

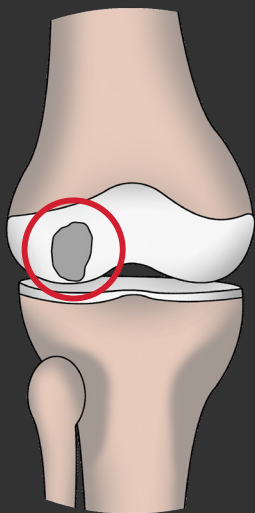


**Syngenit**<sup>TM</sup>  
SURGICAL

Patient Overview

# WHAT IS A CARTILAGE DEFECT ?

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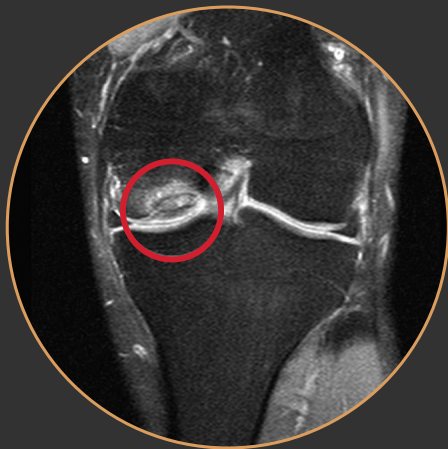
An osteochondral (cartilage) defect refers to an area of damaged cartilage which may extend into the underlying bone. It can occur from an injury to the knee or other articulating joints such as the ankle.

A cartilage defect is often painful and restricts your lifestyle. If left untreated, the condition can become worse and could potentially lead to the need for major surgery such as a joint replacement.

If your knee has a localised cartilage defect but is otherwise healthy, the Syngenit procedure may be suitable for you.

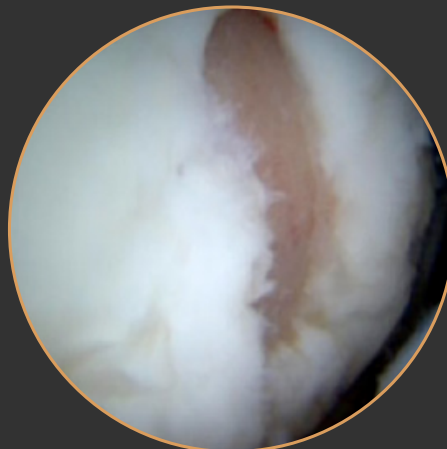
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MRI



A consultation and MRI scan is useful to determine if you are suitable for a Syngenit procedure.

Arthroscopy



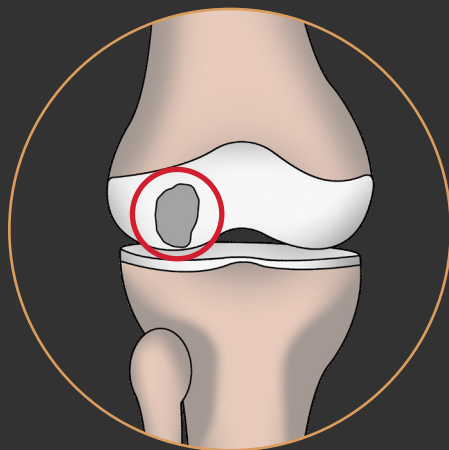
Above shows a cartilage defect.



Above shows a metal probe testing the integrity of a cartilage defect. The damaged cartilage will be removed to perform the Syngenit procedure.

# WHAT IS SYNGENIT SURGICAL?

Syngenet surgical is a quick, effective and clinically proven procedure which is suitable for healthy, active people suffering with the pain of a cartilage defect. It uses your own stem cells to heal and regenerate articular cartilage damage and get you back to an active life.



## STEP 1

The osteochondral defect is identified prior to the surgery using Magnetic Resonance Imaging (MRI).

An arthroscopic procedure may also be used to verify the defect is suitable for this treatment.



## STEP 2

If suitable the surgery can be provided by surgeons specialising in this treatment.

Typically the surgery lasts 60 - 90 minutes and is performed under general anaesthetic.



## STEP 3

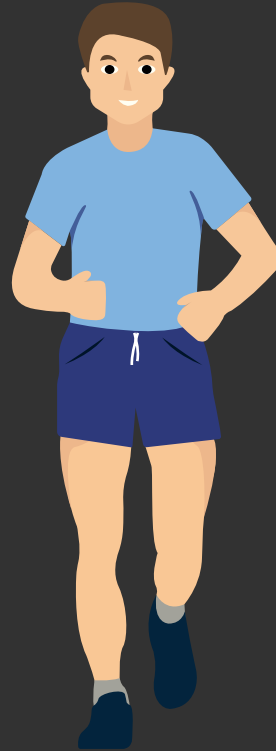
You will be encouraged to follow the knee rehabilitation programme. This can typically be 3-6 months.

