

術後物理治療運動 Physiotherapy After Surgery

足踝泵運動 Ankle pumping exercise



患肢腳踝及腳趾同時用力往上翹，維持2秒，再用力向下壓，重複10次。

Lift up the foot and toes, hold for 2 seconds, then move the foot down for 2 seconds, repeat 10 times.

大腿四頭肌收縮運動 Quadriceps isometric contraction exercise

患肢膝下墊毛巾，將膝蓋用力向下壓，停留10秒，每組做10-25下，每日做3-4組。



Put a towel beneath the knee, press the knee down, hold for 10 seconds, 10-25 times a set, perform 3-4 sets a day.

小腿伸直運動 Knee extensive exercise



膝下墊毛巾，令膝蓋屈曲約30度，再將膝蓋用力伸直，維持5-10秒，重複10次。

Put a towel beneath the knee and make the knee bend in 30 degree, then straighten your leg, hold for 5-10 seconds, repeat 10 times.

直腿抬高運動 Straight leg raising exercise

患肢的膝蓋伸直，再慢慢抬高約30度，腳趾向上翹，維持5-10秒，重複10次。



Straighten the knee, lift the whole leg till 30 degree, keep it for 5-10 seconds, repeat 10 times.

下肢滑行運動 Lower limb sliding exercise



慢慢屈曲膝蓋，再慢慢伸直，重複10次，每日做3-4組。

Bend the knee as much as possible, then slowly straighten the leg, repeat 10 times, perform 3-4 sets a day.

特別與手術有關的風險和併發症 Specific Complications for Total Knee Replacement

神經線受損 Nerve Injury

神經線有可能在手術中受損。患肢會感到麻痺，活動功能受到影響，傷口附近可能會感到有些麻痺。

There may be numbness or weakness if the peripheral nerve gets injured.

動脈受損 Vascular Injury

手術中動脈受損是非常罕見。但如情況嚴重，可能需要血管修補。

The risk of vascular injury in total knee replacement is very rare. Arterial repair may be required if major artery injury happens.

深層靜脈栓塞和肺動脈栓塞

Deep Vein Thrombosis or Pulmonary Embolism

肢體長度不均 Leg Length Discrepancy

骨折 Fracture

骨折可以在手術中或手術後發生。

Fracture would happen during operation or after operation.

關節脫位 Dislocation

假體鬆脫或關節脫位。

Loosening of the parts or joint dislocation.

翻修手術 Revision Surgery

所有人工關節都會出現機械性的磨損。

隨著時間增長，所有人工關節都有機會出現鬆脫而需要再做手術，但一般人工關節的壽命可長達15-20年。

Component wear is possible after joint replacement surgery. With time, there may be loosening of implants and need revision surgery. According to latest study, the survival for total knee replacement should last around 15-20 years.



全膝關節置換術

Total Knee Replacement Operation



簡介 Introduction

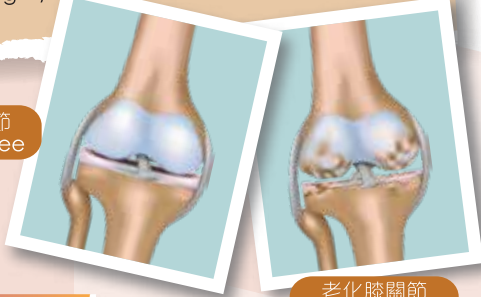
健康的關節會有一層軟骨覆蓋骨頭表面，以減少骨與骨之間互相磨擦。當年齡增長，軟骨會漸漸磨蝕，膝關節之間的空隙變窄，令骨頭增加磨擦，引致疼痛。

人工全膝關節置換術的目的是減輕疼痛，矯正畸形及保持膝關節運動的穩定性。因人工關節使用期大約15至20年，一般會建議50歲以上的患者採用此手術。

In a normal knee joint, there is a thin layer of hyaline cartilage covering on the articular surface. This smooth layer of cartilage can help to reduce the friction between the joint surface. Upon aging, the loss of articular cartilage leads to narrowing of joint space, increases friction and pressure on the articular surface, resulted in knee pain.

