pressure Factors™

Supplement Facts

Serving Size: Three (3) Tablets

Amount Per Serving		% Daily Value
Vitamin D (as Calciferol)	50 IU	12%
Vitamin B-6 (as Pyridoxine)	100 mg	5000%
Calcium (as Calcium Amino Acid Chelate)	60 mg	6%
Magnesium (as Magnesium Amino Acid Chelate)	30 mg	7%
Manganese (as Manganese Amino Acid Chelate)	15 mg	750%
Potassium (as Potassium Amino Acid Complex)	210 mg	6%
Apple Pectin	500 mg	*
Cayenne Fruit (Capsicum annum)	500 mg	*
Garlic Clove (Powder Concentrate) (Allium sativum)	500 mg	*
Hawthorne Berry (Crataegus oxyacantha)	500 mg	*
Hops Flower (Humulus lupulus)	200 mg	*
Valerian Root (Valeriana officinalis)	200 mg	*
Taurine	100 mg	*
Celery Seed (Apium graveolens)	50 mg	*

*Daily Value not established.

OTHER INGREDIENTS: Terra Alba (Calcium Sulfate), Maltodextrin, Magnesium Stearate and Stearic Acid.

CAUTION: Not to be taken by pregnant or lactating women. Keep out of reach of children.

