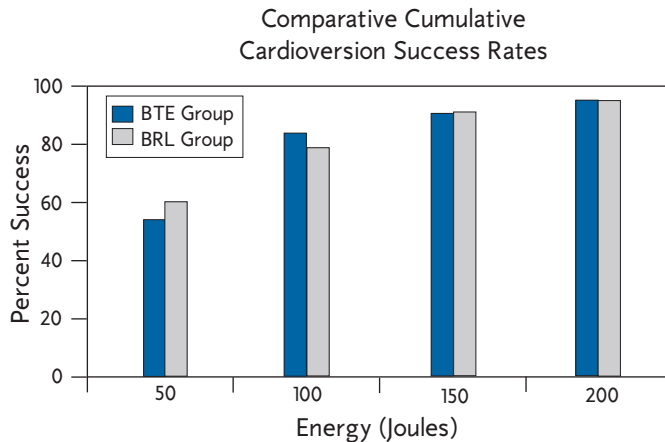




# Medtronic

## Full Energy Biphasic Technology Independent Studies Show the Clinical Benefits

### BIPHASIC TECHNOLOGIES: EQUIVALENT SUCCESS AT EQUAL ENERGIES



At identical energies up to 200J, there was no significant difference in success between Medtronic ADAPTIV™ biphasic truncated exponential (BTE) and Zoll biphasic rectilinear (BRL) technologies<sup>1</sup>. For both, escalating energy was associated with increased cumulative success rates for patients in atrial fibrillation (AF).

### FULL ENERGY (360J) BIPHASIC: SUCCEEDS WHERE 200J FAILS

Three independent studies now show the benefit of escalating biphasic energy beyond 200J in patients with AF. These biphasic-to-biphasic studies compare Medtronic ADAPTIV full energy BTE to Zoll's low energy BRL. Medtronic 360J crossover shocks were successful in 5 of 7 (71%) patients after a failed 200J Zoll shock. In contrast all Zoll 200J crossover shocks were unsuccessful (5 total) after 360J failed to cardiovert.

	Kim et al <sup>1</sup>	Al Atawi et al <sup>2</sup>	Neal et al <sup>3</sup>	Combined Results**
Medtronic 360J after failed Zoll 200J	2/2	3/5	N/A	5/7 (71%)
Zoll 200J after failed Medtronic 360J	0/2	0/2	0/1	0/5 (0%)

\*\* Statistically significant (Fishers exact test p=0.028)

The authors of the Kim study concluded:

*"...there may be clinical situations in which the truncated exponential device, which has a significantly higher maximum energy output (360 vs 200J), can be used successfully when the rectilinear device cannot restore normal rhythm, such as obese patients with AF or patients in ventricular fibrillation who are refractory to defibrillation attempts."*

### ONLY LIFEPAK DEFIBRILLATORS PROVIDE ADAPTIV BIPHASIC FULL ENERGY

*... The broadest therapeutic choice for challenging patients.*

For more information contact Medtronic at 1.800.442.1142.

- Kim ML, et al. Comparison of rectilinear biphasic waveform energy versus truncated exponential biphasic waveform energy for transthoracic cardioversion of atrial fibrillation. *American Journal of Cardiology* 2004; 94: 1438-1440
- Al Atawi F., et al. 2003. Comparison of Biphasic Waveforms for the Transthoracic Conversion of Atrial Defibrillation: The Mayo Clinic Cardioversion Experience. *Circulation* 2003; 108 IV-647.
- Neal et al. 2003. Comparison of the efficacy and safety of two biphasic defibrillator waveforms for the conversion of atrial fibrillation to sinus rhythm. *American Journal of Cardiology*; 92: 810-14