

# Weight Loss, Fat Loss, & Sarcopenia

By Ken Hutchins

**Scenario I:** Place subjects on a moderate caloric deficit without exercise (strength training) and they will lose muscle and fat equally.

**Scenario II:** Place subjects on a crash (severe) caloric deficit without exercise (strength training) and they will lose muscle exclusively.

**Scenario III:** Place subjects on either a moderate or severe caloric deficit with daily steady-state activity (running, walking, swimming, cycling, climbing, dancing, rowing, etc.) and they will lose muscle faster than in Scenario I or II, respectively.

**Scenario IV:** Place subjects on a moderate caloric deficit with SuperSlow strength training and they will lose fat exclusively and increase muscle, metabolic rate, joint integrity, and vascular support.

**Commentary:** Scenario I might be labeled *indiscriminate weight loss*. Scenario II and III might be labeled *discriminate weight loss where the weight lost is exclusively muscle*, and Scenario IV might be labeled *discriminate weight loss where the weight lost is exclusively fat*.

At some extreme point of leanness in all four scenarios, muscle does indeed become preserved with the slightest of activity and at the expense of all other tissues.

**Sarcopenia:** is age-related muscle loss that is now known to start between the ages of 20 and 30. After the age of 30, adults typically lose up to 10 oz of muscle mass per year, just over 8 lbs per decade. Almost every degenerative condition associated with the aging process is correlated with sarcopenia:

- Decreased lean body (muscle) mass
- Decreased basal metabolic rate
- Increased body fat percentage
- Decreased insulin sensitivity
- Decreased bone density
- Increased risk/frequency of falling
- Decreased muscular strength
- Decreased cardiovascular capacity
- Increased blood pressure
- Increased total cholesterol/HDL ratio
- Unsteady gait/reduced gait speed

The onset of these degenerative conditions is synonymous with the *domino effect*, starting with the loss of muscle mass and strength. The loss of strength and muscle tissue leads to reduced mobility followed by a decreased basal metabolic rate, increased bodyfat percentage, decreased metabolic enzymes, decreased insulin sensitivity, and finally, a decrease in bone mineral density. To date, the best treatment for sarcopenia is SuperSlow® strength training ([www.sszrc.com](http://www.sszrc.com)).

Scenarios I, II, and III promote and accelerate sarcopenia.