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Knee Microfracture – Patient Rehabilitation Guide

What operation has been performed?

The damaged and loose articular cartilage on the end of the bone has been removed. This leaves a defect with exposed bone. A cartilage stimulating procedure (microfracture) has been performed to encourage the body to cover the exposed bone with scar tissue. By penetrating the bone with a sharp instrument (a pick), cells arising from the bone marrow migrate over the defect and lay down scar tissue (not new cartilage), covering the exposed bone and so relieving pain. This has been performed arthroscopically (key hole) as a day case (no overnight stay).

Rehabilitation Aims

The aim of rehabilitation is early joint motion, maintaining muscle strength and protection of the healing cartilage defect. There are different rehabilitation protocols in existence, as unfortunately, it is not known how best to rehabilitate from this type of surgery. Scientific studies are on-going. Mr Gordon uses the best available scientific evidence to formulate the right rehabilitation programme for you.

Rehabilitation Protocol

The table below outlines the amount of body weight allowed through the leg and the number of crutches used during the initial rehabilitation period (0-8 weeks). Percentage body weight is calculated using standard bathroom scales. Weigh yourself before the operation. After surgery, stand with only the operated leg on the scales. The amount of weight shown on the scales should be the correct percentage of your total body weight you can put through the leg, for the given period after surgery. Eg. if you weigh 70 kg, 2 (completed) weeks after surgery, you may place 20 % of your total body weight through the operated leg ie 20 % of 70 kg (0.2×70) = 14 kg. Your physiotherapist will show you how to do this if you are unsure.

Week Post Operatively	% Body Weight Through Leg	Number of Crutches
0 (first 7 days after surgery)	0 %	2
1	10 %	2
2	20 %	2
3	30 %	2
4	40 %	2
5	50 %	2
6	60 %	1
7	80 %	1
8	100 %	1

Weight Bearing Status and Crutch Use After Surgery

Knee Microfracture - Rehabilitation Guide

Rehabilitation Protocol Continued

Immediately after surgery:

Weight bearing status: Non weight bearing with 2 crutches (no weight allowed through the leg)

Range of Motion: Full range of motion (no brace), active hip, ankle and foot exercises eg elastic band

2 weeks:

Weight bearing status: 20 % body weight

Activity: Zero resistance on static bike, start swimming (once wounds have been reviewed by Mr Gordon)

8 weeks:

Weight bearing status: Full weight bearing, wean off crutches

Activity: Machine weights, low weight initially, elastic band exercises, increasing to gentle treadmill jogging

12 weeks:

Activity: Start running, sports specific training

6 months:

Activity: Start contact sports, squatting, jumping and pivoting

Driving

You need to be able to control the vehicle in an emergency. Can you stamp your foot down on the ground? For left sided surgery and no clutch is required, driving is probably safe after a few days post operatively. For right sided surgery, driving is safe at 8 weeks post operatively. You should check with your insurance company. If you are unsure, please ask Mr Gordon.

Returning to Work

Sedentary jobs: Return after 7 days

Standing/walking jobs: Return after 2 weeks, bearing in mid weight bearing status

Manual/labouring jobs: Return after 8-12 weeks, bearing in mid weight bearing status

Out patient visits

2 weeks – to assess wound healing

6 weeks – to advise on weight bearing status

12 weeks – to advise on increasing activity level

4-6 months – to assess recreational/sporting goals and targets

9 months –to assess recreational/sporting goals and targets

1 year – final review depending on progress

References

1. **Ebert JR, Fallon M, Zheng MH, Wood DJ, Ackland TR** A randomized trial comparing accelerated and traditional approaches to postoperative weightbearing rehabilitation after matrix-induced autologous chondrocyte implantation: findings at 5 years. *Am J Sports Med* 2012;40:1527-37.
2. **Vogt S, Angele P, Arnold M, Brehme K, Cotic M, Haasper C, Hinterwimmer S, Imhoff AB, Petersen W, Salzmann G, Steinwachs M, Venjakob A, Mayr HO** Practice in rehabilitation after cartilage therapy: an expert survey. *Arch Orthop Trauma Surg* 2013;133:311-20.