A SELECTION OF TEN READINGS ON TOPICS RELATED TO 2025 FAMILY PRACTICE SKILLS COURSE: BASIC OBESITY MANAGEMENT ACCREDITATION 5

FPSC129 – SATURDAY, 11 OCT 2025 & SUNDAY 12 OCT 2024: 2.00pm–5.30pm
All are available as PMC free full text

Selection of readings made by A/Prof Goh Lee Gan

READING 1 – LIFESTYLE INTERVENTIONS FOR TREATMENT AND REMISSION OF TYPE 2 DIABETES AND PREDIABETES IN ADULTS

Rosenfeld RM,[1] Grega ML,[2] Karlsen MC,[3] Staffier KL,[3] Abu Dabrh AM,[4] Aurora RN,[5] Bonnet JP,[6] Donnell L,[7] Fitzpatrick SL,[8] Frates B,[9] Joy EA,[10] Kapustin JF,[11] Noe DR,[12] Panigrahi G,[13,14] Ram A,[15] Levine Reisner LS,[16] Valencia WM,[17] Weatherspoon LJ,[18] Weber JM,[19] Gulati M.[20] **Lifestyle Interventions for Treatment and Remission of Type 2 Diabetes and Prediabetes in Adults: A Clinical Practice Guideline From the American College of Lifestyle Medicine. Am J Lifestyle Med. 2025 Jun 10;19(2 Suppl):10S-131S. PMID: 40546761.**

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ABSTRACT
OBJECTIVE: Diabetes is a defining disease of the 21st century because of its rising prevalence, association with obesity, and enormous health impact. Abundant evidence shows that lifestyle interventions can delay or prevent type 2 diabetes (T2D) in adults, offer relief, and sometimes achieve complete remission. Despite this empowering message, there are no clinical practice guidelines that focus primarily on lifestyle interventions as first-line management of prediabetes and T2D. Our objective, therefore, is to offer pragmatic, trustworthy, and evidence-based guidance for clinicians in using the six pillars of lifestyle medicine-nutrition; physical activity; stress management; sleep; social connectedness; and avoidance of risky substances-for managing adults with T2D and in preventing T2D in adults with prediabetes or a history of gestational diabetes mellitus.

METHODS: We used well-established, peer-reviewed guideline methodology to develop evidence-based key action statements (recommendations) that facilitate quality improvement in clinical practice. The guideline development group included 20 members representing consumers, advanced practice nursing, cardiology, clinical pharmacology, behavioural medicine, endocrinology, family medicine, lifestyle medicine, nutrition and dietetics, health education, health and wellness coaching, sleep medicine, sports medicine, and obesity medicine. Recommendation strength was based on the aggregate evidence supporting a key action statement plus a comparison of associated benefits vs harms/costs. Multiple literature searches, conducted by an information specialist, identified eight relevant guidelines, 118 relevant systematic reviews, and 112 randomised clinical trials. The guideline underwent extensive internal, external, and public review and comment prior to publication.

RESULTS: We developed 14 key action statements and associated evidence profiles, each with a distinct quality improvement goal in the context of lifestyle interventions for T2D. Strong recommendations were made regarding advocacy for lifestyle interventions; assessing baseline lifestyle habits; establishing priorities for lifestyle change; prescribing aerobic and muscle strength physical activity; reducing sedentary time; identifying sleep disorders; prescribing nutrition plans for prevention and treatment; promoting peer/familial support and social connections; counselling regarding tobacco, alcohol, and recreational drugs; and establishing a plan for continuity of care. Recommendations were made regarding identifying the need for psychological interventions and for adjusting (deprescribing) pharmacologic therapy. We include numerous tables and figures to facilitate implementation, a plain-language summary for consumers, and an executive summary for clinicians as separate publications.

CONCLUSIONS: There is robust research evidence supporting the efficacy of lifestyle interventions in preventing, treating, and achieving remission of T2D in adults. Our multidisciplinary guideline development group successfully synthesised this evidence into 14 key action statements that can be used by clinicians and other healthcare professionals to improve quality of care for adults with, or at-risk for, T2D. Despite the research gaps and implementation challenges we highlight in the guideline, we believe strongly that our recommendations have immediate relevance and can help raise awareness and shift the paradigm of T2D management towards optimal use of lifestyle interventions.

