

Is your
knee pain
affecting your
activities
of daily living?



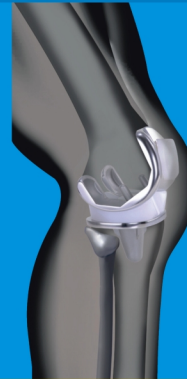
Your doctor can help you regain
your mobility & lead a normal life

To know more, read on...



Patient Education Booklet
on

Arthritis & Total Knee Replacement Surgery



Knee pain, one of the major symptoms of osteoarthritis, can limit your movements and change the way you perform your daily activities.



Recent advances in Total Knee Replacement Surgery (TKR) can help restore the function in your knee so that you can perform daily activities, especially those which require knee bending, in a more comfortable manner.

This booklet will help you understand the basics of osteoarthritis, provide you with useful tips on managing it, as well as give you a brief background on BUECHEL-PAPPAS Total Knee Replacement System and how it works to help restore your knee function.

Knee pain



What is Arthritis?

Arthritis is a term used for a group of more than 100 medical conditions that collectively affects millions of people in the world. However, the most common form of arthritis is osteoarthritis (OA), which is prevalent in people over 50 years of age.

What is osteoarthritis?

Osteoarthritis (OA) is characterised by break down of cartilage (smooth tissue that cushions the ends of bones and allows easy movement at joints without friction between the bones). As cartilage deteriorates, bones begin to rub against one another. This can cause pain and stiffness leading to difficulty in using that joint. Osteoarthritis can also damage ligaments (tissue that links two bones together at a joint), menisci (structure that divides the cavity of a joint) and muscles. Over the time osteoarthritis may create a need for joint replacement.



Which are the joints usually affected by osteoarthritis?

Osteoarthritis occurs most commonly in knees. Less often, it may affect hips and shoulders. Osteoarthritis rarely affects other joints except as a result of injury, or unusual physical stress.

Knee Osteoarthritis

What are the signs and symptoms of knee osteoarthritis?

Usually knee joints affected by osteoarthritis become stiff and painful in the morning hours or during and after their use. They may also become stiff after periods of inactivity. Swelling



and a feeling of warmth on the arthritic knee is also common. One may experience difficulty in walking, climbing stairs, and getting in and out of chairs or cars.

Is knee osteoarthritis related to aging?

Usually, but not necessarily; In fact there are two types of osteoarthritis - primary and secondary. Primary osteoarthritis is generally associated with aging and the 'wear & tear' of life and is prevalent in people over 50 years of age. Secondary osteoarthritis, on the other hand, tends to develop relatively early in life, usually about 10 years following a specific cause such as injury or obesity.

How does knee osteoarthritis adversely affect your lifestyle?

The pain and stiffness of the arthritic knee can make it difficult to do daily activities like walking and climbing stairs, perform your job, play sports or even get around with ease. That is why it is important to know all about this condition, how it affects you, and how to live with it - a process called life style management.



Treatment Options for Knee Osteoarthritis

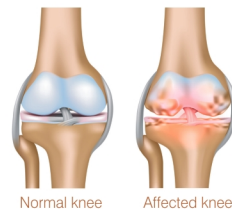
The primary goal of treating knee osteoarthritis is to relieve pain and regain mobility. The initial treatment plan will typically include weight reduction, exercise, pain relieving medications, and physiotherapy. However, in case your mobility is severely affected, the doctor may advise a Total Knee Replacement surgery (TKR).

Total Knee Replacement Surgery (TKR)

Also known as Total Knee Arthroplasty (TKA), it involves replacing the worn out surfaces of the knee joint with an artificial knee joint (implant) designed to allow movement and stability close to that of a normal knee.

Who needs a knee replacement surgery?

The commonest candidates for knee replacement surgery are patients of knee osteoarthritis. In these patients, the need for surgery arises when pain becomes unbearable, deformity is severe and the patients' activities of daily living are severely affected.



What are the benefits of knee replacement surgery?

The primary benefit that a knee replacement offers is relief of pain. Additionally it allows correction of deformity, restoration of movement and joint stability.

The amount of knee flexion (bending) one can get after knee replacement may vary, depending on the quality of bone, the status and strength of ligaments, degree of obesity if any, the type of implant used and the post op rehabilitation (physiotherapy).

What are the improvements one can expect in activities of daily living?

Majority of the patients with knee replacement are able to perform most of their activities of daily living. Most patients are able to walk without any walking aid though some older patients may need to use a walking stick for support. Patients can climb stairs and steps and get up from a chair or couch on their own.

How long one has to stay in the hospital after surgery?

The average hospital stay after knee replacement surgery is 3 to 5 days.

Is it necessary to arrange for blood?

