

# Achieving muscular endurance essay



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Achieving Muscular Endurance Muscle strength and muscle endurance are interrelated and are important in aerobic fitness.

Muscle strength refers to power, the ability to produce force at a high intensity for a brief period of time. In contrast, muscle endurance refers to the ability to sustain energy or force over a long period of time, generally at a low or moderate intensity level. By using weights in a different manner, you can develop both muscle strength and endurance. Muscle strength is developed by using the heaviest loads you can safely manage as you do two to six repetitions of each exercise. Muscle endurance is increased by using lighter loads, so that you can do forty to fifty repetitions of each exercise. Adaptive changes in myofibrillary ATP-ase activity, capillary supply and mitochondrial content were investigated with light- and electron microscopy in needle biopsies from the quadriceps femoris.

1. The average value for the maximal oxygen uptake increased from 45.7 to 57.2 (ml · kg<sup>-1</sup> min<sup>-1</sup>) (25.2%, P less than 0.

005). 2. The average number of capillaries per muscle fibre increased from 1.39 to 1.79 (28.8%, P less than 0.005) (Physiological Society, 1979). Since no significant change in fibre area was found, this suggests that a considerable number of new capillaries have been formed during the training period.

3. An increased capillary supply of all fibre types was found, being greatest for type I and smallest for type IIB. 4. The relative amount of type I fibres before and after the training period was 57.

9 and 56. 5% respectively (n. s.), for type IIA fibres 26.

4 and 31. 5% (P less than 0. 005), for type IIB fibres 9.

2 and 3. 4% (P less than 0. 005) and for type IIC fibres 0. 4 and 2. 2% (P less than 0. 005). Thus, in the type II group, significant changes in subtypes take place during the endurance training. The data suggest that type IIAB may represent a transitional state between type IIA and IIB.

5. Correlation of capillary supply, myofibrillar ATP-ase activity and mitochondrial content (determined semiquantitatively of individual muscle fibres indicators that the capillary supply to a given fibre is more closely related to its mitochondrial content than to the fibre type as determined on the basis of myofibrillar ATP-ase activity (Physiological Society, 1979). Day

1· Round 1: Double Kettlebell Clean and Press (do Military press or push press)· Round 2: Alternating Bent-over Row· Round 3: Turkish Get-up (30 seconds left and 30 seconds right)· Round 4: Double Front Squat· Round 5: Double Swing Day 2 Round 1: Pull-ups· Round 2: Kettlebell Pass Between The Legs· Round 3: Alternating Floor Press· Round 4: One-arm Front Squat Shown With Two Arms (30 seconds left and 30 seconds right)· Round 5: One-arm Swing (30 seconds left and 30 seconds right or switch hand with each rep and count one rep as one completed with both arms) Day 3 Round 1: Double Kettlebell Clean and Jerk· Round 2: Double KB Bent-over Row· Round 3: Turkish Get-up (30 seconds left and 30 seconds right)· Round 4: Double Front Squat· Round 5: Double Snatch

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