Your physiotherapist will work with you to get you back to an active life as soon as possible.

# AM I SUITABLE?

Syngenit™ surgical is a surgical procedure for the treatment of isolated articular cartilage damage in an otherwise healthy joint. The technology has been in use for many years. To fully benefit from this procedure, patients should conform to the selection criteria which your surgeon will be happy to discuss with you.

The current analysis of patient outcomes suggests certain criteria will give a more satisfactory result. Here is a patient that fits these criteria.



I am aged 55 or less.

I am a non-smoker. Smoking is detrimental to cell health and healing

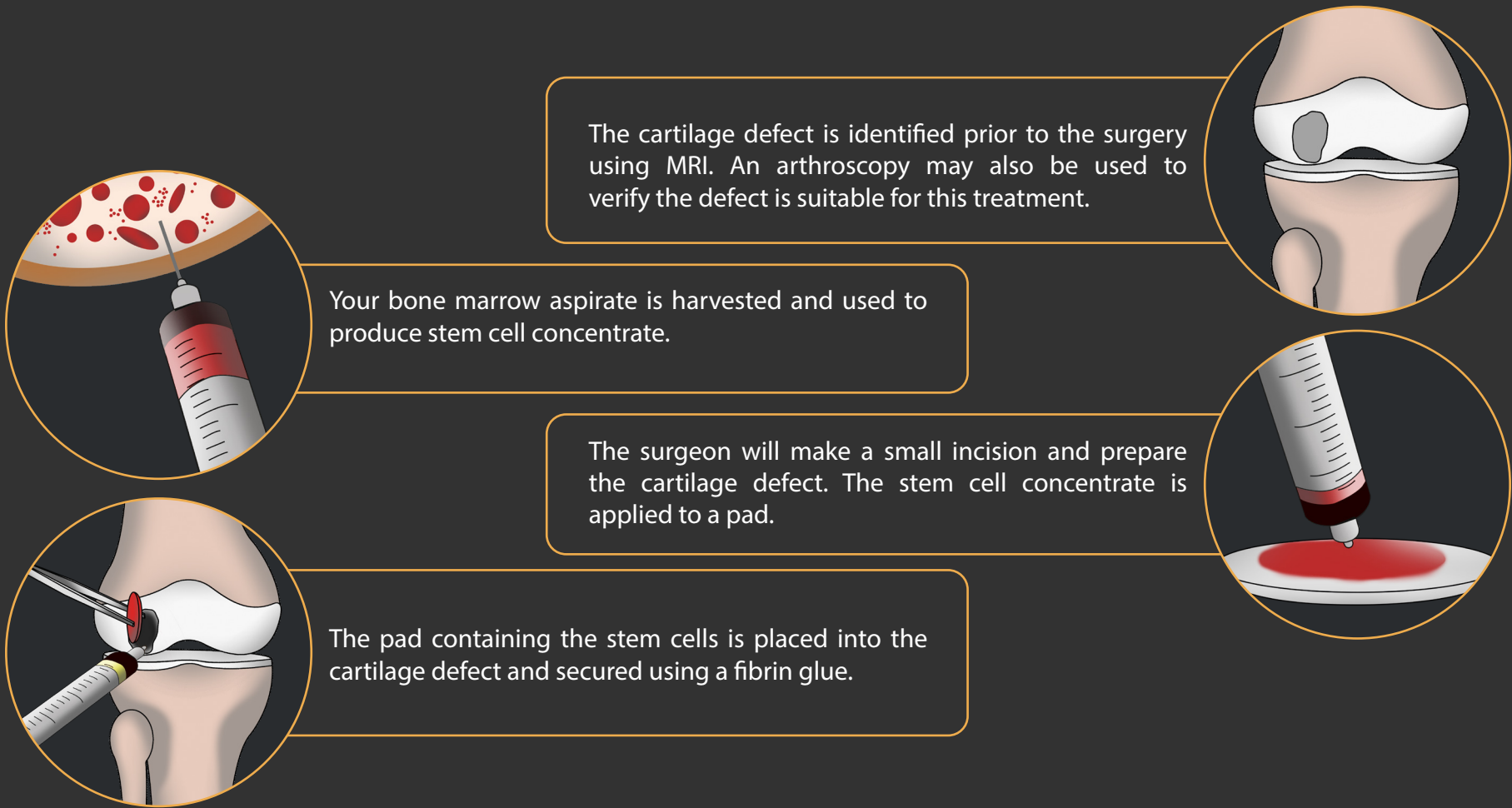
This will be my first cartilage regeneration surgery on this knee. Previous surgeries can impact results.

