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LETTER TO THE EDITOR

To the Editor:

Rehabilitation After Knee Injury: A Swinging Crank

The return to normal activity after injury or operations on the knee may depend on the rate of mobilization. An engineer and cycling enthusiast, aged 73 years, achieved a rapid recovery when he found a way to obtain his own physiotherapy. He had sustained a torn sub-patellar tendon of his right knee, which did not require surgery, causing painful flexion. Extension exercises were advised but were particularly uncomfortable as a result of the accident and so he devised a way to limit the pain and get fit by cutting and hinging the pedal crank of a standard bicycle. The pedal then lifted through a shorter distance than usual (Figure 1), reducing the knee movement on the affected side, enabling him to cycle daily. Normal flexion returned within 2 weeks, followed by full recovery in approximately 3 months. The pedal cranks are made of hardened steel and could be modified easily in a light engineering workshop using a Zif-bronze bush and stainless steel bolt. Either side could be altered without affecting the gears, making it equally suitable for an exercise machine or road bike.

Figure 1.
Standard crank and swinging crank (below). Arrows show the range of vertical travel.

Dr. M.R. Nott, FRCA and G.T. Anderson
Royal West Sussex Hospital
St. Richard's, Chichester PO19 4SE UK