SUBJECT MATTER IN BRIEF

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Papers relevant to CLINICAL AND HUMAN NUTRITION

Nutritional habits of teenagers. A 4-year longitudinal study in Dutch adolescents showed small changes in nutritional habits of girls. In boys, however, the intake of nutrients increased gradually from 12 to 17 years. The proportional intakes of fat, sugar and alcohol were rather high, in both sexes, especially on the weekend days. 161–176

Guar-gum bread in diabetes mellitus type II. Guar gum was given to elderly patients in the form of a palatable bread for 6 weeks. Blood glucose and C peptide concentrations were reduced but at different rates and glucose concentrations began to rise again after 3 weeks. No effect was seen on high-density-lipoprotein–cholesterol and triglycerides. 177–183

Nutritional anaemia in pregnant Beninese women. Iron deficiency represented the main cause of anaemia in a group of Beninese pregnant women. The effect of the mother's Fe status on the haematological profile of newborn infants was revealed when strict criteria, based on a combination of various biochemical indicators, were used to define Fe-deficiency. 185–193

Lactitol absorption and laxative threshold. Lactitol has potential as a low energy sucrose substitute. Intestinal perfusion experiments showed that it is not absorbed from the human small intestine and oral tolerance studies showed that it is well tolerated up to doses of 40 g/d. Consumption of higher doses leads to unacceptable gastrointestinal side effects. 195–199

Reproducibility of 24 h energy expenditure. Ten human volunteers were twice subjected to a stay of 3 d in a whole body indirect calorimeter. Under the controlled experimental conditions reproducibility of 24 h energy expenditure was good, especially when considering the time intervals of several months between measurements. 201–209

Nitrogen balance studies in the elderly. Metabolic balance studies (5 d) showed healthy elderly (> 70 years) people (*n* 24) to be in N balance. Housebound elderly subjects (*n* 20) suffering from chronic diseases and receiving various medication had low dietary intakes of energy and N and were in negative N balance. 211–221

Iron availability from plant foods. Fe availability estimated in vitro was found to be very low from cereals, legumes and nuts but much higher from many vegetables and fruits. When added in amounts corresponding to endogenous levels, phytate depressed and citrate enhanced in vitro Fe availability. Ascorbate had little effect, except at much higher levels. 223–233

Food energy from Polydextrose®. The metabolizable energy value of the low-energy bulking agent Polydextrose® in rats was found to be 12·7 (SE 1·8) kJ/g by the metabolic balance technique. This was higher than the value calculated from the distribution of radioactivity between CO_2, urine and faeces after giving a ^{14}C-labelled analogue. 235–243

Effect of guar gum consumption on iron status. Guar gum slows the absorption of nutrients in experimental animals and man and its prolonged consumption reduced the rate of Fe absorption in the rat duodenum. However, there was no adverse effect on Fe status of rats given guar gum-supplemented diets, of varying Fe concentration, for 10 weeks. 245–253

Papers on GENERAL NUTRITION

Effects of vitamin A on zinc absorption. Vitamin A was found to influence Zn metabolism through stimulation of Zn absorption in the small intestine and experimental avitaminosis A in chicks led to secondary Zn deficiency. A vitamin-A-dependent Zn-binding protein (molecular weight 83 kDa) was isolated from the ileal mucosa of chicks. 255–268

Whole-body protein synthesis in chickens. One of the major components of basal metabolic rate might be the heat associated with protein synthesis. The contribution of whole-body protein synthesis to basal metabolic rate was estimated to range from 14 to 17% in young chickens with no difference between layer and broiler strains. 269–277

Phosphorus level and rumen microbial activity. Phosphorus is an essential element for microbial growth. Rumen microbial activity was studied in vitro at four inorganic P concentrations (48, 28, 4 and < 1 mg/l). Fermentative and synthetic activities were maintained at all but the lowest level of P, where significant reductions were observed. 279–290

Decreased amylase activity in lactating rats. Amylase activity in lactating rats was significantly less than that of unmated rats. When the pups were removed, amylase activity returned to the value in unmated rats. Furthermore, amylase activity in lactating rats receiving a daily injection of insulin significantly exceeded that of normal lactating rats. 291–299