

## Medication 手術藥物

- + **Anesthesia:** either general anesthesia or spinal anesthesia will be used depending on the patient's condition.
- + **Intravenous antibiotics:** intravenous antibiotics may be administered to help prevent post-surgical infection.
- + **麻醉劑:** 視乎病人的健康情況及病情，須接受全身或半身麻醉。
- + **注射抗生素:** 為免病人的傷口出現細菌感染，或有需要注射預防性抗生素。

## After the Procedure 術後處理

- + **Pain medication:** medicine may be prescribed to manage post-surgery pain and symptoms.
- + **Physical therapy:** rehabilitation exercises will maintain mobility in the joint and encourage blood flow, reducing the risk of developing deep vein thrombosis (blood clot).
- + **Assistive devices:** walking with the help of an assistive device will allow the thigh muscles to regain strength and prevent overexertion of the knee joint.
- + **止痛藥:** 控制痛楚及術後症狀。
- + **物理治療:** 保持關節活動幅度及血液流動，減低深層靜脈栓塞風險。
- + **步行輔助器:** 協助恢復大腿肌力，避免讓膝關節過度負重。



## Risks of Knee Replacement Surgery and Complications 手術有關的風險及併發症

With the continued advancement of technology, complications arising from knee replacement surgery are not common, though possible complications may include infection, poor wound healing, blood loss, blood clot, fracture, nerve damage, and loosening of the artificial joint.

隨著科技進步，全膝關節置換術的併發症風險並不常見，而有關的併發症包括傷口發炎或癒合不良、失血、深層靜脈栓塞、骨折、神經受損，以及人工關節鬆脫等。



## Map 路線圖



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## Knee Replacement Surgery 全膝關節置換手術



## Introduction 簡介

Knee replacement surgery is one of the most successful procedures in the field of orthopedics with a success rate of over 90 percent. Through the use of advanced positioning and navigation technologies, surgeons replace damaged knee joints with artificial joints to help patients relieve pain and restore function. Our professional team of orthopedic surgeons and medical staff at Hong Kong Adventist Hospital – Stubbs Road has a wealth of experience in joint replacement and is committed to supporting patients in their journey towards recovery.

全膝關節置換手術是最成功的骨科手術之一，成功率高達九成以上。透過最先進的定位及導航科技，可為有需要的病人將出現病變的膝關節置換為人工關節，讓病人在術後回復行動力。香港安醫院—司徒拔道的骨科專科醫生及專業醫護團隊擁有豐富的關節置換手術經驗，有助病人盡早重拾優質生活。

## Effects of Joint Disease 膝關節病變風險

When knee joints become diseased, many patients often choose to bear the pain until they are unable to do normal daily activities. Diseased knee joints can affect a person in many ways:

- + **Decline in quality of life:** as daily activities become more difficult, many patients choose to stay in, which significantly impacts their social life.
- + **Injury to other joints:** some patients attempt to relieve pressure on the diseased joint and inadvertently place added pressure on other joints, causing undue strain and injury.
- + **Sarcopenia:** lack of activity may lead to a gradual loss of muscle mass. This is especially common for patients over the age of 40, who can lose upwards of 8 percent of their muscle mass each decade. With less muscle strength, many people choose to become even less active, resulting in a vicious cycle of decline.

當膝關節出現病變，不少病人會選擇忍耐，直至下肢難以活動。其實膝關節病變除了降低活動能力，更會為病人帶來以下影響：

- + **生活質素下降：**膝關節難以活動，令病人不願外出，嚴重影響社交活動。
- + **其他關節損耗：**身體下意識減少讓病腳負重，反增加其他關節的壓力，提早出現勞損。
- + **少肌症：**缺少活動，肌肉容易萎縮，年過四十，肌肉量更會每十年減少8%或以上，活動更感無力，造成惡性循環。



## When to Consider Surgery 適合手術人士

If other forms of medical treatment have not been able to relieve pain, and it continues to affect a patient's daily life, knee replacement surgery may be considered. Common conditions that may warrant the need for surgery include:

- + **Degenerative arthritis:** a chronic condition caused by a breakdown of cartilage.
- + **Rheumatoid arthritis:** an autoimmune disorder with an unknown cause.
- + **Post-traumatic arthritis:** occurs following an injury to the joint which causes damage to the cartilage.

當以其他方法無法治療膝痛，影響病人的日常起居生活，便可考慮接受全膝關節置換手術。常見之症狀如下：

- + **退化性關節炎：**由關節慢性勞損引起。
- + **類風濕性關節炎：**成因未明，屬自身免疫系統問題。
- + **創傷引致之關節炎：**意外受創，以及因關節受傷而引致軟骨退化或增生。

## Knee Replacement Surgery 全膝關節置換手術

Knee replacement surgery is considered a safe and effective procedure. It involves cutting away damaged bone and cartilage and replacing it with an artificial joint composed of metal and plastic, which is affixed to the femur and tibia with bone cement. Following the procedure, most patients experience restored mobility in the knee joint, significant pain relief, and reduced stiffness and deformity.

全膝關節置換手術是一項安全和認受性高的手術。過程中會將已受損的膝關節和軟骨切除，於股骨和脛骨上裝上由金屬及塑膠製成的人工關節，並以骨水泥作固定。手術後，膝關節的活動幅度可回復正常，改善原有的關節變形和僵硬等問題，膝關節的痛楚將會大大減小。

### Benefits 優點

- + **Durable:** studies show that artificial joints can last up to 15 to 20 years.
- + **Small wound:** minimally invasive surgery reduces the wound size to about 7 to 10 cm, facilitating a faster recovery process.
- + **Quick recovery:** with the help of medical staff, patients are usually able to stand the day after their surgery. Post-surgery pain gradually subsides within three to four days.
- + **Highly precise:** Patient specific instrumentation (PSI) is a modern technique in total knee arthroplasty (TKA), aiming to facilitate the implant of the prosthesis with the use of the pre-operative 3D model generated by computed tomography (CT) or magnetic resonance imaging (MRI) scan.

- + **物料耐用：**研究證實人工關節可使用15至20年。
- + **傷口較少：**採用微創手術，傷口僅約7至10厘米，康復速度較快。
- + **快速復元：**一般在術後翌日已可在醫護人員協助下站立，傷口疼痛會在三至四天慢慢減退。
- + **準確度高：**個人化人工膝關節手術器械（PSI）是全膝關節置換手術（TKA）中的最新技術，能利用電腦斷層掃描（CT）或磁力共振掃描（MRI）所計算出來的3D影像，令關節假體無縫的植入患者膝蓋關節之內。

### Before the Procedure 術前準備

- + **Routine examination:** a blood test, X-ray, and electrocardiogram are required.
- + **Management of pre-existing conditions:** any pre-existing condition such as heart disease, high blood pressure, diabetes, anemia, or anhelation must be stabilized prior to the surgery.
- + **Fasting:** patients must fast for at least eight hours before surgery.
- + **常規檢查：**須接受常規檢查，包括驗血、X光影像及心電圖檢查。
- + **控制病情：**如有心臟病、高血壓、糖尿病、貧血、氣促等問題，需於術前穩定原有病情。
- + **禁食：**須於術前八小時開始禁食。

