

- 請輪流更換注射部位，來避免脂肪肥厚或萎縮。
Rotate the injection sites to avoid hypertrophy or atrophy.
- 請跟從醫生的指示按時注射正確劑量的胰島素。
Use the insulin as directed by your doctor; take the correct dose at the correct time.
- 如有任何相關問題，請諮詢您的醫生。
If you have any further questions, please consult your doctor.

如何減少疼痛注射 How to minimized painful injections?

- 在室溫下注射胰島素。
Inject insulin at room temperature.
- 在注射前，請確保注射器中沒有氣泡。
Ensure no air bubbles remain in the syringe prior to injection.
- 注射時，請保持注射區域的肌肉放鬆。
Keeping muscles in the injection area relaxed, during the process of injection.
- 如果使用酒精棉消毒，請確保在注射前外用酒精已完全蒸發。
Ensure topical alcohol (if used) has evaporated completely before injection.
- 迅速將針頭刺入皮膚。
When using the needle, ensure the needle penetrates quickly into the skin.
- 不要重複使用針頭。
Do not reuse any needles.

有哪些副作用 What are the side effects?

與所有處方藥一樣，注射胰島素時可能會有一些反應。
最常見的副作用是低血糖：

As with all prescribed medication, it is possible to experience some reaction while taking insulin. The most common side effect is hypoglycemia (low blood sugar):

- 血糖過低的徵狀：包括：頭痛，頭暈，面色蒼白，心率加快，發抖，出冷汗，無法集中，視力模糊，噁心，嘔吐，疲勞，飢餓等。
Possible symptoms of low blood sugar are: headache, dizziness, pale face, elevated heart rate, shivering, cold sweating, inability to focus, blurred vision, nausea, vomiting, fatigue, hunger etc.

- 如果不能及時控制低血糖，後果可以非常嚴重。
如果您經常出現低血糖，請諮詢您的醫生。
It is important to manage low blood sugar promptly to prevent serious consequences. Please speak to your doctor if you are experiencing hypo frequently.

如果錯過了劑量怎麼辦 What if I miss a dose?

- 若一旦錯過注射時間，請盡快使用錯過的劑量，但如果太接近下次預定劑量的時間，就請跳過錯過的劑量。
Use the missed dose as soon as you remember and just skip the missed dose if it is almost time for your next scheduled dose.
- 不要使用加倍劑量。
Do not double the dose.
- 記錄錯過的劑量供醫生參考。尋求醫生關於胰島素注射錯過劑量管理的建議。
Record the missed dose for your doctor's reference. Seek advice from your doctor regarding the missed dose management of insulin injection.

怎麼存儲 How to store?

- 未拆封的胰島素可在攝氏2-8度冰箱中冷藏儲存，至包裝上標示的保存期限。
Unopened insulins should be kept refrigerated at 2-8°C until the expiry date.
- 開封後胰島素置於室溫25°C以下（在室溫下避免日照），可用28天，應於開始使用當日註明效期（取決於個別產品本身）。
Opened insulin can usually be kept at room temperature (below 25°C) for a few weeks, as long as you keep it away from direct heat and sunlight.
- 勿讓兒童接觸。
Keep out of reach of children.

*此資料僅供參考，關於實際狀況，請參閱個別胰島素製劑的說明。
Please refer to the instructions of individual insulin preparation for details.

對於任何查詢，請諮詢您的醫生，藥劑師或其他醫療專業人士。
For any query, please seek advice from your doctor, pharmacist or other healthcare professionals.

胰島素

Insulin



什麼是胰島素？它用於什麼？

What is insulin injection? What it is used for?

胰島素是由胰臟細胞自然產生的一種激素。它能協助醣類的代謝，因此，可以降低血糖。胰島素注射通過補充糖尿病患者的胰島素來降低血糖水平。由於胰島素會受到胃酸破壞，所以只能注射而不能口服。目前市售的胰島素，主要按其藥效長短而分為特快、短效、中效、長效和混合5類型。

Insulin is a hormone produced in the pancreas naturally. It allows the body to use glucose for energy and helps balance the blood glucose levels. Insulin injection lowers blood sugar level by supplementing the insulin in diabetic patients and should not be taken orally as it would be degraded.

