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Carnitine content of most of Korean Foodstuffs

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Carnitine is considered a conditionally essential nutrient because dietary sources may become important under conditions which either reduce biosynthesis or increase urinary excretion of carnitine. Therefore, it is important to have a database for dietary analysis for carnitine content. Because there is limited data available for the carnitine content of Korean foods, this study was undertaken to analyze the total carnitine (TCNE) content of 146 commonly consumed Korean foods. TCNE concentrations were assayed using a modified radioisotopic method. Beef and pork contained 91.09 and 17.21 mg TCNE / 100 g weight, respectively. Fish and shellfish ranged from 0.28 to 24.87 mg TCNE / 100 g weight. TCNE concentration in milk was 1.77 mg / 100 mL and cheese was 0.49 mg / 100 g weight. Cereals and pulses contained between 0 and 1.43 mg TCNE / 100 g weight. The TCNE concentration of most fruits and vegetables was between 0 and 0.7 mg / 100 g weight. However, mushrooms contained between 2.77 and 7.02 mg of TCNE / 100 g weight. Soy sauce, soybean paste and fermented red pepper soybean paste contained 1.05, 0.28 and 0.5 mg TCNE / 100 g weight, respectively. The TCNE concentration of infant formular ranged from 8.51 to 21.46 mg / 100 g weight. These results demonstrate that TCNE concentrations are high in meat, fish, shellfish and milk, but low or non-existent fruits and vegetables. However, mushrooms are a substantial source of vegetable derived TCNE. These data will be useful in establishing a database for determining the TCNE content of Korean diets.