READING 2 – INTERNATIONAL CONSENSUS ON SURGERY FOR TYPE 2 DIABETES MELLITUS

Kermansaravi M,[1,#] Omar [1,2,3,#] Finer N,[4] Le Roux C,[5] Carbajo MA,[6] Sarwer D,[7] Busetto L,[8] Ponce J,[9] Logue J,[10] Parretti HM,[11] O'Kane M,[12] Shahabi S,[13] Khunti K,[14] Blakemore AI,[15] Stenberg E,[16] Abbott S,[17] Alqahtani A,[18] Aminian A,[19] Amr B,[20] Balibrea JM,[21] Batterham RL,[22] Behrens E,[23] Bhatt DL,[24] Chesworth P,[25] Chowbey P,[26] Clare K,[27] Neto MG,[28] Graham Y,[29] Goel R,[30] Hanif W,[31] Herrera MF,[32] Kasama K,[33] Kassir R,[34] Knop FK,[35] Kothari SN,[36] Kristinsson JA,[37] McGowan B,[38] McKechnie A,[39] Miller K,[40] Miras AD,[41] Morton J,[42] Ogden J,[43] Peterli R,[44,45] Pinkney JH,[46] Pournaras D,[47] Pouwels S,[48] Prager G,[49] Salminen P,[50,51] Serlie MJ,[52,53] Shabbir A,[54] Singhal R,[55] Taheri S,[56] Tahrani AA,[57] Weiner R,[58] Shikora SA,[59] Mahawar K.[60] International expert consensus on surgery for type 2 diabetes mellitus. BMC Endocr Disord. 2025 Jul 1;25(1):151. PMID: 40598146.

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ABSTRACT
INTRODUCTION: Metabolic and bariatric surgery (MBS) has been an established treatment option for patients with Type 2 diabetes mellitus (T2DM), but there is a relative paucity of evidence-based guidelines on preoperative, operative, and postoperative considerations concerning metabolic surgery for T2DM patients. To address this gap, we initiated a Delphi consensus process with a diverse group of international multidisciplinary experts.

METHOD: We embarked on a Delphi consensus-building exercise to propose an evidence-based expert consensus covering various aspects of MBS in patients with T2DM. We defined the scope of the exercise and proposed statements and surveyed the literature through electronic databases. The literature summary and voting process were conducted by 52 experts, who evaluated 44 statements. The quality of evidence was assessed using the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) criteria.

RESULTS: Consensus, defined as >80% agreement, was reached for 43 out of 44 statements. The experts reached an agreement on the nature, terminology, and mechanisms of action of MBS. The currently available scores for predicting remission of T2DM after surgery are not robust enough for routine clinical use, and there is a need for further research to enable more personalised treatment. Additionally, they agreed that metabolic surgery for T2DM is cost-effective, and MBS procedures for treating T2DM vary in their safety and efficacy.

CONCLUSION: This Delphi expert consensus statement guides clinicians on various aspects of metabolic surgery for T2DM and also grades the quality of the available evidence for each of the proposed statements.

READING 3 – PORTFOLIO DIET AND LDL-C IN A YOUNG MULTIETHNIC COHORT

Chen V,[1,2] Zeitoun T,[1] El-Sohemy A,[1] Kavanagh ME,[1,2] Chiavaroli L,[1-3] Kendall CWC,[1,2,6] Jenkins DJA,[1-3,7,8] Mahdavi S,[1,4] Glenn AJ,[4,5] Sievenpiper JL.[9-13] **Portfolio diet and LDL-C in a young, multiethnic cohort: cross-sectional analyses with cumulative exposure modelling. BMC Public Health. 2025 May 13;25(1):1761. PMID: 40361017.**

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ABSTRACT
BACKGROUND: The Portfolio Diet is a plant-based dietary pattern of cholesterol-lowering foods that has demonstrated clinically meaningful reductions in low-density lipoprotein cholesterol (LDL-C) and other cardiovascular risk factors. However, the Portfolio Diet has not been assessed in an ethnoculturally diverse population of young adults.

OBJECTIVE: To examine the association of the Portfolio Diet Score (PDS) with LDL-C and other established cardiovascular risk factors in a young adult population.

METHODS: This cross-sectional analysis included 1,507 men and women (mean age, 23±3 years) of diverse ethnocultural backgrounds from the Toronto Nutrigenomics and Health Study. Diet was assessed by a validated Toronto-modified Harvard 196-item food frequency questionnaire with adherence to the Portfolio Diet measured using the Portfolio Diet Score. Data were analysed using multiple linear regressions with adjustment for potential confounders. Modelling analyses related LDL-C levels according to absolute adherence to the Portfolio Diet with cumulative LDL-C and onset of rising cardiovascular risk by age.

