



# BerkelBike

I M P U L S

*the way to move*

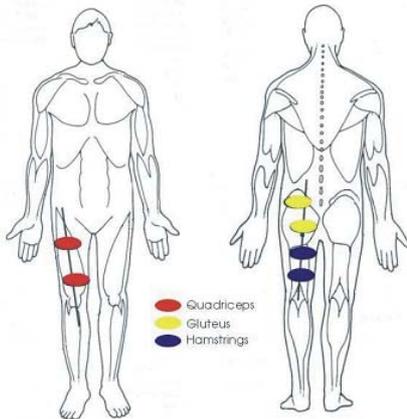


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# BerkelBike Impuls

*The Impuls is an award winning and innovative system which makes it possible for even completely paralysed legs to move again. Advanced high-tech electronics allow people with spinal cord injury to cycle again.*



## How does it work?

The BerkelBike (Classic, Home or Pro) is equipped with a sensor that tells the Impuls stimulator the position of the legs. The software in the stimulator uses this information to calculate which muscles to stimulate and the strength of electric pulse required. The electric pulses generated are passed to the muscles via a pair of Impuls electrode shorts. These are like cycling shorts with a number of electrodes embedded within them. The user moistens the electrode pads before use to ensure good conductivity between the electrodes and muscles. The electric pulses stimulate the muscles, causing them to contract at the appropriate time, allowing the person to cycle again. Adhesive electrodes can be stuck on the leg and buttock muscles as an alternative to using the Impuls shorts.

*Johan (T11): "After 3 months of using the BerkelBike, my legs looked like they did before my spinal cord injury."*



*Impuls shorts*

## Who is it for?

The BerkelBike Impuls system is solely suited for people with a spinal cord lesion. The two key suitability criteria are that muscle spasms in the legs can be provoked and that there is a reduced perception of pain in the legs.

## Effects

The Impuls system has all sorts of positive effects both on physical and mental health. As fitness improves, the immune system is strengthened. As muscle bulk increases, circulation improves resulting in better metabolism. Muscle spasms decrease and pressure sores become less likely. With the increase in exercise, the risk of cardiovascular disease is reduced. Users of the Impuls system have said how much they enjoy cycling and that it makes them feel much better.