EVALUATION OF THE PATIENT AND PREOPERATIVE PREPARATION

Perioperative GLP-1 Receptor Agonists

Intraoperative teaching · CA-1

THE QUESTION

Where the evidence disagrees

This topic was selected because an evidence synthesis beats a textbook on it: the trials disagree, or the guidance has moved recently.

THE EVIDENCE

What each source contributes, and how strong it is

Study design first — a cohort and a randomised trial do not carry the same weight.

Design	Year	Journal	What it found
Guideline	2025	Anaesthesia and intensive care	The 2025 multi-society recommendation is to continue GLP-1 receptor agonists
Meta-analysis	2025	Anaesthesia	Pooling 185,414 patients, GLP-1 receptor agonist exposure was not associated with
Cohort	2023	Journal of clinical anesthesia	Before elective endoscopy, semaglutide raised increased residual gastric content
Review	2024	British journal of anaesthesia	Ongoing treatment attenuates the delay in gastric emptying
Guideline	2024	Clinical gastroenterology and hepa	The AGA rapid clinical practice update provides expert advice on managing patients
Meta-analysis	2025	EClinicalMedicine	After discontinuing GLP-1 receptor agonists, expect a significant weight regain,

6 resolved citations behind this deck; every point above traces to one of them.

WHERE THE GUIDANCE SITS

What the guidelines and pooled evidence say

4 findings, each on the slide that follows.

ANAESTHESIA AND INTENSIVE CARE 2025

The 2025 multi-society recommendation is to continue GLP-1 receptor agonists

The 2025 multi-society recommendation is to continue GLP-1 receptor agonists perioperatively and instead use a 24-hour clear fluid diet followed by…

ANAESTHESIA 2025

Pooling 185,414 patients, GLP-1 receptor agonist exposure was not associated with

Pooling 185,414 patients, GLP-1 receptor agonist exposure was not associated with pulmonary aspiration

The AGA rapid clinical practice update provides expert advice on managing patients

The AGA rapid clinical practice update provides expert advice on managing patients taking GLP-1 receptor agonists before endoscopy, drawn from recent…

ECLINICALMEDICINE 2025

After discontinuing GLP-1 receptor agonists, expect a significant weight regain,

After discontinuing GLP-1 receptor agonists, expect a significant weight regain, averaging 5.63 kg in obese patients (95% CI: 3.52-7.73).

WHERE THE GUIDANCE SITS

The 2025 multi-society recommendation is to continue GLP-1 receptor agonists

Guideline · Anaesthesia and intensive care

The 2025 multi-society recommendation is to continue GLP-1 receptor agonists perioperatively and instead use a 24-hour clear fluid diet followed by standard 6-hour fasting, with gastric ultrasound if that diet was not completed.

2025 ADS/ANZCA/GESA/NACOS Clinical Practice Recommendations on the Peri-Procedural Use of GLP-1/GIP Receptor Agonists, Anaesthesia and intensive care 2025 · PMID 40814081

WHERE THE GUIDANCE SITS

Pooling 185,414 patients, GLP-1 receptor agonist exposure was not associated with

