




Chapter 83 - Caffeine, Insulin Resistance, and Hypertension

Maria Pedro Guarino ^{1,2}, Joana Sacramento ¹, Maria João Ribeiro ¹, Sílvia Vilares Conde ¹




¹ CEDOC, NOVA Medical School - Faculdade de Ciências Médicas, Universidade Nova de Lisboa, Campo Mártires da Pátria, Lisboa, Portugal

² UIS-Unidade de Investigação em Saúde, Escola Superior de Saúde de Leiria, Instituto Politécnico de Leiria, Morro do Lena, Alto do Vieiro, Apartado, Leiria, Portugal

Available online 7 November 2014.

 [What do these dates mean?](#)

Show less 

 Add to Mendeley  Share  Cite

<https://doi.org/10.1016/B978-0-12-409517-5.00083-8>

[Get rights and content](#)

Abstract

In the last decades, we have witnessed a dramatic increase in the prevalence of obesity and obesity-associated diseases like type 2 diabetes and the metabolic syndrome. The role of caffeine in the pathogenesis of core features of these conditions—hypertension and insulin resistance—is still very controversial. A growing number of evidence shows that chronic caffeine intake has protective effects in the development of insulin resistance, glucose intolerance, and hypertension, in contrast with the effects of acute caffeine consumption, which are clearly deleterious. The mechanisms proposed for the protective effects of caffeine range from direct metabolic actions in the adipose tissue to more complex systemic effects mediated by inhibition of the carotid bodies. The discovery that caffeine modulates metabolic and vascular functions shed a new light into this field of research, which is currently a hot topic in the integrative approach to treat dysmetabolic states.