

Magnetic Resonance Imaging

磁力共振造影



Gleneagles Hospital

HONG KONG

港怡醫院

Magnetic Resonance Imaging 磁力共振造影

What is a Magnetic Resonance Imaging? 磁力共振造影是甚麼？

Magnetic Resonance Imaging or MRI is a medical diagnostic technique that create images of the body using a magnetic field and radio waves.

It does not use X-rays. A versatile, powerful and sensitive tool, MRI can generate thin-section images of any part of the body from any angle in a relatively short period of time.

MRI is a completely non-invasive procedure, and here are no known side or after effects. The procedure is painless.

磁力共振造影 (MRI) 是一種利用磁場和無線電波產生身體影像的醫療診斷技術。

MRI 並不是使用 X 光，而是利用多功能的、強大及高靈敏度的工具，可於短時間內從任何角度於身體任何位置產生薄層影像。

MRI 是一種完全非侵入性檢查，而且沒有已知的副作用或後遺症。而整個檢查過程均是無痛的。

Preparation

As the strong magnetic field used for MRI will pull on any ferromagnetic metal object implanted in the body, it is important that all metallic items including magnetic strips (e.g., in bank or credit cards) be removed before entering the scanning room. The presence of metal will also degrade the MRI image and therefore has to be removed in order to optimise your examination.

In most cases surgical staples, plates, pins and screws pose no risk during MRI if they have been in place for more than four to six weeks.

If there is doubt, an X-ray may be required to verify the presence of any metal in your body or head.

You are discouraged to apply make-up or sprays on your body or hair as these may contain metallic dust and affect the images.

You will be asked to fill in a pre-examination screening form to ensure that no significant medical history is forgotten and the staff is fully aware of any metal that may be in your body.

For the general MRI, you may eat normally and go about your daily routine. Continue to take any medication prescribed by your doctor. Or 4 hours fasting is needed for MR Cholangio-Pancreatography.

If you are claustrophobic, sedation may be required. Please highlight this when making an appointment and further instructions will be given.

檢查前準備

由於磁力共振造影掃描系統之強大磁場可拉動任何附於身體的金屬包括金屬植入體，因此在進入掃描室之前必須移除所有金屬物品，包括磁條（例如銀行卡或信用卡）。而且金屬會降低 MRI 的影像質素，因此需避免金屬物品進入磁力共振造影掃描室，以確保檢查影像的質素。

在一般情況下，如體內之金屬片、釘或螺絲已經超過四至六星期，在 MRI 檢查期間應該沒有風險。如您對於身體或頭部是否有金屬存有疑問，可能需要以 X 光檢查來確認。

於進行檢查前，建議不要使用化妝品或噴霧劑於身體或頭髮上，因為這些物品可能含有金屬粉塵，有機會影響影像質素。

您需於進行檢查前填寫磁力共振掃描篩查表格，以確保沒有遺漏了重要的病歷及讓放射技師充分了解到您的身體裡是否有金屬。

一般進行磁力共振造影前後是可以正常進食或進行日常工作，以及可繼續服用醫生處方的任何藥物，但如您所進行的是磁力共振胰膽管造影術，就需要於檢查前禁食 4 小時。

如您患有幽閉恐懼症，醫生可能會安排藥物鎮靜去進行檢查。請於預約時，向您的主診醫生提出，以作妥善的安排。

On the Day of the Examination 檢查當天的過程

Before the Examination 檢查前

- Fill in the screening form on your medical history.
- Remove items like your wallet, watch, keys and magnetic strip cards (eg. ATM, credit cards). Lockers are provided.
- Change to a gown to prevent metallic objects from being attracted by the powerful magnet.
- 請填寫磁力共振掃描篩查表格。
- 請將帶金屬的個人物品如錢包，手錶，鑰匙和磁條卡（如提款卡，信用卡）存放於醫院提供之儲物櫃內。
- 請更換醫院提供之檢查袍，以防止衣物上的金屬被強大的磁力吸去。

Free Shuttle Service 免費專車服務

Gleneagles Hospital Hong Kong provides free shuttle bus service between MTR **Wong Chuk Hang Station** (Exit A) and the hospital (main entrance).