Meta-analysis · Anaesthesia

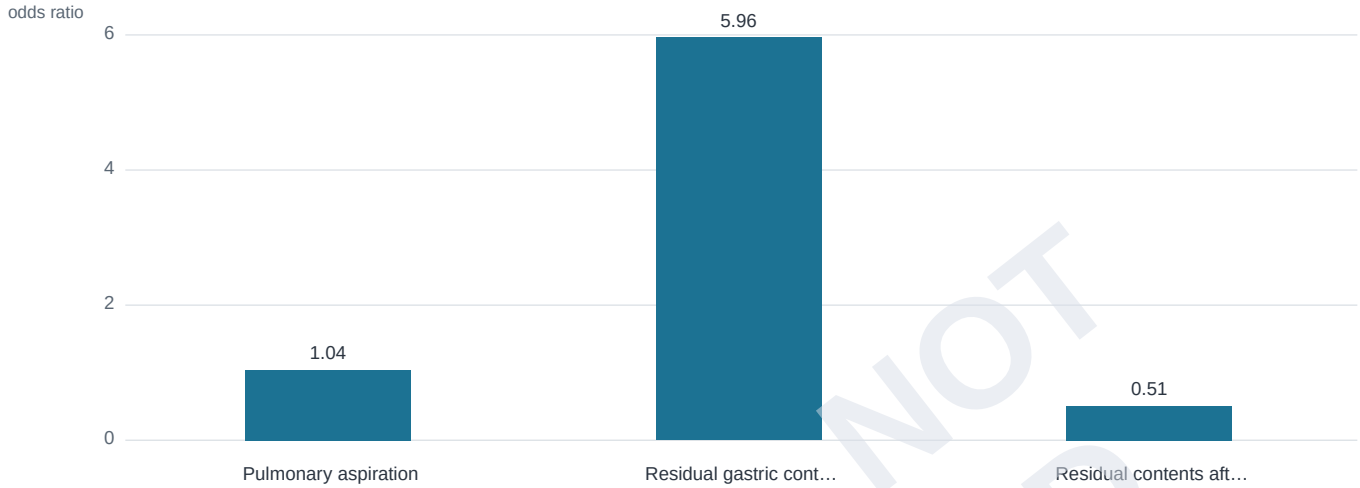
Pooling 185,414 patients, GLP-1 receptor agonist exposure was not associated with pulmonary aspiration, but across 165,522 patients it raised the odds of residual gastric contents roughly six-fold despite appropriate fasting.

Association Between Glucagon-Like Peptide-1 Receptor Agonist Use and Peri-Operative Pulmonary Aspiration: A systematic Review and Meta-Analysis, Anaesthesia 2025 · PMID 40230298

THE NUMBERS

Residual contents rise sharply; aspiration does not

28 observational studies pooled.



A six-fold rise in residual contents with no measurable rise in aspiration — that gap is the whole clinical argument.

Association Between Glucagon-Like Peptide-1 Receptor Agonist Use and Peri-Operative Pulmonary Aspiration: A systematic Review and Meta-Analysis, Anaesthesia 2025 · PMID 40230298

WHERE THE GUIDANCE SITS

The AGA rapid clinical practice update provides expert advice on managing patients

Guideline · Clinical gastroenterology and hepa

The AGA rapid clinical practice update provides expert advice on managing patients taking GLP-1 receptor agonists before endoscopy, drawn from recent studies and the authors' bariatric and endoscopic experience.

AGA Rapid Clinical Practice Update on the Management of Patients Taking GLP-1 Receptor Agonists Prior to Endoscopy: Communication, Clinical gastroenterology and hepatology : the official clinical practice journal of the American Gastroenterological Association 2024 · PMID 37944573

WHERE THE GUIDANCE SITS

After discontinuing GLP-1 receptor agonists, expect a significant weight regain,

Meta-analysis · EClinicalMedicine

After discontinuing GLP-1 receptor agonists, expect a significant weight regain, averaging 5.63 kg in obese patients (95% CI: 3.52-7.73).

Metabolic Rebound After GLP-1 Receptor Agonist Discontinuation: A Systematic Review and Meta-Analysis, EClinicalMedicine 2025 · PMID 41399474

IN PRACTICE

What the cohorts and reviews add

2 findings, each on the slide that follows.

JOURNAL OF CLINICAL ANESTHESIA 2023

Before elective endoscopy, semaglutide raised increased residual gastric content

Before elective endoscopy, semaglutide raised increased residual gastric content from 5.1% to 24.2%

BRITISH JOURNAL OF ANAESTHESIA 2024

Ongoing treatment attenuates the delay in gastric emptying

Ongoing treatment attenuates the delay in gastric emptying, so after more than 12 weeks of therapy standard fasting times are likely sufficient for…

IN PRACTICE

Before elective endoscopy, semaglutide raised increased residual gastric content

Cohort · Journal of clinical anesthesia

Before elective endoscopy, semaglutide raised increased residual gastric content from 5.1% to 24.2%, and preoperative digestive symptoms were themselves predictive — but the interruption interval made no difference.

