HEALTH BASICS

GLP-1 agonists

GLP-1 agonists are prescription medicines used for type 2 diabetes and weight management.

WHAT IT IS
Medicines that mimic a gut hormone called GLP-1

WHERE IT COMES UP
Type 2 diabetes and long-term weight management

WHY IT MATTERS
Lower glucose, reduced appetite, and heart benefits for some people

WHAT IT IS NOT
Not a disease or diagnosis

WHO TO ASK
Prescriber, pharmacist, or diabetes and weight-management service

HOW IT IS CHECKED
Medication review, glucose tests, and weight measurements

Overview

GLP-1 agonists are prescription medicines. They are not a disease or a diagnosis. Their full name is glucagon-like peptide-1 receptor agonists . You may also hear them called GLP-1 medicines or GLP-1 receptor agonists.

Examples include semaglutide, liraglutide, dulaglutide, exenatide and lixisenatide. Most are injections taken daily or weekly. An oral form of semaglutide is also available.

Different products are approved for different purposes. Some treat type 2 diabetes. Some support long-term weight management for people who meet specific medical criteria. A few have additional approved uses, such as reducing certain cardiovascular risks in particular groups.

Brand names can be confusing because products containing the same active ingredient may have different approved uses and instructions. Tirzepatide is often discussed alongside GLP-1 agonists, but it acts on both GLP-1 and another hormone system called GIP.

These medicines are not insulin. They do not replace insulin in people whose bodies cannot make it, such as those with type 1 diabetes.

How it works

GLP-1 is a hormone your intestines normally release after you eat. A hormone is a chemical messenger that helps different parts of the body communicate.

GLP-1 agonists copy some of this hormone's actions. They attach to GLP-1 receptors, which are docking points on cells.

The medicines can:

These effects can lower blood glucose in people with type 2 diabetes. Reduced appetite and slower stomach emptying can also lead to weight loss. The amount and pace of weight loss differ between people and medicines.

Treatment usually starts with a lower amount that is increased in steps. This may make digestive side effects easier to manage. The schedule, missed-dose instructions and storage rules are different for each product.

- Increase insulin release when blood glucose is high
- Reduce release of glucagon, a hormone that raises blood glucose
- Slow the movement of food out of the stomach
- Affect appetite signals in the brain, helping you feel full sooner

Why it matters for your health

For type 2 diabetes, GLP-1 agonists can lower average blood glucose. This is often measured with an A1C test , which estimates your average glucose over about two to three months.

Some people take a GLP-1 agonist with metformin, insulin or another diabetes medicine. Others use one without those medicines. The choice is based on factors such as glucose levels, other medical conditions, treatment goals, side effects, cost and access.

For weight management, these medicines are intended to support long-term care rather than provide a short course or quick change. They are generally used alongside nutrition, physical activity and other support suited to the individual.

Certain GLP-1 medicines have been shown to reduce major cardiovascular events, such as heart attack or stroke, in defined groups. Some also have evidence of kidney benefit. These findings do not mean that every product has the same benefits or that it is suitable for everyone.

Weight often increases after a weight-management medicine is stopped because its effects

on appetite are no longer present. This is not a personal failure. Before starting, it can help to discuss how long treatment may continue and what would happen if it becomes unavailable or unaffordable.

What can go wrong

Digestive side effects are common, particularly when treatment begins or the amount increases. They include nausea, vomiting, diarrhoea, constipation, abdominal discomfort, indigestion and feeling unusually full. These effects are often managed through routine follow-up, but persistent symptoms should be reviewed.

Vomiting or diarrhoea can cause dehydration , meaning the body loses too much fluid. This can contribute to kidney problems. Contact your healthcare service promptly if you cannot keep fluids down, are passing much less urine or feel faint.

Other important situations include:

Some GLP-1 agonists carry a boxed warning about thyroid C-cell tumours seen in animal studies. The relevance to humans is uncertain. Certain products should not be used by people with a personal or family history of medullary thyroid cancer or with multiple endocrine neoplasia type 2. Check the prescribing information for your specific medicine.