港怡醫院為市民提供免費專車服務往來港鐵黃竹坑站 (A出口) 及醫院 (正門)。



Free Shuttle Schedule
免費專車服務時間表

MTR 港鐵

Gleneagles is within walking distance from MTR **Ocean Park Station** (Exit C).

您可由港鐵**海洋公園站** (C出口) 步行至港怡醫院。



Hospital address

1 Nam Fung Path,
Wong Chuk Hang, Hong Kong

醫院地址

香港黃竹坑南風徑1號

Mainline 電話 +852 3153 9000
Service hotline 服務熱線 +852 2122 1333
Fax 傳真 +852 2528 0081

www.gleneagles.hk

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During the examination 進行檢查時

- | You will be positioned on a padded table and slowly moved into an open magnet that surrounds the body with a magnetic field.
- | Once you are comfortably positioned, it is important that you remained relaxed and completely still during the scan. Movement will result in unclear images.
- | There will be faint knocking, intermittent humming and thumping sounds. These represent changes in the magnetic field and the imaging data is being collected. Earplugs will be provided.
- | Breathe normally, as there is nothing about the procedure to make you uncomfortable or painful. You may notice a warm feeling in the area under examination; this is normal but please let us know if it bothers you.
- | In some cases, the doctor may order an image enhancement agent. This is a fluid which is injected into a vein probably in your arm. If this is required, it does not mean that your condition is more serious. It is only in order to increase the report accuracy of the examination. So do not be concerned.
- | You will have to voice contact with the radiographer at all times and you can be seen clearly from the control room.

- | 您將被固定於掃描床上，並覆蓋上相關儀器，掃描床會將您的身體慢慢推向一個開放式的 大磁石內進行掃描。
- | 當您躺於一個舒適的位置後，請在掃描過程中保持放鬆及完全靜止。震動或移動都會導致影像不清晰。
- | 於檢查進行時，會有間歇性的嗡嗡聲和砰砰的聲音。這代表了磁場在變化中，同時亦正收集您身體的影像數據。我們會為您提供耳塞以減低噪音。
- | 請保持正常呼吸，檢查過程中不會使您感到不舒服或疼痛。您可能會感到正在掃描的相關部位變得溫暖，這是正常現象。 但如果您感到不適，請通知當值的放射技師。
- | 在某些情況下，醫生可能會要求注射磁力共振顯影劑以增強影像信號，這大多數是經您手臂上的靜脈將顯影劑注射入體內。如果需要注射顯影劑，並不表示您的病情嚴重，這只是用以增強檢查報告的準確度，因此不必擔心。
- | 您可透過揚聲器隨時與放射技師聯繫，同時放射技師們可從控制室清楚地監測檢查室內的情況。

How long will it take?
檢查需要用多長時間？

Depending on the information your doctor needs, the examination can take between 30 to 45 minutes. 主要根據主診醫生的要求，檢查一般需要 30至 45 分鐘。

