## Recommendations of the Federal Commission for Nutrition on Carbohydrate Intake

- The proportion of carbohydrate that is the optimum for health cannot be precisely defined. Based on current data, the DACH recommendation (i.e. that made by German-speaking countries in Europe) of a target value of 50-60\% of daily energy intake, is too high; it should be from $45-55 \%$ of daily energy consumption. This means 200-250 g carbohydrate per day for women, who have a daily energy requirement of 1800 kcal and $250-300 \mathrm{~g}$ carbohydrate per day for men with an energy requirement of 2200 kcal per day. For sportsmen and sportswomen, higher amounts are recommended depending on the intensity of their training (5-12 g carbohydrate per kg body weight per day).
- In principle the recommendations of the Swiss Society for Nutrition apply for a balanced, varied diet according to the food pyramid. This means preference, as sources of carbohydrate, for wholemeal cereal products, fruit and vegetables, legumes and potatoes. In this way, the target recommendation of at least 30 g per day intake of fibre is also achieved.
- A maximum of $10 \%$ of daily energy intake should be from added sugar (e.g. sucrose [table sugar], glucose, fructose), and from honey, sugar syrup and fruit juice. For an adult who is predominantly sedentary and has a daily energy expenditure of about 2000 kcal this comes to a maximum consumption of about 50 g of sugar per day.
- The limitation of sugar consumption also puts a limit on fructose intake. Large amounts of fructose (more than 1 g per kg body weight per day) have negative effects on blood lipids (blood fats), insulin sensitivity and blood pressure. It is probably the amount of fructose itself that counts, regardless of whether it is free fructose or part of the sucrose molecule. In risk groups (overweight, low physical activity, tendency towards or having diabetes, high blood pressure, high levels of blood lipids), too much fructose consumption (e.g. in sweetened drinks) can have marked negative effects on health.
- Moderate intake of sweeteners and sugar substitutes as part of a balanced diet has no negative effects on health. Sweeteners are a low-calorie, dentally-acceptable alternative to sucrose. However, excessive consumption (more than 20-30 g per day) of certain types of sugar substitutes (sugar alcohols) can lead to diarrhoea. People with phenylketonuria should not consume aspartame.
- Sufficient intake of fruit, vegetables and wholemeal cereals is also necessary for the nutrition of children and adolescents. Drinks that are low in energy or energy-free are recommended, and sweetened products should be avoided.
- The data available on the use of the glycaemic index (GI) or glycaemic load (GL) for the prevention and therapy of nutrition-dependent diseases are controversial. Balanced nutrition, according to the food pyramid is more important than recommendations based on specific properties such as the Gl of carbohydrates.
- People with metabolic syndrome or type 2 diabetes should also eat according to the recommendations of the food pyramid. Food containing sucrose is particularly significant and should therefore be restricted to a maximum of $10 \%$ of daily energy intake. Sweeteners are an appropriate alternative to sugar. Calorie intake should be reduced in cases of overweight. For people with metabolic syndrome, in addition to fruit, vegetables, wholemeal cereals and legumes, mono- and poly-unsaturated fats (e.g. rapeseed oil, olive oil and fish oil) are recommended.
- People suffering from lactose intolerance should avoid milk products containing lactose, depending on their individual tolerance. Yoghurt and hard cheese are usually tolerated.

