# Fibrillation

Fibrillation is the rapid, irregular, and unsynchronized contraction of muscle fibers. An important occurrence is with regard to the heart.

There are two major classes of cardiac fibrillation: atrial fibrillation and ventricular fibrillation.

Ventricular fibrillation is an irregular and uncoordinated contraction of the cardiac muscle of ventricles. It is a common cause of cardiac arrest and is usually fatal if not reversed by defibrillation. Fibrillation may sometimes be used after heart surgery to stop the heart from beating while any minor leaks are stitched up.

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Fibrillation also occurs with individual skeletal muscle fibers.

This happens when muscle fibers lose contact with their innervating axon producing a spontaneous action potential, “fibrillation potential” that results in the muscle fiber's contraction. These contractions are not visible under the skin and are detectable through needle electromyography (EMG) and ultrasound.

Fibrillations can occur in healthy individuals. If the fibrillation have irregular potentials then they don't have pathological significance.

In other cases they are a major symptom in acute and severe peripheral nerve disorders, in myopathies in which muscle fibers are split or inflamed, and lower motor neuron lesions.

They contrast with fasciculations that are visible spontaneous contractions involving small groups of muscle fibers. Also, fasciculation does not necessarily denote pathology, as does fibrillation, although it can be seen in lower motor neuron lesions as well.