

## Statins, Niacin, ASA, and Co-enzyme Q10 Combo Pill?

### **1. When will a convenient combo pill with a statin, niacin, ASA and co-enzyme Q10 be available? What is the argument against using such a pill for CVD?**

**Question submitted by: Dr. Chris Lam, Victoria British Columbia**

The development of a single polypill capable of providing effective cardiovascular risk reduction without the concerns of non-adherence from polypharmacy is a solution that has been sought for some time now. One such formulation, the Polycap, includes a combination of low dose thiazide, atenolol, ramipril, simvastatin, and ASA. It was shown in The Indian Polypill Study (TIPS) trial, to be successful in treating multiple risk factors in a South Asian population with acceptable tolerability.<sup>1</sup>

Clinical trials of coenzyme Q10 for the reduction of cardiovascular

events have been contradictory and inconclusive, and its use, is therefore, not recommended under any current guidelines.

The proposed combination of statin, niacin, and ASA would likely provide a significant cardiovascular event reduction in high-risk patients. However, the current tolerability of niacin may limit widespread uptake of such a combination pill. In addition, as with any fixed combination of therapeutics, the use of a single dose polypill may be effective in managing risk factors on a population level, but will render titration to targets or

avoidance of adverse events problematic for the individual patient. The use of an inexpensive polypill in high-risk populations, especially in developing nations where appropriate medical follow-up may be problematic, is a possible future tool for reducing the overall burden of cardiovascular disease.

Reference:

1. Yusuf, et al. Effects of a Polypill (Polycap) on Risk Factors in Middle-aged Individuals Without Cardiovascular Disease (TIPS): A Phase II, Double-blind, Randomised Trial. *Lancet* 2009;373:1341-51.

Answered by:  
**Dr. Theodore K. Fenske**

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### Victims of Sudden Cardiac Death

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#### **2. How do you investigate siblings who are victims of sudden cardiac death, probably due to channel condition abnormalities that are perhaps genetic?**

**Question submitted by: Dr. Monique Moreau, Alliston, Ontario**

Although sudden cardiac death is usually due to structural abnormalities, about 20% of cases occur in persons with hearts that appear normal. About one-third of cases of sudden cardiac death are explained by mutations in gene coding for cardiac ion channels.<sup>1</sup> Some can be suspected by an abnormal 12 lead electrocardiogram (EKG) (long and short QT syndromes, Brugada syndrome), while others have a completely normal EKG (catecholaminergic polymorphous ventricular

tachycardia). Most are inherited in an autosomal dominant fashion, meaning that 50% of offspring will be affected. Therefore, anyone with a first degree relative who died suddenly at a young age should be referred to a cardiologist. That person, in turn, may be referred to a medical geneticist for definitive genetic testing. Those who harbour mutant genes may be offered drug therapy and/or implantable defibrillators.

#### References

1. Kaufstein S, Kiehne N, Neumann T, et al: Cardiac Gene Defects Can Cause Sudden Cardiac Death in Young People. *Dtsch Arztebl Int*; 2009; 106:41-47.

Answered by:

**Dr. Thomas W. Wilson**

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## Treating High Cholesterol

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### ***3. How would you treat high cholesterol in a 20-year-old male with a strong positive family history of MI diabetes? Would you recommend the use of statins?***

**Question submitted by: Dr. A. Mailk, Ottawa Ontario**

I think this is becoming an increasingly important question. We are all aware of the current burgeoning epidemic of obesity and diabetes, which is going to present the attendant complications of heart disease, hypertension, and stroke. Early coronary plaque formation has recently been described in obese children before reaching their teens!

A 20-year-old male with a strong family history of both myocardial infarction and diabetes mellitus, who also has high cholesterol levels, is already at very high risk for vascular complications. I would definitely treat the high cholesterol with everything possible to lower his risk, including statins to bring his LDL below 2.0 mmol/L, as well as diet, exercise, and firm lifestyle

counseling. Long-term use of the statins has been shown to be safe and effective in significantly reducing vascular complications in those at high risk.

Answered by:

**Dr. Wayne Warnica**

Early coronary plaque formation has recently been described in obese children before reaching their teens!