Relationship Between Perioperative Semaglutide Use and Residual Gastric Content: A Retrospective Analysis of Patients Undergoing Elective Upper Endoscopy, Journal of clinical anesthesia 2023 · PMID 36870274

IN PRACTICE

Ongoing treatment attenuates the delay in gastric emptying

Review · British journal of anaesthesia

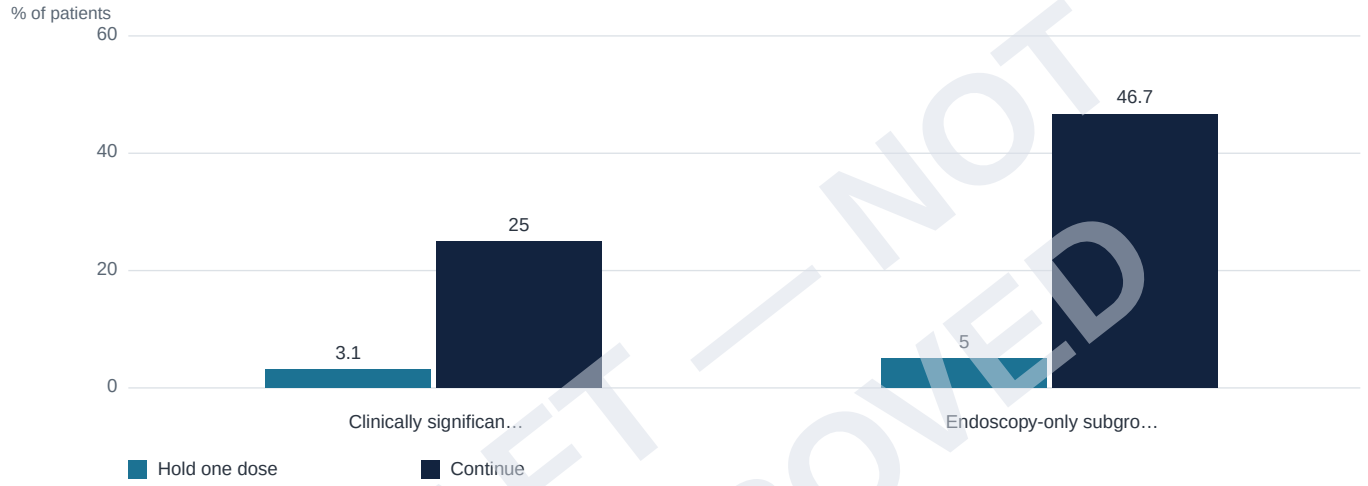
Ongoing treatment attenuates the delay in gastric emptying, so after more than 12 weeks of therapy standard fasting times are likely sufficient for otherwise low-risk patients; caution belongs with recent starters.

Perioperative Management of Long-Acting Glucagon-Like Peptide-1 (GLP-1) Receptor Agonists: Concerns for Delayed Gastric Emptying and Pulmonary Aspiration, British journal of anaesthesia 2024 · PMID 38290907

THE NUMBERS

Holding one dose cut clinically significant residual gastric volume

Randomised trial stopped early at interim analysis, 60 patients.