I have a BMI under 35 and I am in good shape.

I have an otherwise healthy knee. This is not a solution for osteoarthritis

Evidence would suggest decreasing satisfaction and success with older patients, smokers, those with a BMI above 35 and multiple previous interventions. Previous interventions would include microfracture, debridement and previously implanted materials. Your surgeon can discuss how you could increase your eligibility and improve your likely surgical outcome. E.g. by stopping smoking or lowering your BMI.

# PROCEDURE OVERVIEW (Knee)



## THE OPTIMAL BIOLOGICAL ENVIRONMENT

Autologous (Def): Cells or tissues obtained from the same individual

The principle of Syngenit™ Surgical is to create an optimal environment for your own cells to differentiate into new articular cartilage. This is done by concentrating undifferentiated stem cells, using some of your bone marrow. These cells are applied to a pad and retained with a fibrin glue. The objective is to enable these undifferentiated bone marrow cells to become cartilage cells and repair your defect.

# WHAT ARE MY ALTERNATIVES ?



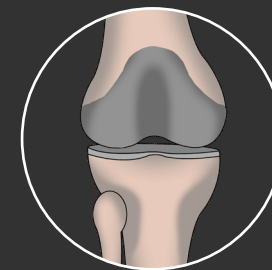
## INJECTION

People with damaged articular cartilage often experience pain and loss of mobility. Early treatments may include injections such as Hyaluronic Acid (HA), Platelet Rich Plasma (PRP) and steroids.



## MICROFRACTURE

This surgical technique was promoted many years ago and is routinely offered. The surgery deliberately damages the bone under the cartilage defect. This wound generates scar tissue and may give temporary pain relief and some return to normal life. Evidence shows microfracture does not regenerate cartilage and often leads to further surgeries.



## ARTIFICIAL JOINT

Damaged articular cartilage cannot naturally heal. If left untreated the damage may become worse, leading to pain, loss of mobility and possibly an artificial joint replacement.

Alternatives	Pain Relief	Normal Life	Cartilage Regeneration
INJECTIONS	✓	✓	✗
MICROFRACTURE	✓	✓	✗
ARTIFICIAL JOINT	✓	✗	✗
<b>Syngenit</b> SURGICAL	✓	✓	✓

Have you been referred for a micro fracture procedure?

Contact us today to ask about Syngenit Surgical as an alternative

# COMMON QUESTIONS

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## BEFORE SURGERY

### WHAT SHOULD I DO (or not do) THE DAY BEFORE?

At your last clinic appointment you will have received instructions on what to do

### WHAT SHOULD I DO (or not do) ON THE DAY?

It is important not to eat or drink beyond the deadline advised by the clinician

## THE SURGERY

### HOW LONG WILL THE OPERATION TAKE?

Typically the surgery lasts 60 - 90 minutes

### WILL I BE GIVEN AN ANAESTHETIC?

You will be given a general anaesthetic and a nerve block to help with pain management

### WILL THIS BE PERFORMED ARTHROSCOPICALLY?

The surgeon will make a small incision to treat the cartilage lesion and make another small incision to aspirate the patient bone marrow

## AFTER SURGERY

### HOW LONG WILL I BE REQUIRED TO STAY IN HOSPITAL?

You are likely to have an overnight stay. In some cases you may be discharged on the same day

### HOW MUCH PAIN WILL I BE IN AFTER SURGERY?

You are likely to experience some pain/discomfort which will usually be well controlled with pain killers

## BACK TO AN ACTIVE LIFE

### HOW LONG WILL MY PHYSIOTHERAPY LAST FOR?

You will be encouraged to follow the knee rehabilitation programme, this can typically be 3-6 months

### CAN I GET BACK TO ACTIVE SPORT / TASKS OR WILL I HAVE LIMITATIONS?

Your physiotherapist will work with you to get you back to an active life as soon as possible



#### DISCLAIMER

This document is for general information purposes and does not constitute an incentive or directive to receive or undertake the surgical techniques described herein. Patients should discuss their clinical needs with appropriate healthcare professional(s) and make an informed decision as to the most appropriate treatment for them. The authors of this document accept no responsibility or liabilities for the decisions made by the patient. Any patient considering their clinical options hereby understands and accepts this statement.

Web : [www.syngenit.com](http://www.syngenit.com)  
Email : [Info@syngenit.com](mailto:Info@syngenit.com)  
Tel : +44 (0) 1273 687 737

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