

(AGING IN SPORT AND EXERCISE)

By

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Outlines

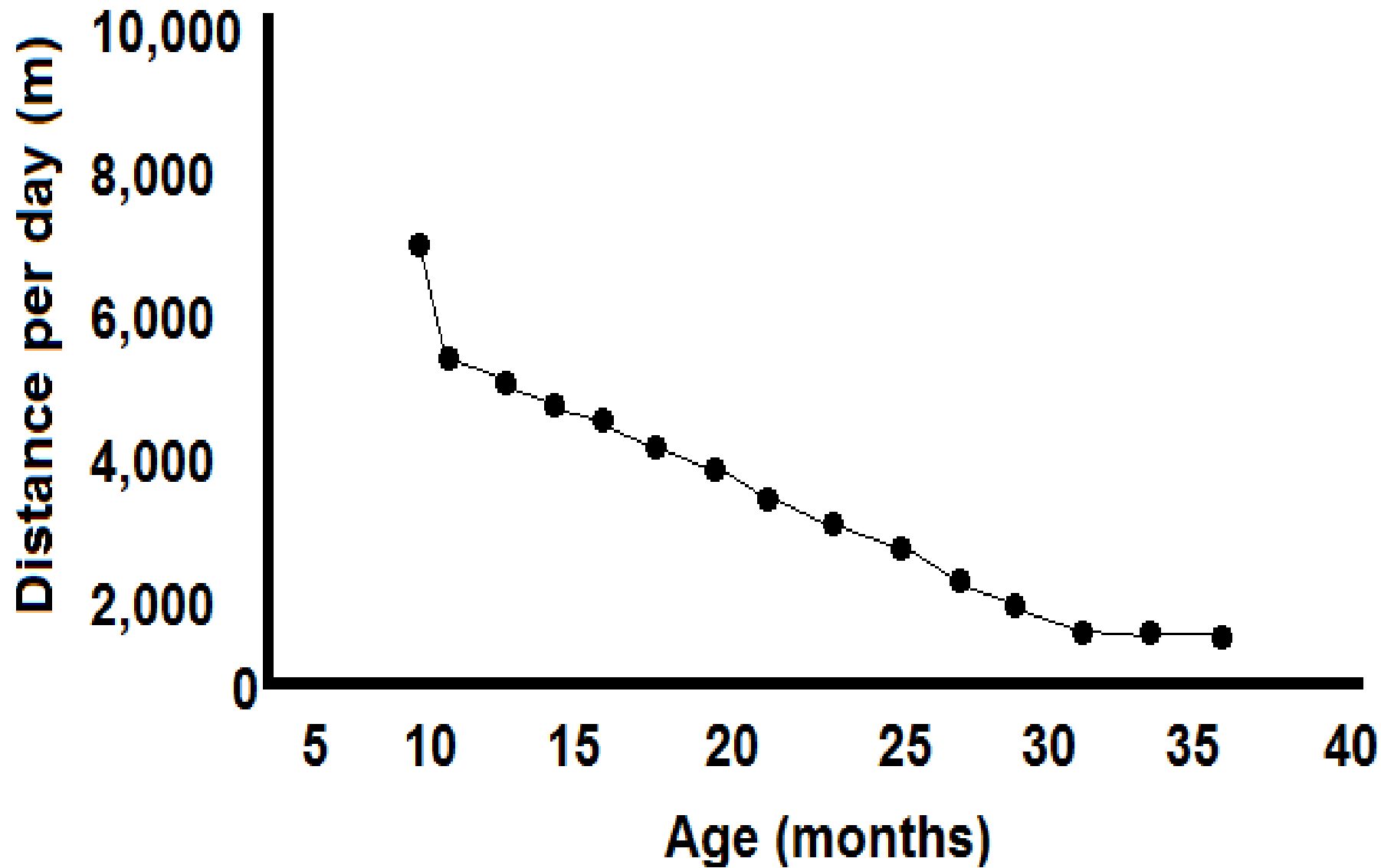
- Body Size and composition
- Physiological Responses to Acute Exercise
- Physiological adaptations to exercise training



