

Differences in the dietary fructose sources of Chinese (C) and Non-Chinese (NC) patients suffering from Non-Alcoholic Fatty Liver Disease (NAFLD) in the Greater Toronto Area of Ontario, Canada

Pat Poon and Dong Poon

Dr. Poon's Metabolic Diet Clinic, Canada

Abstract

Fructose consumption is implicated as one of the dietary causes of non-alcoholic fatty liver disease (NAFLD). Obesity is not one of the requirements for developing NAFLD. Chinese (C) patients that were referred to us for dietary counseling had a BMI that was much lower than that of the Non-Chinese (NC) population. The rate of both liver cirrhosis and liver cancer, of which NAFLD is a major risk factor, is on the rise in the Ontario C population. What is in the diet of the C group that causes them to develop NAFLD, even when they are not obese?

A total of 112 patients (39 C and 73 NC), with ultrasound evidence of NAFLD, were analyzed. They all had no history of alcoholism, hepatitis or known liver disease. The average BMI of the NC group was 36.2 vs. 29.7 for the C group. Only 13.7% of the NC group had a BMI below 30, versus 51.3% of the C group who had a BMI below 29.

Fruit, juice and regular soda pop were the main sources of their fructose intake. Both groups consumed about 2.5 servings of fruit, juice and pop per day. 100% of the C group consumed fruit daily, compared to only 94% of the NC group. The NC group consumed 1.5 servings of fruit per day vs. 1.8 servings for the C group. About 50% of the patients in each group drank juice daily. The NC group had twice the number of patients who drank regular pop on a daily basis (36%) versus the C group (18%).

In conclusion, the C group developed NAFLD though they were not obese. Most of the fructose in the C group came from fruit and juice. Our diet program does not allow our patients to consume any juice or regular pop. By eliminating fruits with high fructose content, most patients with abnormal liver function tests improved and reverted back to normal ranges.

Biography

Pat Poon has completed his Ph.D. in Clinical Biochemistry from the Department of Pathology, Medical College of Wisconsin and his M.D. at the University of Toronto in 1987. He is a diplomate of the American Board of Physician Nutrition Specialist. Dr. Poon's Metabolic Diet Clinics in Toronto offer diet programs designed to treat Metabolic Syndrome and other weight related diseases.