

Understanding Knee Replacement

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Definition

The knee joint is composed of the inner and outer condyle of the lower femoral and the upper tibia and patella (figure 1). Knee replacement surgery uses metal and polymer plastic to replace the worn-out knee joint cartilage. The design of artificial joint

Includes titanium alloy, cobalt-chromium alloy and stainless steel etc., titanium alloy is most commonly used. The plastic material is high density anti-abrasive polyethylene.

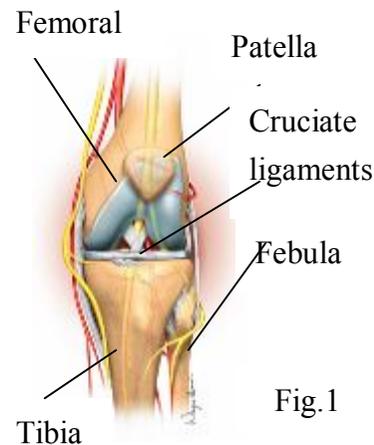


Fig.1

Bone cement binds the joint and the bone tightly together to prevent loosening in a later day, and resume normal activity.

Rheumatoid arthritis: caused by immune disorder

Osteoarthritis: degenerative arthritis.

Symptom

- Joint pain
- Joint deformation
- Motion disability
- Trouble walking
- Limb rigidness, joint stiffness, swollen

Diagnosis and treatment

- Palpation
- X ray film reading

Rehabilitating exercise

1. Quadriceps exercise – begins on the first day after surgery
 - Method: Lie flat, extend the operated leg, contract the thigh muscle so that the back of the knee joint pushed against the bed, maintain this action for 5 seconds and then relax, repeat the motion for about 5 minutes every day (Fig.2).



Fig.2

2. Ankle exercise - begins on the first day after surgery
 - Method: Lie flat, extend the operated leg, press you foot up

and down and in a rotating motion for about 5 minutes every day (Fig.3).

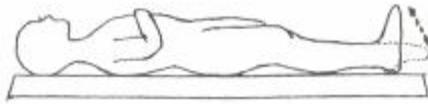


Fig.3

3. Leg-lifting exercise - begins on the third day after surgery °

- Method: Lie flat, extend the operated leg, lift the leg up and hold for 5 second then put it down. Repeat after a 5 second break. Do this for 10-15 times twice a day (Fig.4).



Fig.4

4. Face down knee-bending exercise: Begin this exercise when you reach 90 degree on the sustained passive exercise aids.

- Method: Face down, raise the operated leg high backwards so that the knee joint bend to the max, keep it for 5 seconds and then slowly return to the extended position. Do this for 10-15 times twice a day (Fig.5).



Fig.5

5. Active knee extension in a sitting position

- Method: Sit down by the edge of bed with a roll of bed sheet underneath the knee, both knees relax facing down. Extend the operated leg, hold for 5 seconds and then put it down. Break for 5 seconds and repeat again (Fig.6).

6. Stand up training – Two day after beginning the active knee extension in a sitting position

- Method: Stand by the bed side, hold on to the bed rail or the back of a chair, lower your hips so that your knee is bended and then slowly return to the upright position (Fig.7)

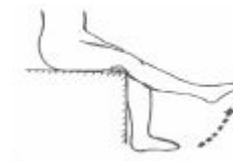


Fig.6

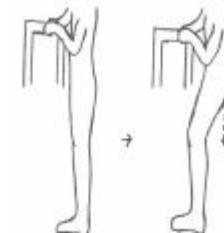


Fig.7

- Continue to execute each rehabilitation exercise.
- Use a cane or walking aids as instructed by the doctor.
- Follow up outpatient treatments on a regular basis.
- See your doctor if the operated leg feels unusual pain or the wound is red, swollen, hot or in pain.