

Faecal Microbiota Transplant

糞便微生物移植



Gleneagles Hospital

HONG KONG

港怡醫院



Potential side effects 潛在副作用

While FMT is considered safe¹, some patients may see transient symptoms that subside in a few days:

雖然FMT的安全性已獲確認¹，但有些病人有機會出現短暫的症狀，如：

- Diarrhoea or constipation
腹瀉或便秘
- Abdominal discomfort
腹部不適
- Flatulence & bloating
脹氣和腹脹

Reference

參考資料：

- (1) Park, Sean-Young, and Geom Seog Seo. "Fecal Microbiota Transplantation: Is It Safe?." Clinical endoscopy vol. 54,2 (2021): 157-160. doi:10.5946/ce.2021.072
- (2) Sehgal, Kanika, and Sahil Khanna. "Gut microbiome and Clostridioides difficile infection: a closer look at the microscopic interface." Therapeutic advances in gastroenterology vol. 14 1756284821994736. 23 Feb. 2021, doi:10.1177/1756284821994736
- (3) Malikowski, Thomas, et al. 'Fecal Microbiota Transplantation for Gastrointestinal Disorders'. Current Opinion in Gastroenterology, vol. 33, no. 1, Ovid Technologies (Wolters Kluwer Health), Jan. 2017, pp. 8-13. Cross ref, doi:10.1097 /mog.0000000000000326- doi:10.1177/1756284821994736
- (4) Kang, Dae-Wook, et al. 'Long-Term Benefit of Microbiota Transfer Therapy on Autism Symptoms and Gut Microbiota'. Scientific Reports, vol. 9, no. 1, Springer Science and Business Media LLC, 9 Apr. 2019. Crossref- doi:10.1038/s41598-019-42183-0./mog.0000000000000326- doi:10.1177/1756284821994736
- (5) Li, Ning et al. "Fecal Microbiota Transplantation Relieves Gastrointestinal and Autism Symptoms by Improving the Gut Microbiota in an Open-Label Study." Frontiers in cellular and infection microbiology vol. 11 759435, 19 Oct. 2021, doi:10.3389/fcimb.2021.759435doi:10.1177/1756284821994736
- (6) Sun, Jing, et al. 'Fecal Microbiota Transplantation Alleviated Alzheimer's Disease-like Pathogenesis in APP/PS1 Transgenic Mice'. Translational Psychiatry, vol. 9, no. 1, Springer Science and Business Media LLC, 5 Aug. 2019. Cross ref, doi:10.1038/s41398-019-0525-3 doi:10.3389/fcimb.2021.759435doi:10.1177/1756284821994736
- (7) Hammond, Nancy. "Can a Fecal Transplant Help Treat Parkinsons?" Medical News Today, Medi Lexicon International, 29 June 2022, <https://www.medicalnewstoday.com/articles/fecal-transplant-parkinsons>. doi:10.3389/fcimb.2021.759435doi:10.1177/1756284821994736
- (8) Mahobe, Raghav and Mishra, Manas. "U.S. FDA Advisers Recommend Ferring's Fecal Transplant Therapy." Reuters, Thomson Reuters, 22 Sept. 2022, <https://www.reuters.com/business/healthcare-pharmaceuticals/us-fda-panel-recommends-ferrings-fecal-transplant-therapy-2022-09-22/>
- (9) El-Salhy M, Winkler R, Casen C, Hausken T, Gilja OH, Hatlebakk JG. Efficacy of Fecal Microbiota Transplantation for Patients With Irritable Bowel Syndrome at 3 Years After Transplantation. Gastroenterology. 2022 Oct;163(4):982-994.e14. doi: 10.1053/j.gastro.2022.06.020. Epub 2022 Jun 14. PMID: 35709830.-panel-recommends-ferrings-fecal-transplant-therapy-2022-09-22/

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。



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What is Faecal Microbiota Transplant (FMT)?

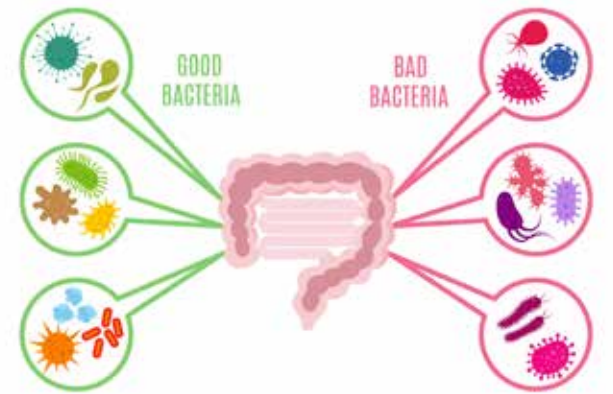
甚麼是糞便微生物移植 (FMT)？

Faecal Microbiota Transplant involves the transfer of a complete ecosystem including beneficial bacteria from a **healthy and rigorously screened donor*** to a recipient with disease-linked severe dysbiosis or infection. This healthy microbiome settles in the lower intestine and replaces the imbalanced gut microbiome of the host through a process known as 'engraftment'.

