# Role of water-soluble vitamins in reducing the risk of cardiovascular heart disease in premature ovarian insufficiency patients.

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## Abstract

### Objective

To analyze the effect of vitamin B and vitamin C on premature ovarian insufficiency patients who are at higher risk of cardiovascular disease.

### Study method

The latest articles on the topic of early menopause and cardiovascular risk were reviewed from PubMed and Science direct database and were interlinked to find solutions.

### Results

In premature ovarian insufficiency, estrogen in the body drops critically. Estrogen plays a very important role in cardiovascular functions i.e.; low estrogen levels cause the heart and blood vessels to become stiff and inelastic. Vitamin B2 and B6 play an important role in increasing blood estrogen levels. These vitamins help reduce cardiovascular diseases by following means. Vitamin B2 helps in preventing oxidative stress, it acts as a potent antioxidant. It also lowers blood pressure. Vitamin B6 reduces homocysteine in the blood, homocysteine's high level can lead to myocardial infarction and thrombosis. Vitamin B6 prevents hypercholesterolemia by decreasing LDL levels. Vitamin B12 counteracts increased heart palpitations which is the side effect of vitamin B2. Vitamin C increases estrogen levels in the body, it is also involved in endometrial thickening. Vitamin C supplementation reduces systolic and diastolic pressure. It is one of the most powerful antioxidants in the body.

### Conclusion

These vitamins if taken in the proper dosage, can reduce the risk of CVD. Also, increase the estrogen level which is the main concern for patients with premature ovarian insufficiency. The author's best daily recommended dosage in form of capsules are as follows B2 (400mg), B6 (250mg), B12 (500mcg), and vitamin C (500mg).