

# ADVANCED TASER

Electro-Muscular Disruption

Technology Review





# The Variables

## Batteries



Flow = Amperage

**168 mA**

Pressure = Voltage

**50,000 V**

Mass & Pressure of Pulse  
= Energy

**1.76 Joules**

## Capacitor

Energy per pulse & # per  
second = Power

**26 Watts**

# Low Battery = Low Pulse Rate



# Strong Battery = High Pulse Rate



# EMD vs. Stun: Stronger Pulses

**7-Watt Stun**

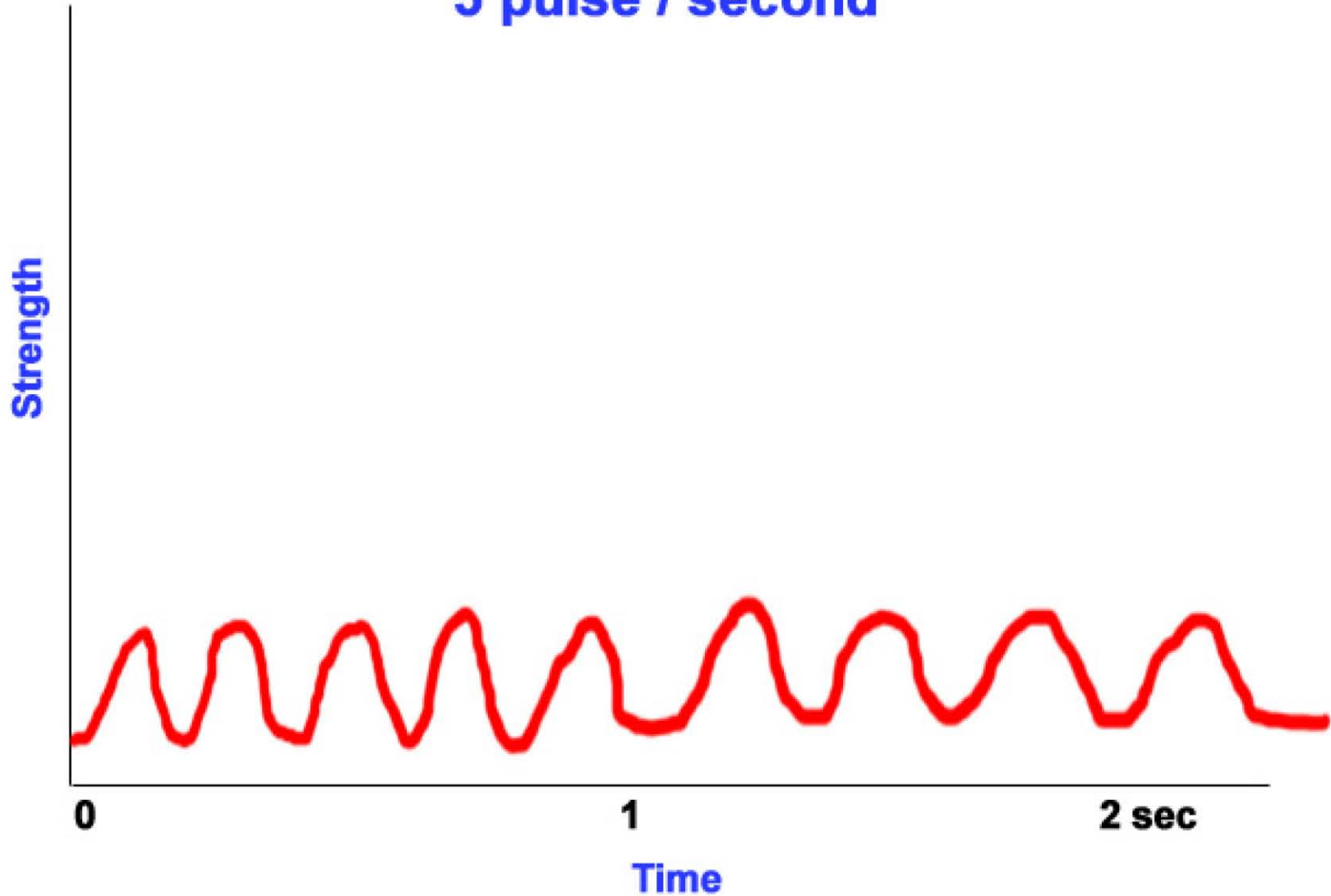


