

## Res-Q “to the rescue”

*by Argina Nutraceuticals*

Res-Q has been developed to aid those who are either in risk of or already suffer from atherosclerosis, the No. 1 cause of death in the western world. The beneficial anti-atherosclerotic effects of the individual ingredients of Res-Q are extensively documented in the scientific literature. In addition, a double blind, placebo controlled study has found that Res-Q supplementation considerably improved arterial health in elderly subjects (see results below).



*Atherosclerosis is a slowly developing disease of the arteries, which in its end stage often culminates in myocardial infarct or stroke. Besides these potentially fatal outcomes, decreased arterial function (as evidenced by an increased arterial stiffness and/or endothelial dysfunction) has detrimental effects on the entire organism, as proper arterial functioning is required to deliver adequate oxygen and metabolic supply to tissues and organs. In other words, the health of arteries is a prerequisite of well-being. As said hundreds of years ago: “we are as old as our arteries”.*

### ***Mode of action***

1. Atherosclerosis is thought to be initiated by an attack of oxygen free radicals on the inner layer (*intima*) of the arterial wall. As the result of such attack, the enzymatic machinery (eNOS), which is responsible for maintaining normal arterial vasodilation, becomes dysfunctional first, resulting in a condition called endothelial dysfunction.

As the disease progresses, atherosclerotic lesions (plaques), which are the results of a number of different pathological processes, accumulate on and inside the arterial wall. Oxygen free radicals also play a direct role in the initiation of plaque formation. LDL-cholesterol is first oxidized by oxygen free radicals, then the oxidized LDL-cholesterol particles start depositing on and in the walls of the arteries.

*Some of the ingredients of Res-Q (antho-, procyanidines and Q-10) serve as efficient antioxidants that protect against the attack by oxygen free radicals. In addition, **resveratrol** (another component in Res-Q) activates several of our own antioxidant defense systems.*

2. After oxidized LDL-cholesterol deposits accumulate on the arterial wall, a cascade of inflammatory processes is activated.

*The beneficial effects of **resveratrol** (an ingredient of Res-Q) on the cardiovascular system are partially due to its anti-inflammatory action.*

3. The final step in plaque-formation includes the recruitment of aggregated thrombocytes (platelets) and the depositing of calcium.

*The aggregation of thrombocytes is strongly inhibited by **resveratrol**, while the build up of calcium deposits on the arterial wall is prevented by **vitamin K2** (an ingredient of Res-Q as well).*

4. Q-10 is an essential component of the mitochondria, a cell organelle that contains the energy producing machinery of the cell. Besides its direct role in energy production, Q-10 also serves as an important antioxidant. Its importance as an antioxidant is due to the fact that one of the main sources of oxygen free radicals is the mitochondrion itself, where Q-10 is also localized.

Normally, sufficient amounts of Q-10 are synthesized by most cells in the body. However, as we age, Q-10 production is gradually decreasing. In addition, cholesterol lowering drugs (various forms of statins) — as one of their adverse effects — also block Q-10 production.

5. Most westerners, except those getting enough sunshine, are deficient in vitamin D; their plasma level is below 35 ng/ml. Plasma levels of vitamin D3 (above 50–60 ng/ml) provides a significant protection against developing ischemic heart disease, a consequence of coronary artery disease, *i.e.* Atherosclerosis, in most cases.

6. Arterial stiffness and endothelial dysfunction are widely used diagnostic “measures” of arterial health. Both of them show good correlation with the progression (stage) of atherosclerosis and are, not surprisingly, independent risk factors of cardiovascular mortality.

*The supplementation with several components of Res-Q (antho-, procyanidines, resveratrol, Q-10 and vitamin D3) has been shown to decrease arterial stiffness and improve endothelial function.*

7. Resveratrol (a component of Res-Q) has been shown to have a wide variety of additional health benefits: it dramatically improves ischemic preconditioning of the heart and the brain, increases insulin resistance and restores lipid homeostasis. All of these health improving effects of resveratrol especially benefit those, who are in risk of developing or already suffer from atherosclerosis.

**Res-Q Winter formula – 60 capsules/bottle**  
(for therapeutic purposes: 2 capsules/day; as a prophylactic: 1 capsule/day)

<b>Active ingredients</b>	<b>Per capsule</b>
Procyanidines	150 mg
Anthocyanidines	60 mg
Coenzyme Q-10	50 mg
<i>t</i> -resveratrol*	10 mg
Cholecalciferol	1000 IU
Menaquinone-7	50 µg

Procyanidines: grape seed extract  
Anthocyanidines: *Aronia melanocarpa* extract  
Q-10: complexed, water soluble  
*t*-resveratrol: grape skin  
Cholecalciferol: vitamin D3  
Menaquinone-7: vitamin K2

**Res-Q Summer formula – 60 capsules/bottle**  
(same as the Winter formula, except that it does not contain vitamins D3 and K2)

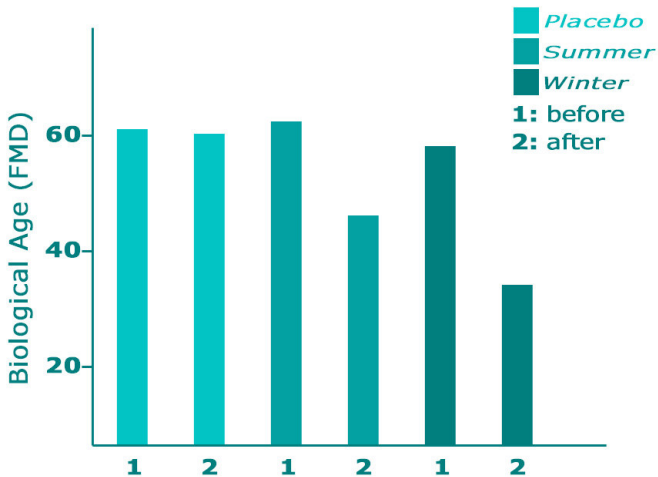
\*‘**Argina-resveratrol**’ has been tested and its effective dosage has been established in human clinical trials:

Blasko P. et al.: *Resveratrol* improves insulin sensitivity, reduces oxidative stress and activates the Akt pathway in type 2 diabetic patients. *Br. J Nutr.* (2011) 106:384–389.

Magyar K. et al.: *Cardioprotection by resveratrol: A human clinical trial in patients with stable coronary artery disease.* *Clin. Hemorheol. Microcirc.* (2012) 50:179–187.

### **The effect of Res-Q supplementation on Flow-Mediated-Dilation**

Flow-Mediated-Dilation (FMD) is a diagnostic measure endothelial function in the arteries. As in the general population FMD gradually decreases with age in adulthood, by measuring FMD the biological age of one’s arterial system can be determined. The study involved male and female subjects between the age of 59–71 years of age, many of them with hypertension. None of the subjects’ vitamin D level was above 35 ng/ml. The subjects were divided into 3 groups: a placebo group (11 subjects, average age 60.4 years), summer group (14 subjects taking Summer formula of Res-Q, average age 62.03 years) and winter group (13 subjects taking Winter formula of Res-Q, 61.2 years). FMD was measured at the beginning of the trial and after 6 moth. The subject were



instructed to take 2 capsules daily (after a morning and an evening meal).

*The figure (above) shows the change in the averaged “Biological Age of the Arteries” before and after the trial for the study groups (see above) as determined by measuring FMD using DigitalMed’s Vasograph instrument. The change in the “Summer” and the “winter” group was **statistically significant**.*

2012

Argina Nutraceuticals, Hungary

Email: [info@argina.hu](mailto:info@argina.hu)

Tel.: 36-30-519-2030