

Effect of daily intake of a low-alcohol orange beverage on cardiovascular risk factors in hypercholesterolemic humans

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Oxidative stress, inflammation status, endothelial dysfunction, and imbalanced lipid metabolism play a major role in cardiovascular disease. Bioactive compounds and moderate alcohol consumption have been associated with decreased cardiovascular risk. This study aimed to evaluate the effect on cardiovascular risk factors of a low-alcohol beverage derived from the alcoholic fermentation of orange juice. Eighteen individuals with moderately high cholesterol levels were randomly assigned to an experimental group (n = 9) who drank 500 mL/day of the orange beverage for 2 weeks or a control group (n = 9) who drank no orange beverage. Blood samples were drawn at the beginning and end of the study period. Consumption of the beverage significantly decreased plasma levels of total cholesterol (?15.6%), LDL-cholesterol (?17.8%), LDL-cholesterol/HDL-cholesterol ratio (?21.4%), catalase (?25.5%), TBARS (?42.6%), and sVCAM-1 (?5.8%). This orange beverage would have a potential capacity to improve cardiovascular risk in hypercholesterolemic humans, supporting its future consideration as a functional beverage. © 2018 Elsevier Ltd

Alcohol

Bioactive compounds

Cardiovascular risk factor

Hypercholesterolemic humans

Lipid profile

Orange

Alcohols

Cholesterol

Citrus fruits

Fruit juices

Bioactive compounds

Cardio-vascular risk factors

Hypercholesterolemic humans

Lipid profile

Orange

Alcoholic beverages

antioxidant

catalase

high density lipoprotein cholesterol

low density lipoprotein cholesterol

thiobarbituric acid reactive substance

adult

alcoholic beverage

blood

cardiovascular disease

complication

female

fruit and vegetable juice

human

hypercholesterolemia

inflammation

male

metabolism

oxidative stress

risk factor

sweet orange

Adult

Alcoholic Beverages

Antioxidants

Cardiovascular Diseases

Catalase

Cholesterol, HDL

Cholesterol, LDL

Citrus sinensis

Female

Fruit and Vegetable Juices

Humans

Hypercholesterolemia

Inflammation

Male

Oxidative Stress

Risk Factors

Thiobarbituric Acid Reactive Substances