tory effect caused a deficit of 10 impulses before the application of alcohol; of 1 impulse when the alcohol had exerted its effect; and of 11 impulses after recovery. The initial frequency in the last record was higher than in the first, presumably owing to further dark adaptation during the experiment, yet the number of impulses lost during inhibition was approximately the same. This is in accordance with Hartline's finding (*2*) that the number of impulses lost during inhibition is independent of the initial frequency over a wide range.

A single preliminary experiment has been made to determine whether three other substances have a selective effect on inhibition. Acetyl choline (100 mg/100 cm^3) and curare (5 mg/100 cm^3) had no effect whatever. Nicotine (0.16 percent) caused spontaneous activity and then blocked conduction in the nerve fibers but had no selective effect on inhibition.

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Fat Changes during Weight Loss

In the course of nutritional studies, 13 clinically healthy and active young white males were placed upon a low-calory diet yielding approximately 1000 cal/day for a period of 24 days (*1*). Soft-tissue teleoroentgenograms were taken at six anatomical sites during the preliminary control period and again at the end of the period of caloric restriction. These x-rays, made and measured under standard conditions (*2*), provided an accurate measure of changes in the subcutaneous fat-plus-skin layer on nine parts of the body.

All of the subjects lost weight, while incurring a deficit of the order of 40,000 cal: the median weight loss was 8.3 kg, or 12 percent of the original value. Subcutaneous fat decreased with median losses of 4 to 5 mm for "central" fat (deltoid pocket, iliac, and trochanteric) and 1 to 2 mm for "peripheral" (lower arm and lower leg), as is shown in Table 1. Decreases in subcutaneous fat ranged from 16 percent to 47 percent of the initial values. The rate of fat lost per kilogram of weight loss ranged from 0.1 to 0.6 mm, depending on the part considered.

Table 1. Median values for subcutaneous fat and weight before and after weight reduction and changes in fat per kilogram of weight loss.

Measurement (thickness in mm)	Median (before)	Median (after)	Decrease (median)	Decrease (per kg)
Weight (kg)	69.1	60.7	8.3	
Lateral arm fat	4.4	3.4	1.0	0.1
Medial arm fat	3.8	2.7	0.7	0.1
Deltoid "pocket" fat	12.5	7.7	4.4	0.5
Iliac fat	12.2	7.1	5.7	0.7
Trochanteric fat	13.6	9.5	5.9	0.6
Lateral leg fat	5.6	4.7	0.9	0.1
Anterior leg fat	3.0	2.7	1.1	0.2
Medial leg fat	7.6	5.7	2.3	0.3
Posterior leg fat	5.9	4.3	1.5	0.2

Losses in subcutaneous fat were clearly related to the initial thicknesses. Those parts of the body with the thickest fat deposits sustained the greatest loss during caloric restriction (Fig. 1, top). In like fashion, those *individuals* with greater amounts of fat to start with sustained greater losses in fat (Fig. 1, bottom). Rank-order correlations in each case were found to be highly significant, an exact test for significance (*3*) being used.

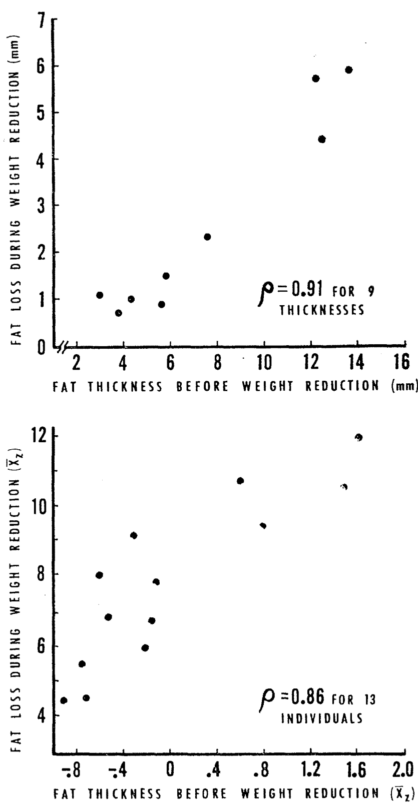

Fig. 1. Relationship between initial subcutaneous fat thicknesses and amount of subcutaneous fat lost after 24 days on a 1000-cal diet. (Top) Scattergram showing changes in the nine fat thicknesses measured in this study. (Bottom) Scattergram showing changes in 13 subjects. [Individual mean Z scores for fat are used as an indication of total fatness (*4*).]

Since fat is withdrawn in proportion to the initial amount of fat present, relative fat patterns before and after weight reduction tend to preserve their individual characteristics. This finding has been published elsewhere (*4*).

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References and Notes

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Reaction of 8-Quinolinol with Cerium (III)

The reaction between cerium (III) and 8-quinolinol was first studied by Pirtea (*1*), who used it for the gravimetric determination of this ion. The unusual nature of this reaction was indicated when it was found that the formula of the precipitated chelate was $Ce(C_9H_6NO)_4 \cdot 2H_2O$, containing 18.73 percent cerium. The cerium had not been precipitated as the trivalent chelate, but an oxidation had occurred giving a chelate in which the cerium was present in an oxidation state of four. Although 8-quinolinol usually acts as a reducing agent, in this case it was the oxidizing agent.

Berg and Becker (*2*) found that the precipitation of cerium (III) by 8-quino-