RESULTS: Participants were Caucasian (49%), East Asian (34%), South Asian (11%), or other (7%) with a mean LDL-C of 2.3±0.7mmol/L. A 1-point higher PDS and higher PDS tertiles were associated with lower LDL-C (ß [95% CI] per 1-point: -0.009 mmol/L [-0.016, -0.002], P=0.013; Ptrend across tertiles=0.040), non-HDL-C (-0.010 mmol/L [-0.018, -0.002], P=0.014; Ptrend=0.028), total cholesterol (-0.011 mmol/L [-0.019, -0.003], P=0.011; Ptrend=0.038), systolic blood pressure (-0.150 mmHg [-0.250, -0.050], P=0.003; Ptrend<0.001) and diastolic blood pressure (-0.133 mmHg [-0.219, -0.046], P=0.003; Ptrend<0.001). Higher PDS tertiles were associated with lower triglycerides (Ptrend=0.039). A 1-point higher PDS was also associated with lower BMI (-0.038 kg/m^2 [-0.071, -0.004], P=0.026), waist circumference (-0.092 cm [-0.171, -0.013], P=0.022), body weight (-0.124 kg [-0.229, -0.019], P=0.021) and FMI (-0.019 kg/m^2 [-0.037, -0.001], P=0.039). There was no association with HDL-C, CRP, or fasting glucose. Modelling analyses suggest that, compared to low adherence, 50% and 100% adherence to the Portfolio Diet may delay the onset of rising cardiovascular risk by an estimated six and 13 years, respectively.

CONCLUSIONS: Among young adults, the PDS was inversely associated with LDL-C and several other established cardiovascular risk factors. Early adherence to the Portfolio Diet may limit lifetime exposure to LDL-C and could delay the age at which cardiovascular events begin.

READING 4 – GLOBAL PATTERNS OF NONINVASIVE TESTS FOR THE CLINICAL MANAGEMENT OF METABOLIC DYSFUNCTION-ASSOCIATED STEATOTIC LIVER DISEASE

Allen AM,[1,2] Mark HE,[1] Lazarus JV,[1,3,4] Alkhouri N,[1,5] Noureddin M,[1,6] Wong VW,[1,7] Tsochatzis EA,[1,8] de Avila L,[1,9] Racila A,[1,9] Nader F,[1,9] Henry L,[1,9] Stepanova M,[1,9] Younossi ZM,[1,9,11] Castera L.[1,10] **Global patterns of utilisation of noninvasive tests for the clinical management of metabolic dysfunction-associated steatotic liver disease. Hepatol Commun. 2025 Apr 30;9(5):e0678. PMID: 40304566.**

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ABSTRACT
BACKGROUND: Noninvasive tests (NITs) are used to risk-stratify metabolic dysfunction-associated steatotic liver disease. The aim was to survey global patterns of real-world use of NITs.

METHODS: A 38-item survey was designed by the Global NASH Council. Providers were asked about risks for advanced fibrosis, which NITs (cutoff values) they use to risk-stratify liver disease, monitor progression, and which professional guidelines they follow.

RESULTS: A total of 321 participants from 43 countries completed the survey (54% hepatologists, 28% gastroenterologists, and 18% other). Of the respondents, 85% would risk-stratify patients with type 2 diabetes, obesity (82%), or abnormal liver enzymes (73%). Among NITs to rule out significant or advanced fibrosis, transient elastography (TE) and fibrosis-4 (FIB-4) were most used, followed by NAFLD Fibrosis Score, Enhanced Liver Fibrosis, and magnetic resonance elastography. The cutoffs for ruling out significant fibrosis varied considerably between practices and from guidelines, with only 50% using TE <8 kPa, 65% using FIB-4 <1.30 for age <65, and 41% using FIB-4 <2.00 for age ≥65. Similar variability was found for ruling in advanced fibrosis, where thresholds of FIB-4 ≥2.67 and TE ≥10 kPa were used by 20% and 17%, respectively. To establish advanced fibrosis, 48% would use two NITs while 23% would consider 1 NIT, and 17% would confirm with liver biopsy. TE was used by >75% to monitor, and 66% would monitor (intermediate or high risk) annually. Finally, 65% follow professional guideline recommendations regarding NITs.

CONCLUSIONS: In clinical practice, there is variability in NIT use and their thresholds. Additionally, there is suboptimal adherence to professional societies' guidelines.