Case Study

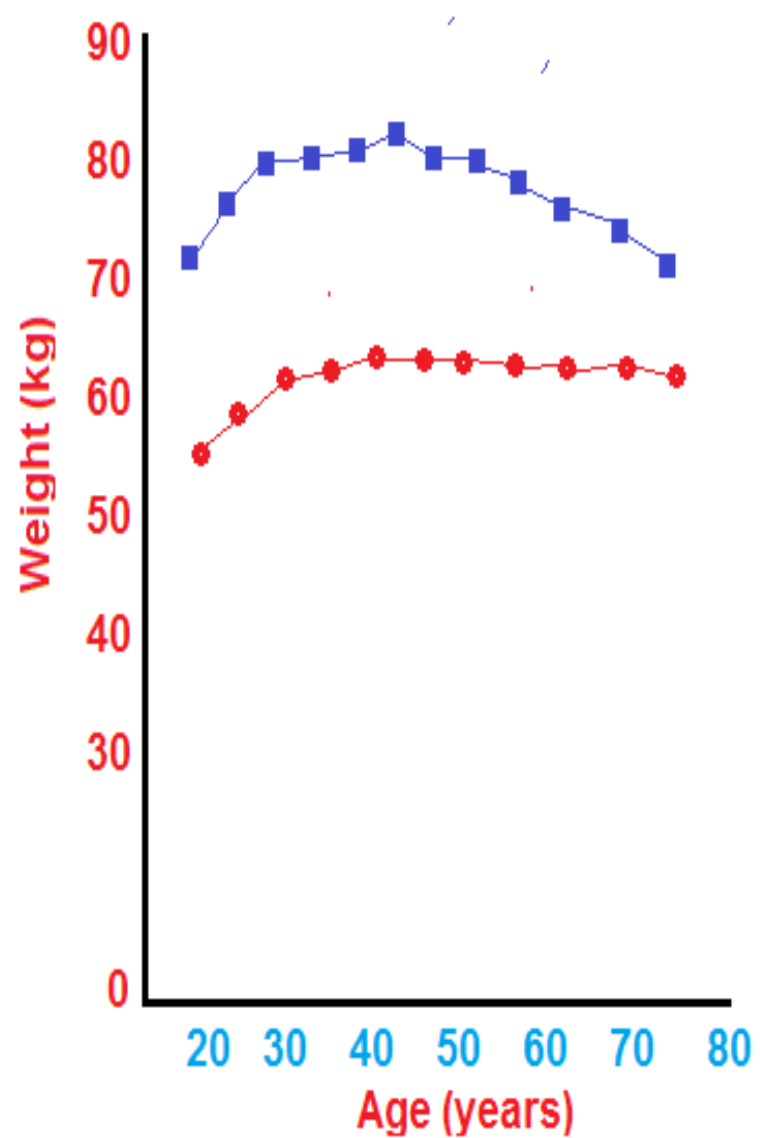
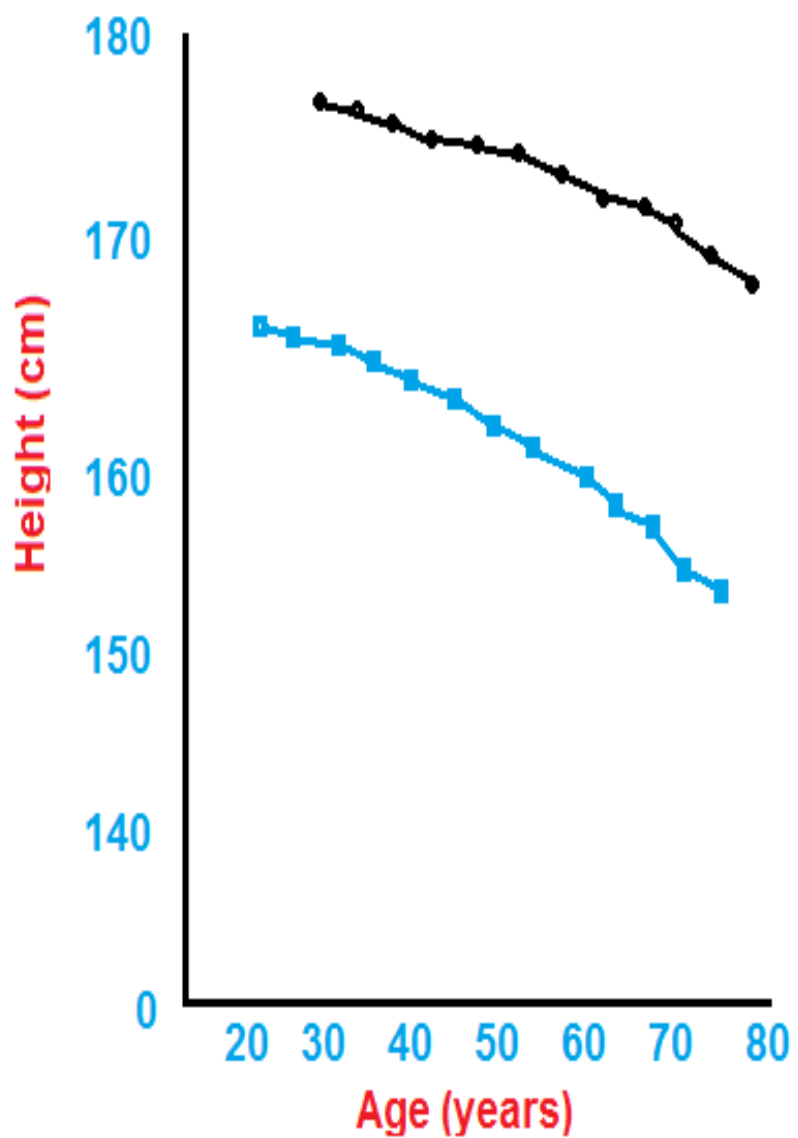
- Clarence Demar, who won his seventh Boston Marathon at age 42, placed 7th at age 50, and was 78th in a field of 153 runners at age 65. In all, he ran more than 1000 distance races, including more than 100 marathons between 1909 and 1957. His best time for the Boston Marathon was 2:29:42 at age 36. Thereafter, his time gradually slowed to 3:58:37 at age 66.





