# BODY DENSITY EQUATIONS

**LINEAR REGRESSION EQUATIONS  (DURNIN & WORMERSLEY)**

BODY DENSITY = C-[M(LOG10 SUM OF ALL FOUR SKINFOLDS)]

| MALE | 17-19 YRS | 20-29 YRS | 30-39 YRS | 40-49 YRS | 50 + YRS |
|------|-----------|-----------|-----------|-----------|----------|
| C | 1.1620 | 1.1631 | 1.1422 | 1.1620 | 1.1715 |
| M | 0.0630 | 0.0632 | 0.0544 | 0.0700 | 0.0779 |

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| FEMALE | 16-19 YRS | 20-29 YRS | 30-39 YRS | 40-49 YRS | 50 + YRS |
|--------|-----------|-----------|-----------|-----------|----------|
| C | 1.1549 | 1.1599 | 1.1423 | 1.1333 | 1.1339 |
| M | 0.0678 | 0.0717 | 0.0632 | 0.0612 | 0.0645 |

**THE SIRI EQUATION**

$$\text{FAT\%} = \left[ \left( \frac{4.95}{\text{BD}} \right) - 4.5 \right] \times 100$$

**BODY DENSITY EQUATIONS (JACKSON & POLLOCK)**

MALE BD = $1.0990750 - 0.0008209\ (X_2) + 0.0000026\ (X_2)^2$
$- 0.0002017\ (X_3) - 0.005675\ (X_4) + 0.018586\ (X_5)$

Where $X_2$ = sum of the chest, abdomen and thigh Skinfold in mm

$X_3$ = age in years

$X_4$ = waist circumference in cm

$X_5$ = forearm circumference in cm

FEMALE BD = $1.1470292 - 0.0009376\ (X_3) + 0.0000030\ (X_3)^2$
$- 0.0001156\ (X_4) - 0.0005839\ (X_5)$

Where $X_3$  = sum of triceps, thigh and suprailiac Skinfold, in mm

$X_4$ = age in years

$X_5$ = gluteal circumference, in cm