Abstract

iMedPub Journals
www.imedpub.com

Journal of Clinical Nutrition & Dietetics

2021
Vol.7 No.S5

The impact of Genetics on the relationship between Caffeine consumption and Metabolic Syndrome Outcomes.

Dr. Petros Motitis*

Doctor, St Mary\'s University Twickenham, London

Abstract

Caffeine is the most widely consumed physiological stimulant worldwide. Its effects on metabolic syndrome outcomes have been controversial at a population level. This review systematically investigates evidence from both, Randomized Controlled Trials (RCTs) and non- RCTs, how do some caffeine metabolism-related polymorphisms influence the effect of caffeine consumption on metabolic syndrome outcomes.

Two databases (PubMed and EMBASE) were independently searched using almost the same algorithm. Included studies that involved only human participants and explored the influence of any genetic polymorphisms related to caffeine and metabolic syndrome outcomes. We included 16 studies (four randomized controlled trials, one interventional and quasi-interventional, seven crosssectional studies, and four case-control studies). Cytochrome P450 (CYP1A2) single nucleotide polymorphisms and the family of adenosine receptor (ADORA) genotypes, mostly ADORA2A, were associated with caffeine consumption and metabolic outcomes.

However, the findings are controversial, and better-designed studies with larger sample sizes, fewer confounders, and better estimation of caffeine intake are needed in the Future.

Biography

Petros received his PhD in cancer cell biology from St. George's Hospital Medical School University of London, where he investigated the cytotoxic effects of small molecules including thalidomide and vitamin analogues in pancreatic cancer. In 2013 he was recruited in the group of Prof Gail ter Haar to work on the biological effects of focused ultrasound on cancer. He investigated the activation of apoptosis and autophagy and has demonstrated that hyperthermia synergises with HSP90 inhibition to kill colon cancer cells. He contributed to the development of a biologically relevant "ultrasound dose" by showing that Arrhenius equations can predict the cell cytotoxic effects of high temperature rapid heating. Petros's most recent focus has been the investigation of the immunological effects of focused ultrasound in in vivo pancreatic cancer models.

Email:petrosmotitis34@gmail.com