him to "police them" maintain their weight very well. The others do not do so well.

HCG (human chorionic gonadotropin) enables patients to live on a very low calorie diet with very little hunger. They commonly experience considerable euphoria and note a redistribution of weight. Its use is accompanied by another curious feature. Women of middle age or beyond commonly acquire a more youthful appearance and tell us that friends who may not have seen them for 6 months or so fail to recognize them. We have only the patient's statement for this, but we hear it so frequently that we have come to accept it as a fact. Only photographs of the "before" and "after" could substantiate this and these we do not have. When all is said and done Simeons has done more for the comfort and convenience of the victims of obesity than any one else.

Many centuries ago Plato said something to the effect that the human animal was made up of a body and a soul and when one did not function well neither did the other. I wonder sometimes if the marvells of the laboratory do not tend to make us forget the soul.

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REFERENCES

Cortical Thickness of Bone in Underprivileged Populations

Dear Sir;

In a recent contribution to the Journal, Luyken and Luyken-Koning (1) reported much the same mean thickness of second metacarpal bone in different groups of Surinam children (Creoles, Hindustanis, Javanese) compared with United States Caucasian children. The finding of principal interest to us is that this obtained despite the much lower calcium intake of the Surinam children. Previously, Garn et al. (2) observed a lower mean cortical thickness in Japanese and Chinese subjects; these authors concluded that the level of calcium intake did not appear to be an influential factor. In another study, Garn et al. (3) noted that Guatemalan rural children compared with United States Caucasian children of the same age had a lower cortical thickness of the metacarpal. Recently, in Pretoria, we measured this parameter in 500 Bantu and 500 Caucasian representative schoolchildren, aged 7-15 years. The data on the Bantu for each age group were lower than those of the Caucasians (P < 0.05), although the differences were no longer conspicuous when the slower growth of Bantu was taken into reckoning. Clearly, the bearing of the ethnic factor is variable. Of greater moment, however, is the inference that, at least in certain contexts, the cortical thickness of the metacarpal bone is not regulated primarily by level of calcium intake.

We have extended our local investigations to include aged rural Bantu. This forms part of a project designed to elucidate the minimum sequelae of aging in a primitive population (4). In the village of Kgal, near Rustenburg (80 miles west of Johannesburg), 100 of a possible 105 adults of 60+ years (mean age, 73 years) have been X-rayed to permit measurement of the cortical thickness of the second metacarpal, also of humerus and femur (anterior–posterior view). In comparison with data given on a "normal" series of English aged women by Nordin et al. (5), the Bantu women (66 subjects) had similar cortical indices (total cortical thickness/total bone thickness). For example, in Bantu women of 70+ years, mean metacarpal and femural indices were 0.41 and 0.51; the figures for the Caucasians were 0.43 and 0.49, respectively. Smith and Rizek (6) noted slightly greater thickness of metacarpal cortex in United States Negro compared with Caucasian females from 55 years onwards. In the lumbar vertebral bodies of these Bantu women, of those of 65+ years, 20.0 percent gave evidence of obvious collapse. Among United States Caucasian women of the same age period, the corresponding figure given by Bernstein et al. (7) was about 33%. Furthermore, among our total Bantu group, fracture of the neck of the femur was noted in only one woman (98 years). This low prevalence is in accordance with Solomon's
(8) finding that hip fracture in urban Bantu has only a tenth of the prevalence reported for Caucasians. Yet, in the aged Bantu studied, habitual daily calcium intake was low, 250–400 mg; the mean urinary calcium–creatinine ratio was correspondingly low, 0.08; in contrast, in a series of “normal” English women, calcium intake was 800–900 mg, and the calcium–creatinine ratio, 0.23 (9). Furthermore, each of the old Bantu women had had several pregnancies and long lactations, involving a mean calcium loss calculated to be about 400 g.

In these old Bantu, therefore, in respect of bone size and quality, the situation is commendable, for it prevails despite inferior nutritional conditions, including a lifelong low intake of calcium. The FAO/WHO Committee on Calcium Requirements (10) recommended an intake of 400–600 mg per diem for adults. A British Committee in their recent report is slightly more generous, 600 mg (12). The American Food and Nutrition Board (11), in their new revision, continue to recommend 800 mg per diem, and importance is still attached to the calcium–phosphorus ratio.

From the foregoing, it must be faced that the ubiquitous questions on this subject remain unanswered—what exactly are the sequelae of calcium deficiency and in what respects are habitually low consumers of the element at an unequivocal disadvantage? The items of evidence given draw attention afresh to the grossly unsatisfactory state of knowledge on calcium deficiency.

Full details will be published elsewhere.

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