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Title and subtitle METABOLIC EFFECTS OF FIBRE-RICH FOODS - studies of vegetables, oats and wheat on glucose and lipid metabolism, and satiety	
Abstract A diet low in fat and correspondingly high in carbohydrate, and also dietary fibre, is generally recommended in Western countries. Adequate proportions of various food components, per meal, are illustrated by the tripartite plate model. The experimental design of the present thesis on metabolic effects of common, fibre-rich, carbohydrate foods is based on current dietary recommendations. Meal studies, in healthy volunteers, demonstrated effects on glucose and hormonal response, and satiety of vegetables added to a mixed lunch meal. The meals were served in the morning after an overnight fast under standardized conditions, and the vegetables were given in various amounts and variously processed/cooked. Generous amounts - at least as large as recommended in the tripartite plate model - of raw or lightly cooked vegetables were shown to lower the postprandial glucose and hormonal response, and to enhance satiety. The larger the portion of vegetable, the more pronounced were the effects. The degree of polymerization and the viscosity of soluble dietary fibre from variously processed/cooked carrots, were lower the more extended the heat treatment. In a long-term study, in subjects with impaired glucose tolerance, the fasting insulin/C-peptide levels were reduced as a result of dietary counselling. Increased amounts of viscous dietary fibre, from oat bran buns, lowered LDL cholesterol and tended to reduce glycosylated haemoglobin, whereas insoluble fibre, from wheat bran buns, reduced the systolic blood pressure and further improved the glucose tolerance.	
Key words dietary recommendations, vegetables, oat bran, wheat bran, dietary fibre, viscosity, glucose, insulin, C-peptide, cholesterol, blood pressure, satiety.	
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