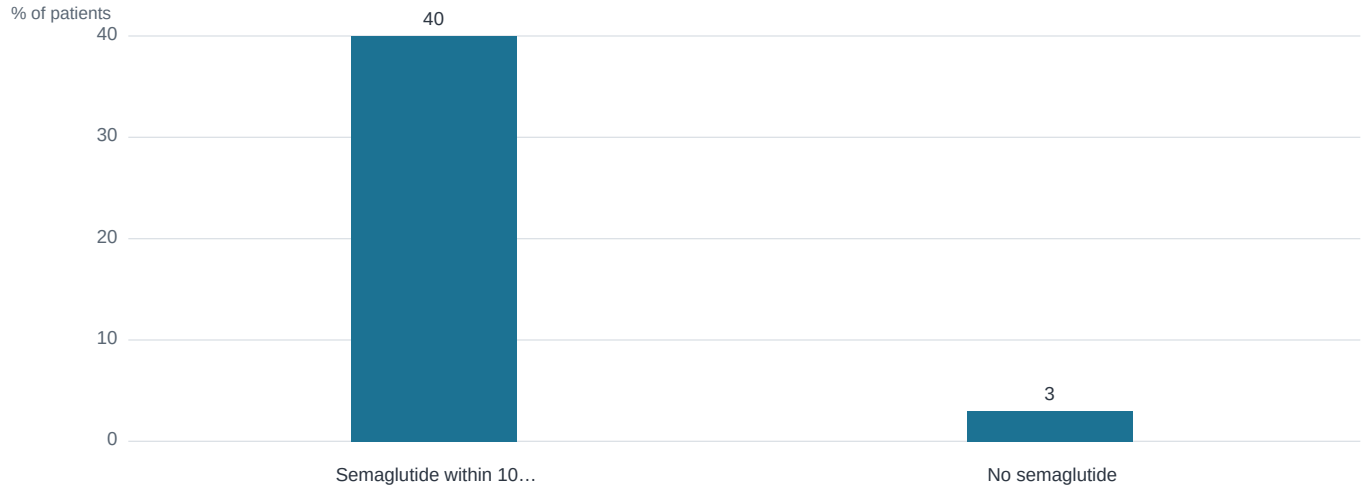


Stopped early because the risk crossed the stopping boundary — and nobody on clear liquids the day before was affected.

THE NUMBERS

Ten days of interruption was not enough

220 patients, preoperative gastric ultrasound.



40% versus 3% despite guideline-compliant fasting — which is why the guidance moved to diet modification rather than a cessation interval.

IN THE ROOM

What this changes about the next case

Colour is the strength of the evidence behind each step, not the urgency.

1. **1**
   The 2025 multi-society recommendation is to continue GLP-1 receptor agonists perioperatively and instead use a 24-hour clear fluid diet followed by standard 6-hour fasting, with gastric ultrasound if that diet was not completed.
2. **2**
   The AGA rapid clinical practice update provides expert advice on managing patients taking GLP-1 receptor agonists before endoscopy, drawn from recent studies and the authors' bariatric and endoscopic experience.
3. **3**
   Pooling 185,414 patients, GLP-1 receptor agonist exposure was not associated with pulmonary aspiration, but across 165,522 patients it raised the odds of residual gastric contents roughly six-fold despite appropriate fasting.
4. **4**
   After discontinuing GLP-1 receptor agonists, expect a significant weight regain, averaging 5.63 kg in obese patients (95% CI: 3.52-7.73).
5. **5**
   Before elective endoscopy, semaglutide raised increased residual gastric content from 5.1% to 24.2%, and preoperative digestive symptoms were themselves predictive — but the interruption interval made no difference.

KEY TAKEAWAYS

What to carry into the next case

> **The 2025 multi-society recommendation is to continue GLP-1 receptor agonists**
> Anaesthesia and intensive care 2025

> **Pooling 185,414 patients, GLP-1 receptor agonist exposure was not associated with**
> Anaesthesia 2025

> **Before elective endoscopy, semaglutide raised increased residual gastric content**
> Journal of clinical anesthesia 2023

> **Ongoing treatment attenuates the delay in gastric emptying**
> British journal of anaesthesia 2024

The 2025 multi-society recommendation is to continue GLP-1 receptor agonists

QUESTIONS I'LL ASK YOU IN THE ROOM

1. Walk me through your setup for this before we start.

2. What are you watching on the monitor that would tell you this is going wrong?
3. What is your first move if it does?
4. What would you want ready in the room before induction?

ORAL BOARDS STEM

> *A 47-year-old on weekly semaglutide presents for elective knee arthroscopy. She fasted from midnight, took her last dose four days ago, and the resident asks whether to treat her as a full stomach.*

BOARD QUESTIONS

1. State the 2025 multi-society recommendation for a patient taking a GLP-1 receptor agonist before an elective procedure: whether the drug is continued or held, what preoperative diet and fasting interval is advised instead, and what should be done if that diet was not completed.
2. A systematic review and meta-analysis of GLP-1 receptor agonist use pooled 185,414 patients for pulmonary aspiration and 165,522 patients for gastric contents. State the finding for each of those two outcomes, and explain how both findings can be true at the same time.
3. In a retrospective analysis of patients undergoing elective upper endoscopy, how often was increased residual gastric content found in those on semaglutide compared with those not on it, what preoperative feature was itself predictive, and what difference did the length of drug interruption make?
4. The American Gastroenterological Association issued a rapid clinical practice update on patients taking GLP-1 receptor agonists before endoscopy. Identify what type of document this is and what its content is derived from, and state what evidentiary weight that lets you give it when arguing about whether to hold these drugs.

