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# Effect of Supercapacitor on Power Supply for Rechargeable Implanted Medical Devices

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## **Abstract**

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The need for medical devices to be planted into living organisms to perform the function of a dysfunctional body part is increasing by the day. Most of these devices require power supply of some sort to function appropriately. The supply can be taken care of by batteries but the batteries have a life span which will never be long enough, especially if the implant is in a human. This will mean that every time the battery dies the device will have to be brought out and the batteries changed. This paper seeks to explore the existing energy storage capacities for a wireless setup. The addition of a supercapacitor to the battery or replacement in the power pack was simulated and analyzed. Then, a proffered solution which is introducing a microcontroller to determine the switching between battery and super capacitor was proposed. Also some level of communication and control of the implant by the external circuit through the capacitor.

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