

# Effect of dietary intake on the levels of biliary unsaturated free fatty acids having inhibitory activity on mutagens

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Unsaturated free fatty acids (FFAs), such as palmitoleic, oleic, linoleic, linolenic and arachidonic acids, have inhibitory actions on mutagenesis. These FFAs in bile may play a role in preventing cholecystopathy and their levels may be influenced by diet. However, the effects of dietary intake on biliary FFAs levels is not known. In order to examine possible associations between dietary habits and biliary FFAs levels, bile samples were collected from resected gallbladders of 114 Chilean female patients with gallstones, and FFAs were measured with an HPLC system. The long-term dietary intake of the patients was investigated through a semi-quantitative food frequency questionnaire. A high intake of vegetables was negatively correlated with the total FFA level ( $r = -0.264$ ,  $P = 0.010$ ). Positive correlations were found between fruit consumption and the lauric acid level ( $r = 0.200$ ,  $P = 0.041$ ), fish consumption and the levels of oleic ( $r = 0.370$ ,  $P < 0.0001$ ), linolenic ( $r = 0.197$ ,  $P = 0.038$ )