RESTING METABOLIC RATE
(or Low Basal Metabolism)

The Resting Metabolic Rate is also referred to sometimes as "low basal metabolism." The RMR is the number of calories (calories and energy are one and the same) that we need to fuel our essential bodily processes all day long and keep our organs and tissues in good working order. In other words, the RMR is the energy that allows the heart to beat, the lungs to breathe, the kidneys to cleanse the blood, the brain to think, and so on. Your RMR is working even when you're sleeping. Typically, at rest, without active mental or physical work, 50-70% of all our calories consumed are used in this process. (This is called ***mandatory expenditure***—which means, it's going to happen no matter what, with or without physical or mental activity, whether you're awake or asleep.) All other calories consumed are used to meet one's *additional energy needs*: thermogenesis and physical activity. (These two areas of energy expenditure are referred to as ***optional expenditure***.

Thermogenesis is energy utilized for digestion, absorption and metabolism; body temperature maintenance when exposed to cold (shivering); and, lastly, stress. Physical activity is just that: walking, running, working out, vacuuming, painting, dusting, folding the laundry, etc. Thermogenesis and physical activity are referred to as "optional" expenditures because, let's face it, we don't have to eat if we don't want to, and if we want to sit around all day and have no physical activity whatsoever, we can do that too. Typically, 15% of calories consumed are used in the thermogenetic process.

The more fit and trim a person is, regardless of age, the more active their RMR. Basal metabolism (or RMR) depends on body mass without fatty tissue. That means, in fact, one's RMR is based on one's quantity of muscle mass. The more stored fat or fatty tissue, the more sluggish that individual's RMR. The heavier a person is, the more energy they need to fuel their normal bodily processes all day long. Therefore, **a person does not have to eat excessively to still be overweight!**

The level of one's RMR may be influenced by hormones, drugs, climate, genetic as well as many unknown factors. In view of this, it is obvious that there are several reasons for individual differences in the basal metabolism. Additionally, with aging, one's RMR is reduced by 2% every 10 years, beginning at the age of 20!

In summary, then . . .

1. **RMR (or LBM)** is the energy (calories) that allows the heart to beat, the lungs to breathe, the kidneys to cleanse the blood, the brain to think, and so on. This is ***mandatory expenditure***, and 50-70% of all our calories consumed are used in this process.

2. **Thermogenesis** (digestion-absorption-metabolism; body temperature maintenance; stress) is one type of ***optional energy expenditure***, and 15% of our calories consumed are used in these functions.

3. **Physical activity** is the other type of ***optional energy expenditure***, and 20-40% of our calories are used in this manner.

4. When there are no additional *optional* energy needs of either/or both thermogenesis and physical activity, the percentages attributed to them are either conserved (if not enough calories consumed) or stored as fat (if more calories than needed are consumed).

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