The aim of total knee replacement is to reduce the knee pain and improves the range of movement, so that people can have a pain free, functional knee. The average survival for total knee replacement should last around 15 to 20 years, it is recommended that for patient age over 50 and with severe knee pain can consider joint replacement surgery.

正常膝關節
Normal Knee



老化膝關節
Ageing Knee

適用情況 Indication

嚴重退化性骨關節炎、風濕性關節炎、骨壞死、引致膝關節不正常活動長期腫痛。

Severe osteoarthritis knee, rheumatoid arthritis, avascular necrosis that lead to severe knee pain, swelling and limited range of movement.

手術目的 Aims of Surgery

- 減輕痛楚
To reduce pain
- 改善膝關節活動性
To improve the range of movement of knee

手術簡介 Operation Procedure

耐磨聚乙烯
Ultra High, Molecular Weight
Polyethylene

全膝關節置換術，一般使用15-20厘米垂直傷口。將破壞了的膝關節切除，用骨水泥將人工關節固定。

Total knee replacement is performed with a 15-20 cm midline wound across the knee joint. The articular bone and cartilage at femoral side and tibial side have to be removed. The implants are fixed with bone cement.



股骨合金
Alloy for Femur

脛骨合金
Alloy for Tibia

假體質料包括金屬和塑料兩種，金屬材料由鈦合金或鈷鉻合金所鑄成的股骨及脛骨關節；假體塑料則由聚乙烯製成。

The femoral articular surface and tibial tray are made of cobalt-chromium and titanium alloys. The articulate insert is made of highly cross-linked polyethylene.

手術前準備 Preparation Before Operation

- 需要驗血，做心電圖及照X光。
Basic blood test, electrocardiogram and Chest X ray.
- 矯正及穩定原有的疾病，例如心臟病、高血壓、糖尿病、貧血、氣促等。
Stabilize the underlying medical condition eg. Ischemic heart disease, diabetes, hypertension, anaemia, shortness of breath.
- 手術前6小時前開始禁止飲食。
No food and drink 6 hours before operation.
- 手術部位皮膚清潔，或需要剃毛及插導尿管。
Clean the operative knee, may need shaving and urinary catheterization.

麻醉 Anaesthesia

一般會採用半身麻醉，如不適合半身麻醉，會採用全身麻醉。
Spinal anaesthesia or general anaesthesia.



手術後護理 Post Operative Care

- 一般情況下，手術後皆可進食。
Usually will resume diet after operation.
- 傷口會用敷料與彈性繃帶紮緊膝部以作消腫止血。
Crepe bandage may be applied on the knee to control the bleeding and swelling.
- 身上會有引流管或尿管留置，目的要引流術後傷口產生的血水及預防下床如廁跌倒，所以需注意勿壓迫管路及不慎拉扯造成滑脫。
There may be a drain at the operative knee to drain out the blood. Foley catheter may be inserted when necessary. Need to pay attention to the drain and catheter when get out of the bed.
- 手術後1-2天若有引流管，醫生會視引流液量的多少決定拔除的時間。
Drain usually will be removed 1 or 2 days after the operation.
- 傷口疼痛時，可依醫生指示使用止痛藥物。
Analgesic will be prescribed to relieve the pain.
- 盡早離床坐，多作屈伸，術後一、兩天可以使用輔助器如四腳架學習步行。
Early mobilization is recommended. Can start walking with walking aids 1 to 2 days after the operation.

出院計劃 Discharge Plan

- 一般術後3-4天便可出院。
Patient usually can be discharged 3 to 4 days after the operation.
- 傷口大約10至14天癒合，而縫線亦會於兩星期後拆除。
Wound will be healed around 10 to 14 days and the stitches will be removed after 2 weeks.

手術風險及併發症 Risk of Operation and Complications

麻醉風險 Risk of Anaesthesia

- 一般風險 General complications:
肺炎，心肌梗塞，腦中風。
Pneumonia, myocardial infarction, stroke.
- 脊椎麻醉風險 Risk of spinal anaesthesia:
脊椎血塊/感染，神經受損。
Epidural haematoma, nerve injury.

一般性風險 General Complications of Surgery

- 傷口發炎、流血或血腫。
Bleeding, haematoma, infection.
- 傷口癒合不良。
Wound complications.