Body Size and composition

As we age. We tend to lose height and gain weight, as illustrated in figure (1) the reduction in height generally starts at about 35 to 40 years of age.



Body Size and composition

- Body weight tends to increase with aging, whereas body height decrease.
- Body fat increases with age, primarily because of increased caloric intake decreased physical activity, and a reduced ability to mobilize fat.
- Beyond age 45, fat-free mass decreases, primarily because decreased muscle and bone mass, both resulting at least partly from decreased activity. But, training can help attenuate these changes in body composition.

Strength VS Aging

- Strength is reduced with aging. This is the result of decrease in both physical activity and muscle mass.

- for example, the ability to stand up from a sitting position in a chair starts to be restricted at age 50, and before age 80 this task becomes impossible for some people.

- The level of strength needed to meet the daily demands of living remains unchanged throughout life. However, a person's maximal strength, generally well above the daily demands early in life, decreases steadily with aging. Eventually, strength decline to point where simple activates become challenge.

- Maximal strength decrease steadily with aging.
- Age-related losses of strength result primarily from a substantial loss of muscle mass.
- In general, normally active people experience as shift toward a higher percentage of ST muscle fibers as they age, possibly attributable to a reduction in FT fibers.
- Aging also appears to slow the nervous system's ability to detect a stimulus and to process the information to produce a response.

Thank You

