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Impact of a high fructose diet in wistar rat–metabolic and behavioral disorders –effect of supplementation of flaxseed**El Kaoui Habiba**

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Introduction: The deregulation of the energy balance by the malnutrition leads to the dysfunction of the neuro- The metabolic mechanisms but these homeostatic problems can be corrected by nutritional supplements. In this study, we investigated the effects of flaxseed on metabolism and anxiety- depressive-like disorders in high fructose-fed (23%) Wistar rat.

Methods: One-month-old female Wistar rats were divided into four groups of six rats:1. Control: (30g of standard food + 30ml of tap water), 2. Control supplemented with flaxseed (27g standard food + 7g flaxseed + 30ml tap water) 3. Fructose (30 g standard food + 23% fructose) 4. Fructose supplemented with flaxseed (23 g standard food + 7gflaxseed + 23% fructose), after two months of diet, the rats underwent a battery of tests to evaluate the affective behavior (Open Field, Elevated Plus Maze and Forced Swimming Test) and biochemical analyzes of glucose, cholesterol and triglycerides

Results: High fructose diet inducesadverse metabolic effects (increases blood sugar, cholesterol, triglycerides) and behavioral ones(depression). Forflaxseed, it does not correct anxiety, but decreases depression-like and metabolic disorders.

Conclusion: Our results suggest that a high fructose diet induces metabolic and behavioral dysfunctions. Flaxseeds have improved these conditions.

Biography

El Kaoui Habiba completed her master's degree at the age of 25 from the University ibn tofail Morocco and is currently doing her doctoral studies at the same faculty. She has published a book titled "Effects of Flaxseed on the Pathophysiology of Obesity and Behavioral Disorders following a High Fructose Diet in Wistar Rats" in an "OmniScriptum" editing group.Presenting author details.

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