**26 Watt EMD**



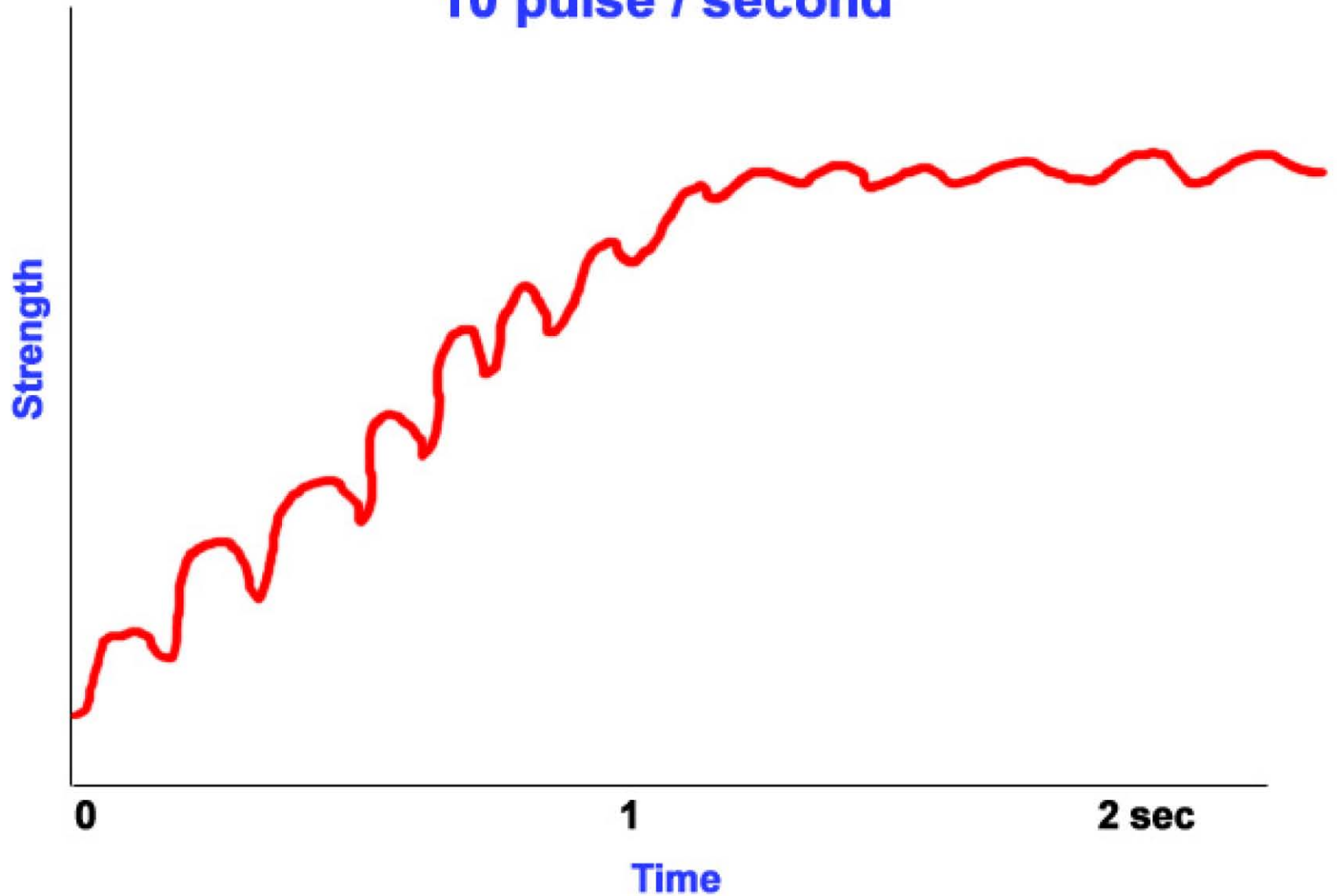
# Why Pulse Rate is Important

**Muscle Contraction**  
**5 pulse / second**



# Why Pulse Rate is Important

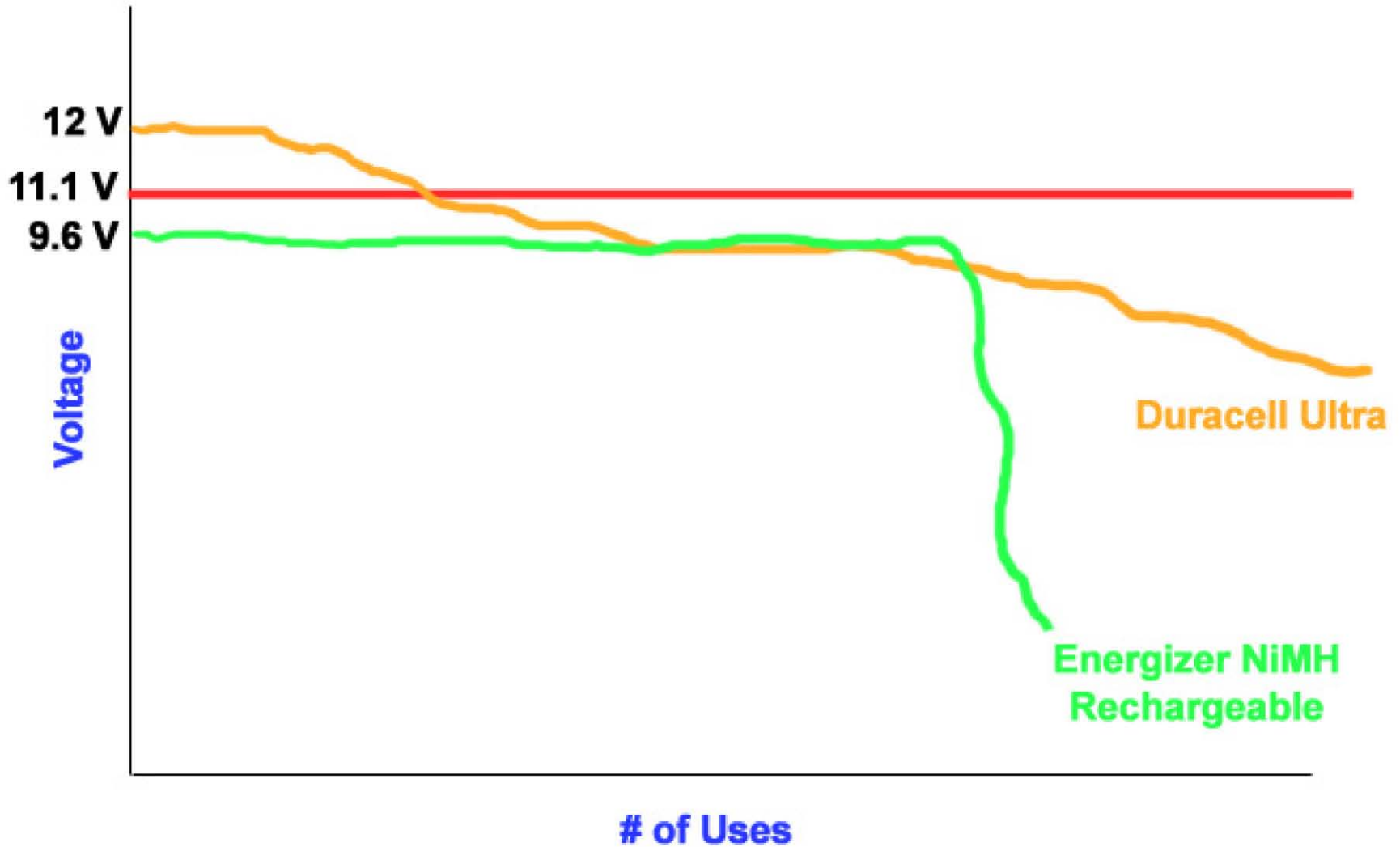
**Muscle Contraction**  
**10 pulse / second**





