



# ProArgi-9 Plus

ProArgi-9 Plus combines cutting-edge ingredients that provide superior cardiovascular support and improve vascular function.

L-arginine is a vital amino acid that plays a role in a number of physiological functions in the body<sup>1</sup> but is best known for its cardiovascular benefits. In the body, L-arginine is converted to nitric oxide (NO), which causes relaxation of blood vessels, and regulates blood vessel tone and flexibility. This reduces stress on the heart, improves circulation, and lowers blood pressure.<sup>2</sup> In addition, L-arginine reduces blood viscosity and lipid peroxidation.<sup>3</sup>

The amino acid citrulline is metabolized to yield more L-arginine which in turn provides additional NO.<sup>5</sup> Citrulline helps to optimize blood flow throughout the body and promote healthy energy levels.<sup>6</sup>

Folic Acid, B6 and B12 work together to decrease harmful homocysteine levels. Decreasing homocysteine helps to protect against atherosclerosis and cardiovascular disease.<sup>3</sup>

Red wine extract is high in antioxidant anthocyanins and polyphenols which have cardioprotective effects and help reduce LDL oxidation.<sup>7</sup>

Pomegranate contains superior antioxidants known as punicalagins and ellagic acid. Pomegranate inhibits LDL oxidation, reduces arterial wall thickening, and enhances the activity of eNOS, the enzyme responsible for converting L-arginine to NO.<sup>3</sup>

Vitamin K2 keeps calcium in the bones and out of the arteries where it can lead to arterial calcification. Vitamin K2 supports the synthesis of proteins associated with calcium utilization, namely osteocalcin, and matrix Gla protein. Osteocalcin is involved in the mineralization of bone and is needed to effectively bind calcium to the bone matrix.<sup>8</sup> Matrix Gla prevents the calcification of soft tissue including arteries, while facilitating normal bone growth and development. Matrix Gla protein is a potent inhibitor of arterial calcification and is dependent on vitamin K to perform this function.<sup>9</sup> Consumption of vitamin K2 can reduce the potential for coronary heart disease.<sup>10</sup>

Vitamin D3 has long been known to aid in calcium absorption, but new research shows that D3 also plays a role in healthy cardiovascular function, reduces inflammation,<sup>11</sup> and protects against infection<sup>12</sup> and abnormal cell growth.<sup>13</sup> Vitamin D3 can reduce blood pressure levels by inhibiting renin, an enzyme released by the kidneys that acts to increase blood pressure.<sup>14</sup> Vitamin D receptors (VDR) may play a role in regulating blood vessel relaxation. Vitamin D3 activates VDR which in turn exerts a positive effect on cardiovascular function.<sup>15</sup>

Ribose is a naturally occurring sugar that has been extensively studied for its ability to enhance the recovery of energy compounds in heart cells after myocardial ischemia.<sup>16</sup>

Ribose is part of the ATP molecule which is the energy currency for cells. Ribose is required to replenish ATP and increases ATP stores in heart muscle as well as skeletal muscle cells.<sup>3</sup>

Xylitol is a low glycemic sweetener<sup>17</sup> that occurs naturally in the body. High glycemic sweeteners can cause glycation which leads to decreased arterial flexibility.<sup>18</sup> Unlike other sweeteners, xylitol has been shown to inhibit oral bacteria, and promote saliva production providing protection against tooth decay.<sup>19</sup>

Ascorbic Acid (Vitamin C) is a water soluble antioxidant<sup>3</sup> that acts as a natural preservative to protect the product ingredients from oxidation.

ProArgi-9 Plus is an advanced formula that contains not only arginine, but additional, exciting ingredients that enhance the cardiovascular benefits of arginine. ProArgi-9 Plus supplies the nutrients needed to boost energy levels and blood flow throughout the body and protect against the negative effects of cardiovascular aging.

## References:

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