Normally, knee replacement surgery does not warrant blood transfusion. In rare cases where it is required, the surgeon will let one know in advance and the hospital will help to arrange for the same.

How long will one need to undergo physiotherapy after surgery?

Following surgery, one will have to undergo physiotherapy for around 10 days at a rehabilitation facility or at home. Subsequently, the therapist may advise you to go to an outpatient physiotherapy facility for one or two months.

How long will it take to recover completely?

Complete recovery may take 2 to 3 months, after which, as per the surgeon's advice, the patient may be able to play sports, ride bicycle, do swimming, drive a car and engage in sexual activity.



Affected knee

Replaced knee

What are the precautions to be taken after knee replacement surgery?

Post knee replacement, one should avoid high impact and repetitive activities such as jumping and running on a routine basis as they may put undue strain on the knee thus reducing the longevity of the artificial joint. Use of western style toilet is also recommended. It is important to follow the guidelines and adaptive techniques given by the physiotherapist while performing daily activities.

How long will the newly replaced knee joint last?

The present day knee joint implants are designed to last for 25 years or more. However, the actual life of the implant will vary, depending on factors such as bone quality, body weight and the lifestyle of the patient after surgery.

ALTIUS™ BUECHEL-PAPPAS™

Mobile Bearing Knee Replacement System

Also known as 3rd Generation New Jersey Knee



This system was jointly developed by

Dr. Frederick F Buechel

a high profile orthopaedic
surgeon and researcher &
developer in the field of
joint replacement

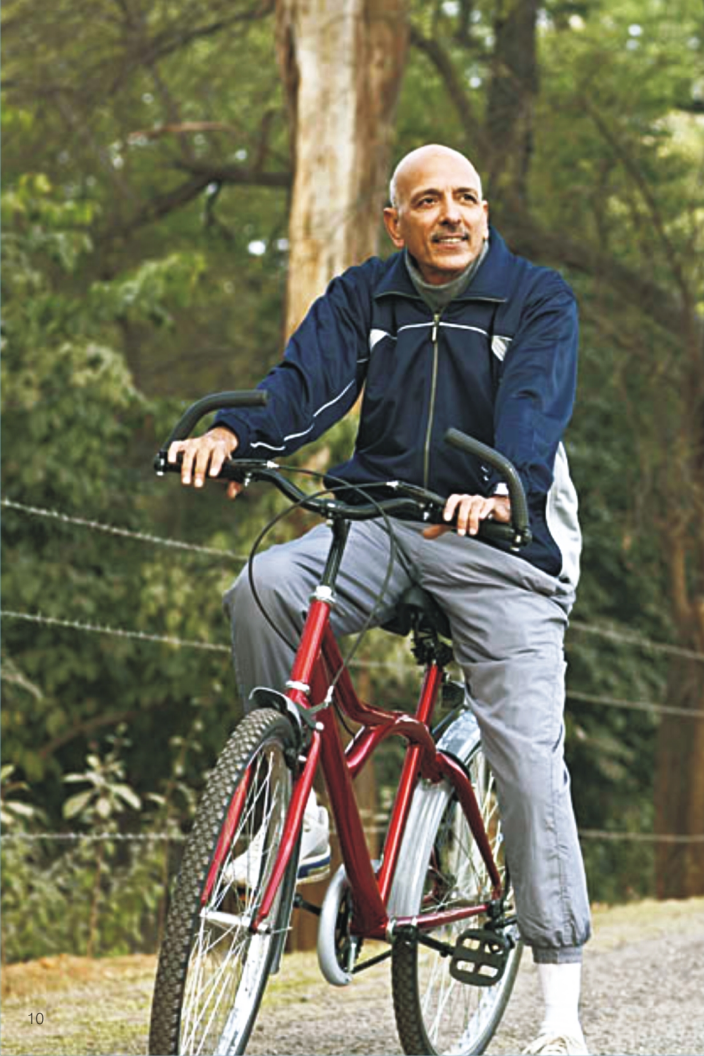


Dr. Michael J Pappas

a professor in mechanical
engineering and an
internationally recognized
expert in advanced design

at New Jersey Institute of Technology





ALTIUS™ BUECHEL-PAPPAS™

Mobile Bearing Knee Replacement System

3rd Generation New Jersey Knee

High Flex Design

- Maximum range of motion up to 162 degrees

Very minimal bone cut

- Preserves optimum natural bone

Tibial Stopper Pin

- No dislocation
- Very rare chance of revision surgery due to dislocation

Finest congruence & engagement

- Maximum stability

Low contact stress

- Maximum longevity

Mobile bearing

- Facilitates highly active life to both young & old patients
- Enables even cross legged sitting



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