Grundumsatz-Formeln nach BENEDICT und HARRIS

(1)

Männer: $M = 71{,}2 \cdot W^{3/4} [1+0.004(30-A)+0.010(S-43{,}4)]$

Frauen: $M = 65{,}8 \cdot W^{3/4} [1+0.004(30-A)+0.018(S-42{,}1)]$

M = Grundumsatz in kcal pro Tag
W = Körpergewicht in kg
A = Lebensalter in Jahren

$S = \frac{\text{Körpergröße in cm}}{W^{1/3}}$

(nach KLEIBER, M.: Physiol.Rev. 27, 511 (1947)

Non nachlesen

Body size and metabolic rate.

(693c)

Ruheumsatz ± Grundumsatz + 10–15% (Grundumsatz)

GRUNDUMSATZ:

~~Mann 30 Jahre, 65kg 170 cm: 40 − 27 = 67 kcal/Std.~~
Frau: 80 Jahre, 55kg 165 cm: 34 2 41

4658

KLEIBER, M. **Body size and metabolic rate.** *Physiol. Rev.*, 1947, **27**, 511–541. [Div. Animal Husb., Coll. Agric., Univ. California, Davis.]

Three out of five theories of the relationship of body size to metabolic rate, including the "protoplasmic mass" theory, are rejected as erroneous or illogical. The two accepted relate metabolic rate to rate of heat transfer and to rate of blood circulation. Recent results of observations on mammals from mice to cattle give as the best expression for metabolic rate, the three-fourths power of body-weight. Under standard conditions the rate is 70 Cal. per kg.$^{\frac{3}{4}}$ per day or about 3 Cal. per kg.$^{\frac{3}{4}}$ per hr. The unit of metabolic body size, kg.$^{\frac{3}{4}}$, should be used to express levels of food intake and animal production and should also be used, for instance, to estimate the dosage of biotics.—I. Leitch.

4659

ORSINI, D. O metabolismo de base de jovens brasileiras. [**Basal metabolism of Brazilian children.**] *Arq. brasil. Nutrição*, 1947, **3**, No. 5, 6–36; No. 6, 6–65. [Dept. Fisiol., Univ. São Paulo.]

The subjects were 250 Brazilian girls aged 8 to 18 years, negro, white and mulatto. The apparatus was of the Roth Benedict type and the Boothby

p. 505 Nm 1947/48 h