It is classified into 5 different types according to their onset of action, peak and duration of actions.

胰島素類別 Types	發揮效力時間 Onset (Length of time before insulin reaches bloodstream)	作用高峰 Peak (Time period when insulin is most effective)	有效作用時間 Duration (How long insulin works for)	注意事項 Precautions
特快(速效) Rapid-acting 例如: Apidra [®] , NovoRapid [®]	< 15 分鐘Mins	30-90 分鐘Mins	3-5 小時Hrs	通常在餐前或餐後不久注射。 Usually injected shortly before or after meal.
短效 Short-acting 例如: Actrapid HM [®]	0.5-1 小時Hrs	2-4 小時Hrs	5-8 小時Hrs	通常在餐前約0.5-1小時注射。 注射後不可推遲用膳時間，以防出現低血糖情況。 Usually injected about 0.5-1 hour before meal.
中效 Intermediate-acting 例如: Protaphane HM [®]	1-4 小時Hrs	4-12 小時Hrs	>12小時Hrs	依照醫生指示每天定時注射。 Usually injected at regular time every day.
長效 Long-acting 例如: Levemir [®] , Lantus [®] , Tresiba [®]	1 小時Hrs	無高峰期 No Peak	24小時Hrs	依照醫生指示每天定時注射。 Usually injected at regular time every day.
混合型 Pre-mixed 例如: Novomix 30 [®] , Mixtard 30 [®]	5-60 分鐘Mins	不定 Varies	10-16 小時Hrs	使用前，先把瓶裝或筆芯型的胰島素置於掌中，慢慢搓動或上下移動，使其充分混和。並依照醫生指示每天定時注射。 Gently roll the vial between the palms before use. Or, in case of penfill cartridge, turn it up and down for at least 10 times until the solution disperses uniformly before use. Do not shake the injections vigorously.

重要提示 Important Information :

除非醫生指示，否則不要自行混合或混合使用多種不同的胰島素藥物。

如果您出現任何過敏反應，如皮膚瘙癢、面部或手部腫脹、呼吸困難等，請立即聯絡您的醫生。

Unless directed by your doctor, never combine or mix different insulin medications.

If you experience any allergic reaction like skin itchiness, face or hand swelling, breathing difficulty etc., Please contact your doctor immediately.

常見胰島素劑型 Common Delivery System of Insulin

針劑 注射器 Syringe	用注射器將適當劑量的胰島素從小瓶抽出並直接注射到體內。 注射器傾向於與小瓶中的胰島素一起使用。 Empty tube attached to a needle can be used to draw a dose of insulin from a vial and inject it into the body.
筆型 注射器 Pen	一種預先裝好胰島素之筆型注射器，方便外出攜帶。鋼筆設計用於一次性針咀，直接注射到皮膚。 Injectable device contains a premeasured amount of insulin or cartridge filled with insulin. The individual dose can be dialed up. Pens are designed to be used with a disposable pen needle that screws or snaps onto the pen.
輸送泵 Pump	胰島素輸送泵是附著在身體上的便攜式裝置，通過置於皮膚下的導管連續遞送胰島素。可佩戴在腰帶或口袋中。 Insulin pumps are portable devices attached to the body that continuously deliver amounts of rapid or short acting insulin via a catheter placed under the skin.

注射技巧及注意事項 Insulin injection tips & precautions

- 注射前需先洗手和準備好胰島素注射器、針頭和酒精棉。
Wash hands before injection and prepare the insulin syringes, needles, and alcohol pads prior to injection.
- 胰島素通常以90°角皮下注射到上臂，大腿，臀部或腹部。
Insulin is usually injected subcutaneously at a 90° angle into the upper arm, thigh, buttock or abdomen.