Because these medicines delay stomach emptying, they may affect preparation for surgery, deep sedation or some tests. There have been concerns about food remaining in the stomach during anaesthesia. Tell the surgical or anaesthesia team which medicine you take, when you last took it and whether you have nausea, vomiting or a feeling that food remains in your stomach. Do not stop it without receiving instructions for your situation.

Weight-management GLP-1 products are not used during pregnancy. If you are pregnant, planning pregnancy or breastfeeding, discuss the specific medicine promptly with your prescribing service.

- Low blood glucose: This is more likely when a GLP-1 agonist is combined with insulin or a sulfonylurea. Sweating, shaking, hunger, confusion and weakness can be warning signs.
- Pancreatitis: This is inflammation of the pancreas. Severe, persistent upper abdominal pain, sometimes spreading to the back, needs urgent medical assessment.
- Gallbladder disease: Gallstones or gallbladder inflammation can cause persistent upper abdominal pain, fever, vomiting or yellowing of the skin or eyes.
- Severe stomach or bowel problems: Ongoing vomiting, marked swelling of the abdomen, severe constipation or inability to pass stool or gas needs prompt assessment.

- Eye complications from diabetes: Rapid improvement in glucose can temporarily worsen diabetic retinopathy, which is damage to the retina at the back of the eye. Report new or sudden vision changes promptly.
- Allergic reactions: Swelling of the face or throat, breathing difficulty or collapse is an emergency.

What you can do

Know the generic name, brand name and reason for taking your medicine. This helps prevent mix-ups between products that have similar names but different approved uses or strengths.

Useful actions include:

Do not combine GLP-1 products unless a qualified prescriber has specifically reviewed the combination. Do not share injection pens, even if the needle is changed.

Use a licensed pharmacy. Unapproved or counterfeit products may contain the wrong ingredient, concentration or amount. Compounded versions are not the same as approved products and may be considered only in limited circumstances under local rules. If a product's label, packaging or dosing units are unclear, ask a pharmacist before using it.

Routine follow-up is appropriate for manageable nausea, constipation, questions about weight change or difficulty using an injection device.

Seek urgent medical care for severe or persistent abdominal pain, repeated vomiting, signs of significant dehydration, sudden vision changes or symptoms suggesting gallbladder disease. Call emergency services for breathing difficulty, facial or throat swelling, collapse, a seizure or severe confusion that could be caused by low blood glucose.

- Keep an up-to-date list of your medicines and injection schedule
- Ask what to do after a missed dose
- Learn how to prepare, inject and store your specific product
- Attend planned checks for glucose, A1C, weight and side effects
- Ask whether other diabetes medicines need adjustment
- Tell healthcare teams about the medicine before surgery or sedation
- Report persistent digestive problems rather than increasing the amount yourself

Common questions

Are GLP-1 agonists only for weight loss?

No. Several were first approved to treat type 2 diabetes. Only specific products are approved for weight management, and eligibility is based on medical criteria rather than appearance alone.

Do they cause low blood glucose?

On their own, they have a relatively low risk because their effect on insulin is linked to glucose levels. The risk rises when they are used with insulin or medicines called sulfonylureas.

Will I need to take one forever?

There is no single treatment length. It is based on why you take it, whether it remains effective, side effects, health changes and access. Ask when treatment will be reviewed and what would lead to continuing, changing or stopping it.

Can I switch between brands?

Not on your own. Products differ in approved use, strength, device design and dosing schedule. A switch requires product-specific instructions.

Can I take one before surgery?

Tell the procedure and anaesthesia teams well in advance. The plan depends on the medicine, your dose schedule, digestive symptoms, procedure and local guidance. Do not make an unplanned change.

Are online or compounded products equivalent?

Not necessarily. An approved medicine has been assessed for quality, safety and effectiveness. Unapproved versions have not undergone the same review, and dosing errors have occurred with some compounded products.

Sources

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