ANSWER KEY

1. Continue the GLP-1 receptor agonist perioperatively. Instead of holding it, use a 24-hour clear fluid diet followed by standard 6-hour fasting, with gastric ultrasound if that diet was not completed.

The 2025 recommendation shifts the intervention from the drug to the diet: keep the agonist going, use 24 hours of clear fluids and a standard 6-hour fast, and scan the stomach if that did not happen.

2025 ADS/ANZCA/GESA/NACOS Clinical Practice Recommendations on the Peri-Procedural Use of GLP-1/GIP Receptor Agonists, Anaesthesia and intensive care 2025 · PMID 40814081

2. Pooling 185,414 patients, GLP-1 receptor agonist exposure was not associated with pulmonary aspiration; across 165,522 patients it raised the odds of residual gastric contents roughly six-fold despite appropriate fasting. Both can hold because they are different endpoints: residual gastric contents is a finding in the stomach, whereas aspiration is the clinical event, and only the former was associated with exposure in these pooled data.

Residual gastric contents were about six times likelier despite appropriate fasting, yet aspiration itself was not associated with exposure, so do not treat the two endpoints as interchangeable.

Association Between Glucagon-Like Peptide-1 Receptor Agonist Use and Peri-Operative Pulmonary Aspiration: A systematic Review and Meta-Analysis, Anaesthesia 2025 · PMID 40230298

3. Before elective endoscopy, semaglutide raised increased residual gastric content from 5.1% to 24.2%, and preoperative digestive symptoms were themselves predictive, but the interruption interval made no difference.

In this retrospective series, how long semaglutide was stopped for did not change what was in the stomach, while asking about digestive symptoms did carry information.

Relationship Between Perioperative Semaglutide Use and Residual Gastric Content: A Retrospective Analysis of Patients Undergoing Elective Upper Endoscopy, Journal of clinical anesthesia 2023 · PMID 36870274

4. It is a rapid clinical practice update providing expert advice on managing patients taking GLP-1 receptor agonists before endoscopy, drawn from recent studies and the authors' bariatric and endoscopic experience. That makes it expert advice informed by recent studies and clinical experience, not trial data, so it can frame the discussion but cannot settle it by itself.

Know the genre of what you are quoting: a rapid clinical practice update is expert advice drawn from recent studies and the authors' own bariatric and endoscopic experience.

AGA Rapid Clinical Practice Update on the Management of Patients Taking GLP-1 Receptor Agonists Prior to Endoscopy: Communication, Clinical gastroenterology and hepatology : the official clinical practice journal of the American Gastroenterological Association 2024 · PMID 37944573

The 2025 multi-society recommendation is to continue GLP-1 receptor agonists

SOURCES

[1] 2025 ADS/ANZCA/GESA/NACOS Clinical Practice Recommendations on the Peri-Procedural Use of GLP-1/GIP Receptor Agonists, Anaesthesia and intensive care 2025 · PMID 40814081

[2] Association Between Glucagon-Like Peptide-1 Receptor Agonist Use and Peri-Operative Pulmonary Aspiration: A systematic Review and Meta-Analysis, Anaesthesia 2025 · PMID 40230298

[3] Relationship Between Perioperative Semaglutide Use and Residual Gastric Content: A Retrospective Analysis of Patients Undergoing Elective Upper Endoscopy, Journal of clinical anesthesia 2023 · PMID 36870274

[4] Perioperative Management of Long-Acting Glucagon-Like Peptide-1 (GLP-1) Receptor Agonists: Concerns for Delayed Gastric Emptying and Pulmonary Aspiration, British journal of anaesthesia 2024 · PMID 38290907

[5] AGA Rapid Clinical Practice Update on the Management of Patients Taking GLP-1 Receptor Agonists Prior to Endoscopy: Communication, Clinical gastroenterology and hepatology : the official clinical practice journal of the American Gastroenterological Association 2024 · PMID 37944573
[6] Metabolic Rebound After GLP-1 Receptor Agonist Discontinuation: A Systematic Review and Meta-Analysis, EClinicalMedicine 2025 · PMID 41399474