



- AC-1: Imperceptible
- AC-2: Perceptible but no muscle reaction
- AC-3: Muscle contraction with reversible effects
- AC-4: Possible irreversible effects
- AC-4.1: Up to 5% probability of ventricular FIBRILLATION
- AC-4.2: 5-50% Probability of fibrillation
- AC-4.3: Over 50% probability of fibrillation
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- **Voltage**
- Voltage does not give a good indication of the likely severity of an electric shock as current flow depends on the resistance of the human body. The majority of the body's resistance comes from the skin and this can range from 1,000  $\Omega$  when wet to 100,000  $\Omega$  when dry.
- Exposure to voltages less than 50V a.c. is generally considered low risk in electrical safety terms. An electric shock at 50V a.c. is unlikely to be fatal, however it can still be painful and may cause a related accident from a reaction to the shock.
- Voltages greater than 450V a.c. are especially dangerous. At this point the resistance of the skin can break down which significantly reduces the body's overall resistance thereby causing a substantial increase in current.
- **Current Path**
- The severity of an electric shock also depends on the path the current takes through the body. Many serious electric shocks occur when the current flows from hand to hand, because the current path is through or near the heart. Hand held appliances present a particular risk as the appliance is gripped in one hand and it is possible to make contact with an earthed surface with the other.
- **Let-Go Threshold**
- If the source of the current is held in the hand, it may cause muscles to contract making the person unable to let go voluntarily. 99% Of adults will not be able to let go with a current greater than 22 mA.

