

recommendations. The animal / vegetal proteins ratio (1.7 ± 0.1 vs 2.9 ± 0.2 ; $P < 0.001$), the parts of polyunsaturated fatty acids (22.9 ± 0.6 vs $16.3 \pm 0.6\%$ of the lipid intake; $P < 0.001$) and polysaccharides (31.8 ± 0.8 vs $22.5 \pm 0.8\%$ of the total caloric intake; $P < 0.001$) were also more appropriate, the part of monounsaturated fatty acids was similar in the two groups. BMI (26.8 ± 0.3 vs 25.4 ± 0.1 kg/m²) and the waist-to-hip ratio (0.87 ± 0.01 vs 0.83 ± 0.01) were higher ($P < 0.01$), these differences being only due to the women. Fatty mass in women, evaluated by bioelectrical impedance was also higher in M than in F (31.2 ± 0.6 vs $28.4 \pm 0.7\%$; $P < 0.01$). In M the glycaemia 2 h after glucose load (75 g per os) was higher (5.7 ± 0.2 vs 4.9 ± 0.2 mmol/L; $P < 0.01$), in spite of a higher insulinemia (261 ± 16 vs 190 ± 18 pmol/L; $P < 0.01$), the serum total cholesterol (TC) was lower (4.92 ± 0.08 vs 5.83 ± 0.13 mmol/L; $P < 0.001$), HDL/TC ratio, triglycerides and apoproteins A1 and B did not differ significantly from F. Thus, in the studied group, the migration to France seems responsible for alimentary changes which, though the imbalance is still lower than that observed in F, are associated with a decrease in insulin sensitivity and an aggravation of the cardiovascular risk profile.

Impact of food supplementation from 4-7 months on physical growth of infants in four developing countries. KB Simondon, A Gartner, J Berger, A Cornu, C Ly, JP Massamba, JL San Miguel, I Missotte, P Traissac, F Simondon, F Delpeuch, B Maire (*Unité de nutrition, Orstom, BP 5045, 34032 Montpellier cedex, France*).

The growth velocity of breastfed infants in developing countries falls from 4-6 months as complementary food is introduced into their diet. The objective of the study was to test whether daily supplementation with a high-quality gruel from the age of 4-7

months had a positive impact on growth in length.

Controlled randomized trials were conducted in the Congo (C, $n = 120$), Senegal (S, $n = 110$), Bolivia (B, $n = 127$) and New Caledonia (NC, $n = 90$). At 4 months of age, infants were randomly allocated to an intervention or a control group. Twice a day, supplemented infants received a high-energy-density commercial food supplement based on cereals and enriched with minerals and vitamins. Supplementation was done at home by the mothers, under supervision of field workers who measured the amount consumed. The controls received no placebo and both groups were free to eat local food in addition to breastmilk. The main outcome measure was the 4-7 months length increment.

Mean consumption varied from 558-790 kJ/day according to the country. All infants were breastfed until 7 months old, except for New Caledonia (47%). Local complementary food was introduced early in the Congo (96% of controls ate complementary food at 5 months) and late in Senegal (40% of controls at 5 months). Less supplemented infants received local complementary food compared to controls in the Congo and Senegal ($P < 0.001$). In Senegal, the 4-7 months length increment was greater among supplemented infants compared to the controls (+ 0.48 cm, $P < 0.05$) but not the weight increment. In the other countries, no impact was found.

In conclusion, food supplementation from 4-7 months is not likely to improve physical growth significantly in the settings under study.

The amino acid induced aversion acts as an alarm signal. G Fromentin¹, S Feurté¹, D Tomé¹, S Nicolaïdis² (¹GER Nutrition humaine, Ina PG Paris 5; ²CNRS UPR 9054, Collège de France, Paris 5, France).