



**E-FIGURE 121-1** Motor unit potentials. The shaded muscle fibers are functional members of the motor unit; the axon, which enters from the upper left, branches terminally to innervate the appropriate muscle fibers. The motor unit action potential produced by each motor unit is seen at the upper right; its duration is measured between the two small vertical lines. The normal-appearing but unshaded fibers belong to other motor units. **A**, The normal situation, with five muscle fibers in the active unit. **B**, In this myopathic unit, only two fibers remain active; the other three (shrunken and unshaded) have been destroyed by a muscle disease. **C**, Four fibers that belonged to other motor units and had been denervated have now been reinnervated by terminal axon sprouting from the healthy motor unit. Both the motor unit and its action potential are now larger than normal. Note that only under these abnormal circumstances do fibers in the same unit lie next to one another. (From Griggs RC, Bradley WG: Approach to the patient with neuromuscular disease. In Isselbacher KJ, Braunwald E, Wilson JD, et al, editors: Harrison's textbook of internal medicine, ed 13, New York, 1994, McGraw-Hill, p 2364.)