糞便微生物羣移植是指將一個完整的生態系統及其益菌，從**經過嚴格篩選的健康捐贈者***轉移到患上菌羣失調相關性嚴重疾病或被細菌感染的受贈者體內。健康的微生物羣轉移後會在宿主的下腸胃道定居，並通過一個稱為「移植」的過程取代宿主失衡的腸道微生物羣。

*Includes screening tests for chronic diseases, inflammatory bowel disease or colorectal cancer, infectious diseases like Hepatitis A, B, C and E, Sexually transmitted diseases such as HIV, Syphilis, pathogens such as Clostridioides difficile (CDI), parasites, helminths, SARS-CoV-2, diarrhoea-causing bacteria such as Escherichia coli, Salmonella sp., Vibrio cholera etc., Cytomegalovirus (CMV) and Epstein-Barr (EBV) Virus.

*健康篩查包括慢性病、炎症性腸病、結腸直腸癌、鉅細胞病毒（CMV）和愛滋斯坦-巴爾病毒（EBV）病毒；甲型、乙型、丙型和戊型肝炎等傳染病；愛滋病病毒（HIV）、梅毒等性傳播疾病；艱難梭菌（CDI）、寄生蟲、蠕蟲，SARS-CoV-2 等病原體，以及大腸桿菌、沙門氏菌、霍亂弧菌等致瀉細菌。



What are the conditions that can benefit from FMT?

受益於FMT療法的疾病

- Clostridioides difficile infection (CDI) - Up to 90% more efficacious than antibiotic therapy alone at resolving recurrent or refractory CDI in people who have had two or more previous infections.²
艱難梭狀芽孢桿菌感染（CDI）：與單獨使用抗生素療程相比，在治療感染過至少兩次複發性或難治性艱難梭菌的感染患者時，療效高達90%以上。²
- Gastrointestinal conditions such as Irritable Bowel Syndrome (IBS).^{3, 9}
腸道疾病，如腸易激綜合症（IBS）。^{3, 9}
- Inflammatory Bowel Disease (IBD) and Irritable Bowel Syndrome (IBS).
炎症性腸病（IBD）和腸易激綜合症（IBS）。^{4, 5, 6, 7}
- Neuro-related conditions such as autism spectrum disorder (ASD), Alzheimer's and possibly Parkinson's disease as our microbiome impact neurological processes through the gut-brain axis.^{4, 5, 6, 7}
神經系統疾病：微生物羣可通過腸腦軸影響神經過程，發揮治療自閉症譜系障礙（ASD）、阿爾茨海默氏症以及帕金森病的潛能。^{4, 5, 6, 7}

- International recognition from National Institute for Health and Care Excellence (NICE), a regulatory body in the United Kingdom and US Food and drug Administration (FDA) as treatment for CDI and also reduce recurrence of a bacterial infection.⁸
英國國家健康與護理卓越研究所（The National Institute for Health and Care Excellence NICE）和美國食品藥品監督管理局（US Food and Drug Administration FDA）等國際機構已經公認FMT為 CDI療法，能減少細菌感染的復發。⁸

3 Types of FMT Procedures

進行FMT的三種方式

Colonoscopy 腸胃鏡

Way 方法

A colonoscope is advanced into the small or large intestine (as clinically appropriate), where the FMT preparation is then released along the intestinal walls, usually in the terminal ileum or caecum
將結腸鏡推進小腸或大腸（根據臨床情況而定），在迴腸末端或盲腸的腸壁釋放FMT 製劑

Pros 優點

Most precise deployment of the donor microbiome to the site of preferred engraftment (terminal ileum and caecum)
供體微生物組最精確的移植方式

Cons 缺點

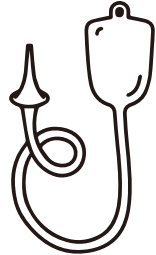
Requires colonoscopy clinics and specially trained healthcare practitioners
需要結腸鏡設備和經過特定培訓的專科醫護為患者進行政序



Enema 灌腸

Way 方法

The FMT preparation is administered as an enema (rectal infusion) into the distal colon for lower gastrointestinal tract delivery
FMT 製劑用於下消化道施藥方式，通過灌腸（直腸灌注）注入遠端結腸



Pros 優點

Can be deployed outside of colonoscopy clinics by a broader set of trained healthcare practitioners
可於腸鏡檢查中心以外的地方、經由更多已接受培訓的醫護人員為病人進行此程序

Cons 缺點

May require repeated sessions for optimal results
或需多次療程才達到最佳效果

Oral Capsules 口服膠囊

Way 方法

Frozen capsules filled with FMT preparation are administered orally. These capsules are specifically designed to break down and release in the lower intestine to facilitate engraftment
裝有FMT製劑的冷凍口服膠囊經過特殊設計，可在下胃腸道中分解釋放，促進糞便移植

Pros 優點

Often preferred by patients as capsules are less invasive. Can be deployed outside of specialist settings by a broader set of trained healthcare practitioners
跟其他兩個方式相比，口服膠囊創傷較小，因而較受患者青睞，也方便更多受過專業培訓的醫護人員為病人進行此程序

Cons 缺點

Patients may find the size of capsules difficult to swallow
患者可能覺得膠囊難以吞嚥

Please consult your doctor to find out which procedure is most appropriate for your condition.
請諮詢您的醫生，以了解哪種施行方式最適合您的病情。

