Growing Changes in the Body Composition of Young People in Kyushu

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This short article will describe a comparative study on the body composition of young people in Kyushu.

Skinfold thickness was measured at five different sites on the right side of the body on 1749 persons, ages 10 to 18, living in Kyushu. Body density and fat percentage were estimated according to the method of Nagamine and Suzuki (1964) and the formula of Brozek *et al.* (1963).

Fig.1 shows the average values of skinfold thickness of triceps and subscapular sites of the present subjects with the corresponding values of several other groups in the same generation. As shown in this figure, the subcutaneous fat of the present subjects is thicker than that of most of the other groups including the youths in Tokyo.

The present subjects group consists of the youths living in the southern Kyushu and those in the northern Kyushu. The allometry between fat weight and body weight was calculated for each of the subgroups and for the whole group (Fig.2). In the case of males, the southern group shows the positive allometry with a considerably large relative growth coefficient of 2.227 and the northern group shows the negative allometry. In the case of females, both the subgroups show the positive allometry, although the relative growth coefficient of the southern group is larger than the northern by about 13%.

Fig. 3 shows the allometry between lean body mass and body weight. All the groups including the northern males show the negative allometry.

As the above, the young people living in Kyushu have thick subcutaneous fat and they show the

Fig.1. The average values of skinfold thickness of triceps and subscapular sites. The Arabic numerals within parentheses under the abscissae mark the numbers of subjects in each age. The values of the other groups than Kyushu were quoted from Hisada (1977) and Eveleth and Tanner (1976).

Fig.2. The allometry between fat weight and body weight for the whole group and the northern and southern subgroups.

Fig.3. The allometry between lean body mass and body weight.

positive allometry between fat weight and body weight. Especially, large relative growth coefficients of the southern males and females were noted.

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