

What Every HEART PATIENT Needs To Know About **Homocysteine** & **Cardiovascular** **Health**



A Patient Education Tool

Heart Patients

Heart Statistics



- Cardiovascular disease (disease of the heart and blood vessels) is the #1 killer of both male and female Americans.
- It is estimated that at least 71,300,000 Americans have one or more forms of cardiovascular disease (CVD).
- Over 1,240,000 angioplasties are done annually in the U.S.
- Over 460,000 cardiac bypass surgeries are done annually in the U.S.
- **Unfortunately, 15-40% of patients receiving angioplasty or bypass procedures will have reblockage of their heart vessels.**

Based on information from the AHA Heart and Disease Statistics – 2006 Update



Risk Factors for the Development of Heart Problems

- High blood pressure
- Diabetes
- High cholesterol and triglycerides
- Smoking and tobacco use
- Obesity
- High homocysteine levels
- Poor nutritional status

Approximately 35% of heart attacks occur in people with normal total cholesterol levels.¹

Because of this, medical researchers continue to work to identify those risk factors that affect the chance of developing heart disease. One of these risk factors appears to be homocysteine.

The Homocysteine Connection

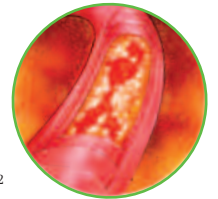
WHAT IS HOMOCYSTEINE?

Simply put, homocysteine is a known risk factor for the development of cardiovascular disease. When the body digests protein, homocysteine is produced. Homocysteine is an amino acid derivative of protein metabolism.

WHAT HAPPENS WHEN HOMOCYSTEINE IS ELEVATED IN MY BODY?

- Homocysteine injures arterial walls and promotes the build-up of “plaque.”
- Homocysteine can cause the growth of smooth muscle cells in vessel walls, narrowing the blood vessel.
- Homocysteine increases the risk of blood clots, which can lead to a heart attack or stroke.
- Homocysteine has been implicated in playing a role in multiple health challenges, including issues with blood sugar, memory-neurologic function and kidney function.

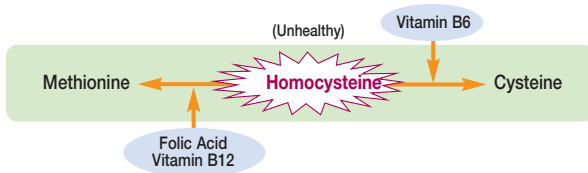
Some studies have shown that for each five micromoles per liter increase in homocysteine level, your risk for heart challenges may increase by as much as 60 to 80%.²



HOW DO HOMOCYSTEINE LEVELS INCREASE IN MY BODY?

Elevated levels of homocysteine occur when your body does not have the necessary *cofactors* to break down and metabolize homocysteine. **The necessary cofactors are Folic Acid, Vitamin B12 and Vitamin B6.** These nutrients all play a role in the regulation of homocysteine in the body, converting it to substances, such as methionine and cysteine, which do not interfere with normal vessel function and health. Increased doses of Vitamins B12, Vitamin B6 and Folic Acid have been shown in clinical

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studies to significantly promote healthy levels of homocysteine in the body.³

WHAT ARE HEALTHY HOMOCYSTEINE LEVELS?

The **American Heart Association™** has indicated a reasonable goal should be less than ten micromoles per liter. Other research suggests that optimal homocysteine levels should be less than six micromoles per liter, especially in high risk individuals.⁴

Homocysteine and Reblockage Rates of Blood Vessels

Unfortunately, 15-40% of patients receiving angioplasty or bypass procedures will have reblockage of their heart vessels within one year of the procedure.

As a result, researchers have long been studying interventions to increase the long-term success rate of these procedures. Although many opinions exist in the scientific community, all tend to be in agreement that elevated homocysteine may be a major factor in the restenosis (reblockage) of heart blood vessels. As such, interventions which can bring homocysteine levels into a healthy range could potentially play a significant role in promoting the health of previously blocked blood vessels and helping avoid the restenosis of these vessels post-procedure.⁵

What do I look for in a Nutraceutical Heart Product?

- Pharmaceutical Grade Liquid Ingredients
- Formulation and Selection Based on Scientific Studies
- All-Natural ingredients
- Free of Fillers and Binders
- High-potency Ingredients for Clinical Effect
- **Doctor Recommended**



A Complementary Approach

Numerous studies have yielded positive data regarding the clinical efficacy of nutraceuticals, especially for cardiovascular health. A significant benefit of these substances is their safety and the fact they can most often be used in conjunction with traditional medical approaches. It is always advisable for individuals to consult their health care professionals about using and combining complementary approaches.*

The leading complementary nutraceuticals with strong supportive research for cardiovascular health include:

- **Vitamin B12** • **Vitamin B6** • **Folic Acid**
- **Coenzyme Q10** • **L-carnitine** • **D-ribose**
- **Multiple Antioxidants**

Heartflow®—The Natural Choice for Healthy Homocysteine Levels



Heartflow® is a high-potency, liquid nutraceutical formula that has demonstrated results in helping individuals address cardiovascular challenges.* It is an answer for those looking to promote and maintain healthy heart vessels.* Its formulation specifically helps the body achieve healthy homocysteine levels.* It also has the benefit of promoting healthy hematologic, nervous and immune systems.*

Heartflow's advanced liquid formula promotes quicker absorption and use of its nutrients than tablets or pills, which must first dissolve in the digestive system before it may be absorbed and used.

Ingredient Ratings for Effectiveness of Promoting Healthy Homocysteine Levels

Ingredient Rating	Nutritional Effect ¹⁻⁸⁰	Minimum use for Clinical Heartflow®	Amount/ Serving
1. Vitamin B12	★★★★★	400 mcg	1250 mcg
2. Vitamin B6	★★★★	10 mg	12.5 mg
3. Folic Acid	★★★★★	400 mcg	995 mcg

Heartflow® is a liquid nutraceutical designed to help promote cardiovascular health and healthy homocysteine levels, *naturally*.*

1-80 Data on file. Eniva Corporation, 2006.

Ask your medical health care professional about Heartflow® today, or contact:

Taking Wellness to the World™

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