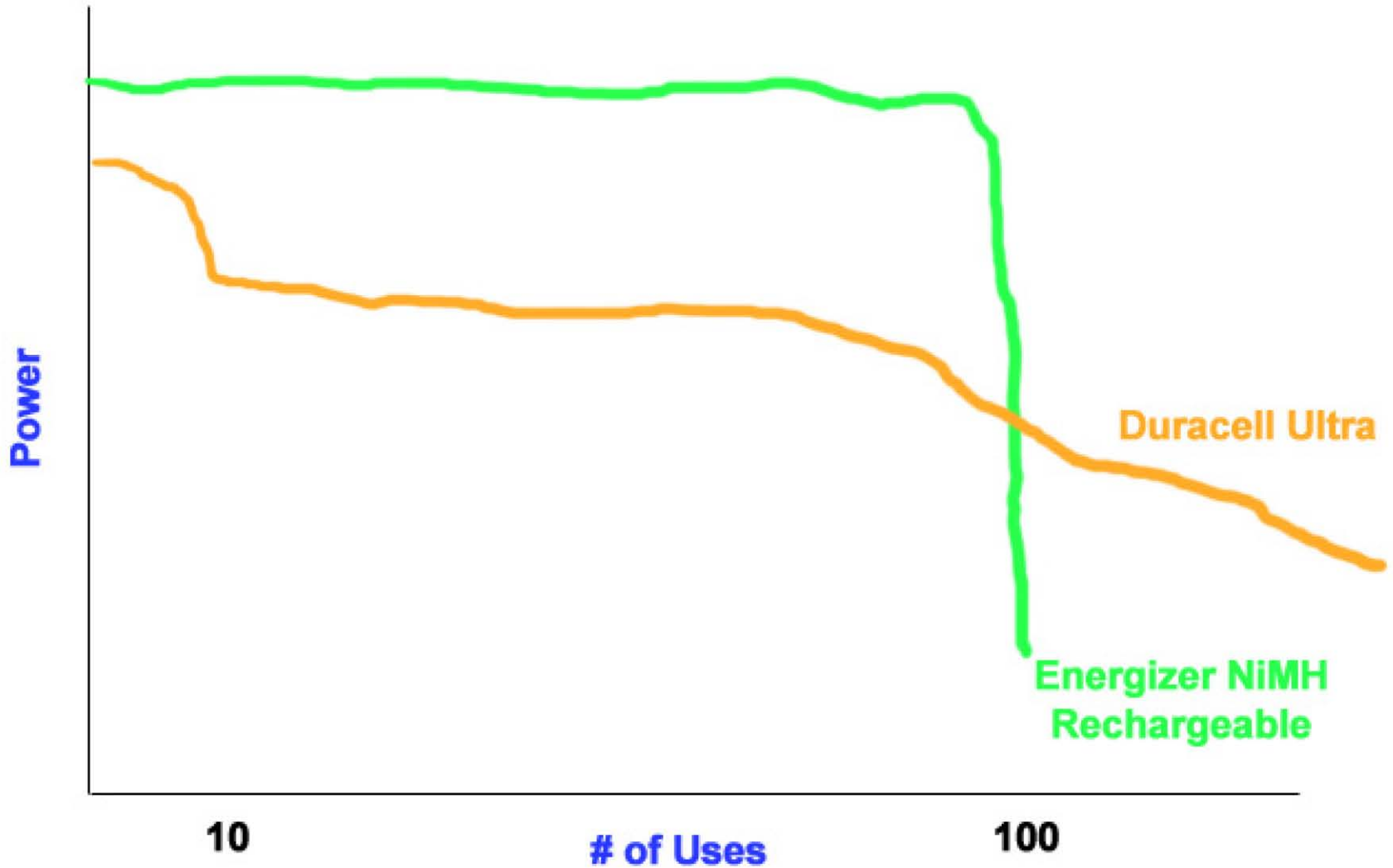
# Why Battery Indicator is only for Alkaline Batteries

## Battery Indicator



# NiMH's perform better over time

## Power Output



# NiMH's perform better at low temperatures

Power Output  
By Temperature Range

