**Concurrent Session 1: Functional Foods I**

**Cocoa flavanols - circulatory and heart health benefits**

Peter Howe, Kade Davison, Narelle Berry, Alison Coates, Jonathan Buckley  
*Nutritional Physiology Research Centre & ATN Centre for Metabolic Fitness, University of South Australia, Adelaide SA 5000*

**Background** – Recent research on cocoa flavanols adds substance to traditional beliefs in the health benefits of chocolate.

**Review** – In addition to generic antioxidant effects, these polyphenols can enhance endothelial nitric oxide production to influence physical and possibly mental health status through circulatory improvements. Flow mediated dilatation (FMD), a non-invasive index of endothelial function which is impaired in obesity, hypertension, high cholesterol, smoking and diabetes, increases following consumption of cocoa flavanols. We recently found that flavanol-rich cocoa supplementation for 12 wks led to sustained FMD improvement, lower blood pressure (BP) and enhanced glucose metabolism in overweight/obese but otherwise healthy non-smokers (Davison et al, unpublished). Others have shown that such benefits are dose related and attainable with modest flavanol intakes from chocolate. This is consistent with epidemiological evidence of lower BP and reduced cardiovascular mortality in cocoa/chocolate consumers. Recent studies link cognitive decline to impaired cerebral vasodilatation and show that consuming flavanol-rich cocoa can increase cerebral blood flow. Thus enhanced endothelial function may be a common mechanism by which vasoactive nutrients improve cardiometabolic risk factors, mood and cognition.

**Conclusion** - Further evaluation of the potential role of specific cocoa flavanols in healthy ageing is warranted.

**References**

3. Taubert D et al., Effects of low habitual cocoa intake on blood pressure and bioactive nitric oxide: a randomized controlled trial. JAMA 2007;298:49-60