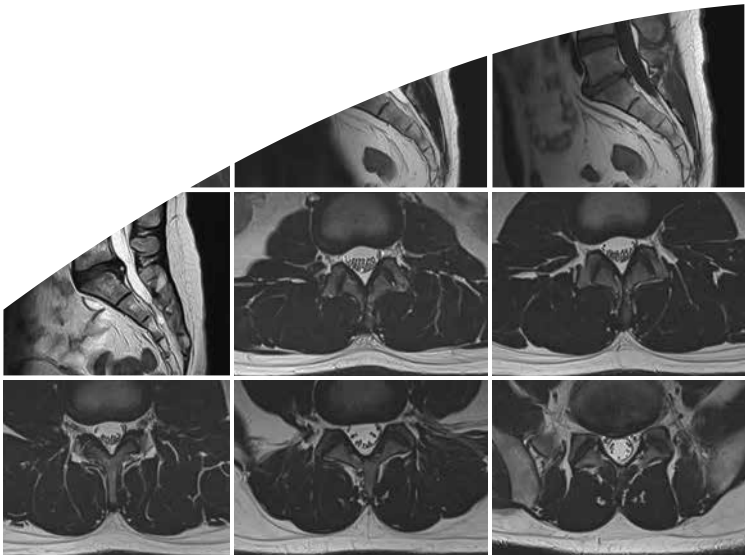
Benefits and Risks
磁力共振檢查有什麼好處和風險？

Benefits 好處

- | Images of the soft-tissue structures of the body – such as the heart, lungs, liver and other organs are clearer and more detailed than with other imaging methods.
- | MRI can help physicians evaluate the function as well as the structure of many organs.
- | The detail makes MRI an invaluable tool in early diagnosis and evaluation of tumors.
- | MRI contrast material is less likely to produce an allergic reaction than the iodine-based materials used for conventional x-rays and CT scanning.
- | MRI enables the detection of abnormalities that might be obscured by bone with other imaging methods.
- | MRI provides a fast, non-invasive alternative to x-ray angiography for diagnosing problems of the heart and cardiovascular system.
- | Exposure to radiation is avoided.

- | MRI 比其他醫療造影檢查較清晰及詳細地顯示身體的軟組織結構，如心臟，肺，肝等器官。
- | MRI 能幫助醫生評估多種器官的結構及其功能。
- | MRI 所提供的詳細資料，成為早期腫瘤診斷和評估的寶貴工具。
- | MRI 所使用之顯影劑相對於常規的X光檢查和電腦掃描檢查所使用的碘類顯影劑較少出現過敏反應。

- | MRI 可檢測出於其他醫療造影檢查因被骨頭遮擋而無法顯示的異常之處。
 - | MRI 提供了一種快速及無創的檢查以診斷心臟和心血管系統的問題，是X光血管造影以外的較佳選擇。
 - | MRI 可避免接受輻射。
- Risks 風險
- | An undetected metal implant may be affected by the strong magnetic field.
 - | MRI is generally avoided in the first 12 weeks of pregnancy. Doctors usually use other methods of imaging, such as ultrasound, on pregnant women unless there is a strong medical reason to use MRI.
 - | 未被檢測的金屬植入物可能會受到強大磁場的影響。
 - | 磁力共振檢查一般避免於懷孕 12 週內進行。醫生通常會使用其他醫療造影方法，如超聲波檢查。除非有強力的醫療原因才會安排孕婦進行磁力共振檢查。



Results
檢查結果

The MRI radiologist and radiographer will review the images during the scan to check that they are clear. The report will be sent to your doctor who will then discuss the scan results with you.

進行磁力共振的放射科醫生和放射技師會在掃描過程中查看影像，以確保影像清晰。檢查報告將發送到您的主診醫生，並會與您討論檢查結果。

Limitations
限制

- | Bone is better imaged by conventional X-rays in some cases and CT is preferred for patients with severe bleeding.
- | MRI may not always distinguish between tumor tissue and edema fluid.
- | It does not detect calcium when this is present within a tumor.
- | In most cases the examination is safe for patients with metal implants, with the exception of a few types of implants. Patients should inform the staff of the presence of an implant prior to the test.
- | The examination must be used cautiously in early pregnancy.
- | MRI typically costs more than CT scanning.

- | 某些情況下傳統的X光檢查對於骨頭能提供更好影像，而電腦掃描檢查是治療嚴重出血的首選。
- | MRI 有時可能無法區分腫瘤組織和水腫。
- | MRI 未能檢測到腫瘤中的鈣。
- | 在大多數情況下，MRI對於植入金屬物的病是安全的，不過仍對於少類的金屬植入物不安全。因此，病人應在檢查前通知放射技師有關之植入物。
- | MRI 對於早期孕婦必須格外小心進行。
- | MRI一般比電腦掃描昂貴。

Questionnaire
篩查問卷

Before having the MRI examination, you MUST complete the MRI safety screening form.

進行磁力共振掃描檢查前，您必須先完成磁力共振掃描篩查表格。

