

Research Article

Effect of Dietary Intake of Avocado Oil and Olive Oil on Biochemical Markers of Liver Function in Sucrose-Fed Rats

Octavio Carvajal-Zarrabal,¹ Cirilo Nolasco-Hipolito,²
Ma. Guadalupe Aguilar-Uscanga,³ Guadalupe Melo Santiesteban,⁴
Patricia M. Hayward-Jones,¹ and Dulce Ma. Barradas-Dermitz⁵

¹ Biochemical and Nutrition Chemistry Area, University of Veracruz, SS Juan Pablo II s/n,
94294 Boca del Río, VER., Mexico

² Department of Molecular Biology, Faculty of Resource Science and Technology, Universiti Malaysia Sarawak, Kota Samarahan,
94300 Sarawak, Malaysia

³ Food Research and Development Unit, Veracruz Institute of Technology, Calzada M. A. de Quevedo 2779,
91860, Veracruz, VER., Mexico

⁴ Pathology Laboratory, Institute of Forensic Medicine, University of Veracruz, SS Juan Pablo II s/n,
94294, Boca del Río, VER., Mexico

⁵ Biological-Chemistry Area, Veracruz Institute of Technology, Calzada M. A. de Quevedo 2779,
91860, Veracruz, VER., Mexico

Correspondence should be addressed to Octavio Carvajal-Zarrabal; ocarvajal@uv.mx

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Metabolic changes, along with cardiovascular and hepatic factors, are associated with the development of diseases such as diabetes, dyslipidemia, and obesity. We evaluated the effect of avocado oil supplementation (centrifuged and solvent extracted), compared with olive oil, upon the hepatic function in sucrose-fed rats. Twenty-five rats were divided into five groups: control (basal diet), a sucrose-fed group (basal diet plus 30% sucrose solution), and three other groups (S-OO, S-AOC, and S-AOS, indicating basal diet plus 30% sucrose solution plus olive oil OO, avocado oil extracted by centrifugation AOC or using solvent AOS, resp.). Glucose, total cholesterol, triglycerides, total protein, albumin, globulin, direct bilirubin, glutamic pyruvic transaminase, glutamic oxaloacetic transaminase, alkaline phosphatase, cholinesterase, and α -amylase concentrations were determined and avocado oil effect on them was studied. In some cases the induced metabolic alteration significantly affected total protein and bilirubin levels and also had a highly significant effect on α -amylase levels. AOC and AOS exhibited effects similar to those of olive oil, according to the nonsignificant difference in fatty acid profile observed by other authors. Avocado oil consumption could be beneficial in the control of altered metabolic profile illnesses as it presents effects on hepatic function biochemical markers similar to olive oil.

1. Introduction

The incidence of metabolic syndrome in Mexico is one of the highest in the world, so much that it has become a public health problem. However, little has been done to prevent the factors responsible for this. Epidemiological studies in our country highlight the need to strengthen strategies for its detection, control, and treatment. It involves a set of

three or more alterations such as overweight or obesity and disturbance in glucose metabolism and insulin, along with hypertension, dyslipidemia, and other abnormalities of importance that are related to its development and are grouped in different profiles, such as liver, pancreatic, and cardiovascular functions [1–4]. The incidence is about 25% in the general population and there are no differences between men and women, although it varies according to genetic