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Programme:
Food and consumption
Diet and digestion
Metabolism

FOOD AND CONSUMPTION

Diet and growth during the weaning period in 3 communities in developing countries.

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The aim of this study was to observe the impact of different weaning methods on the growth of young children. A preliminary study established the growth and diet characteristics in representative samples selected at random in the context of a multicenter supplementation trial on growth retardation. The study was conducted in a rural environment in Senegal (n = 57) and an urban environment in Congo (n = 67) and Bolivia (n = 66) using the same protocol and equipment under identical conditions with trained local personnel.

The children were included in the study at 4 months ± 7 d of age and were followed longitudinally. Their weight and length were measured at 4 and 7 months of age. At the same time their diet was evaluated by a follow-up questionnaire using the criteria recommended by the WHO [WHO/CDD (1991) Ser 91-14]. The indices of weight-

for-length (WL) and length-for-age (LA) were calculated as standard deviations (DS) of the WHO reference population.

Mean indices by age and country:

	Senegal	*Congo*	*Bolivia*
WL at 4 months	+0.43	+0.51	+1.00
WL at 7 months	−0.30	+0.31	+0.87
LA at 4 months	−0.62	−0.47	−0.99
LA at 7 months	−1.10	−0.77	−1.37

The mean weight increment between 4 and 7 months in Senegal (0.79 kg) was lower than at the other 2 sites (1.29 and 1.29 kg). The height increments were similar (4.55; 4.90 and 4.64 cm). The diet at 4 months was different at the 3 sites, with breast-feeding being predominant in 72, 10 and 62% of cases, supplemented by traditional weaning gruel in Senegal and Congo, but not in Bolivia, where the family meal is used earlier for this purpose.

The height retardation in these countries begins early and continues through the weaning period whatever the mode of feeding and weight growth during this period. Various hypotheses, besides the insufficient quality of the weaning diet, have been put forward including specific nutrient deficiencies of the mother or foetus, or interaction with clinical or subclinical infections. Its etiology at present is still unknown and linear growth retardation in developing countries should be studied further.

Food intake correlates with restrained eating, disinhibition and hunger, in French obese patients. A Lluch [1], A Stricker-Krongrad [1], JP Kahn [2], O Ziegler [2], P Drouin [2], L Méjean [1] *([1] INSERM U 308, 38, rue Lionnois, 54000 Nancy; [2] CHU-Nancy, hôpital Jeanne-d'Arc, 54200 Toul, France)*

We selected the Three-Factor Eating Questionnaire (Stunkard *et al* (1985) *J Psychosom Res* 29, 71-83) in order to assess in a quantified manner, the relationships between factors associated with eating behaviour (EB) and food intake. This 51-item self-rating questionnaire explores 3 dimensions of EB: 'cognitive restraint of eating', 'disinhibition' and 'hunger'. After a translation of the American version of the questionnaire and a back-translation, the French version was completed by 109 women (mean body mass index = 37.2; mean age = 42 years) seeking treatment for obesity. An individual score was calculated for each of the 3 scales. A high score indicated a high degree of the studied trait. Food intake was assessed by the technique of dietary history. Nutritional data and the scores of each of the 3 scales were submitted to a correlation analysis. In our sample, the mean total energy intake (TEI) was 8 632 ± 297 kJ per d (2 065 ± 71 kcal). Protein, fat and carbohydrate accounted for, respectively, 19.4, 38.5 and 42.1% of the TEI. A negative correlation was observed between TEI and cognitive restraint ($r = -0.5$; $p < 0.001$) whereas a positive correlation related TEI to disinhibition ($r = 0.3$; $p < 0.01$) and hunger ($r = 0.3$; $p < 0.01$). Restraint resulted in a greater contribution of protein in the TEI ($r = 0.4$; $p < 0.001$) and a lower one of fat ($r = -0.3$; $p < 0.01$). When the disinhibition score was high, the protein proportion decreased ($r = -0.3$; $p < 0.05$). Finally, the hunger scores were negatively related to the protein contribution ($r = -0.2$; $p < 0.05$) and positively related to the carbohydrate contribution ($r = 0.3$; $p < 0.001$). The 3 dimensions of EB, assessed with our French version of the Three-Factor Eating Questionnaire in a population of obese women, were in excellent relation with predictable nutritional data. Hopefully, this psychometric tool could be useful to identify