READING 5 – LIFESTYLE AND SURGICAL INTERVENTIONS TO ACHIEVE WEIGHT LOSS IN PEOPLE WITH OVERWEIGHT OR OBESITY

Idris I,[1,2] Anyiam O.[1,2] The latest evidence and guidance in lifestyle and surgical interventions to achieve weight loss in people with overweight or obesity. Diabetes Obes Metab. 2025 Apr;27 Suppl 2(Suppl 2):20-34. PMID: 40026042.

doi: 10.1111/dom.16296. PMID: 40026042. Free full text.

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ABSTRACT
BACKGROUND: The prevalence of obesity and related co-morbidities has reached epidemic proportions. Effective evidence-based treatment approaches are therefore important. Lifestyle intervention remains the mainstay of the treatment strategy to manage obesity. Increased evidence has also emerged regarding the efficacy of metabolic bariatric surgery (MBS) to induce significant and sustained weight loss while also reducing the progression of obesity-related co-morbidities for people living with obesity.

AIMS & METHODS: This article aims to bring together current evidence, guidance, and best practice for the prevention and management of people living with overweight or obesity by means of lifestyle and behavioural intervention, as well as by MBS.

RESULT: Lifestyle intervention encompasses dietary strategies, physical activity, and behavioural intervention. Discussion on MBS will focus on current indications, comparison between different MBS procedures, novel endoscopic techniques, potential complications, and pre-operative management.

PLAIN LANGUAGE SUMMARY: The number of people living with excess weight and complications associated with being overweight is alarmingly high. Effective treatment approaches that are supported by clinical studies are therefore important. Lifestyle changes remain important in managing excess weight. Increased evidence has also shown the benefits of weight loss surgery to produce significant weight loss that can be sustained, while also reducing the risk of developing medical conditions associated with excess weight. This article aims to bring together current evidence, guidance, and best practice for the prevention and management of people living with excess weight by means of lifestyle and behavioural changes, as well as by weight loss surgery. Lifestyle intervention encompasses dietary strategies, physical activity, and behavioural intervention. Discussion on weight loss surgery will focus on current criteria for suitability, comparison between different weight loss surgery procedures, new techniques, possible complications, and appropriate management prior to weight loss surgery.

READING 6 – POSITION STATEMENT AND GUIDELINES ABOUT ENDOSCOPIC SLEEVE GASTROSCOPY

Baratte C,[1] Poghosyan T,[1] Sebbag H,[2] Arnalsteen L,[3] Auguste T,[4] Blanchet MC,[5] Benchetrit S,[6] Abou-Mrad A,[7] Reche F,[8] Genser L,[9] Caiazzo R,[10] Lazzati A,[11] Catheline JM,[12] Pourcher G,[13] Leyre P,[14] Kamoun-Zana S,[15] Stenard F,[16] Coste T,[17] Sterkers A,[18] Blanchard C,[19] Pattou F,[20] Perretta S,[21] Robert M.[22] **Position statement and guidelines about Endoscopic Sleeve Gastroplasty (ESG) also known as "Endo-sleeve". J Visc Surg. 2025 Feb;162(1):71-78. PMID: 39794164.**

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ABSTRACT
IS ESG EFFECTIVE IN THE TREATMENT OF OBESITY AND ASSOCIATED COMORBIDITIES?: Endoscopic Sleeve Gastroplasty (ESG) is more effective than lifestyle modifications alone for weight loss and improving obesity-related comorbidities. While it has less effect on weight loss compared to Laparoscopic Sleeve Gastrectomy (LSG) in the short to medium term, it offers similar comorbidities resolution to LSG.

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IS ESG EFFECTIVE IN THE TREATMENT OF OBESITY AND ASSOCIATED COMORBIDITIES?: Endoscopic Sleeve Gastroplasty (ESG) is more effective than lifestyle modifications alone for weight loss and improving obesity-related comorbidities. While it has less effect on weight loss compared to Laparoscopic Sleeve Gastrectomy (LSG) in the short to medium term, it offers similar comorbidities resolution to LSG.

IS ESG A SAFE PROCEDURE, AND WHAT ARE ITS RISKS?: The safety profile of ESG is consistently supported in the literature. Surgical complications after ESG, ranging from 1.5–2.3%, such as bleeding, perforation, fistula, or upper bowel obstruction, are rare and typically managed endoscopically. The incidence of new-onset gastro-oesophageal reflux disease (GERD) is deemed negligible and occurs less frequently after ESG compared to SG.

WHAT ARE THE INDICATIONS AND MANAGEMENT METHODS?: Multidisciplinary care for patients undergoing ESG should be provided in an accredited centre authorised to perform bariatric and metabolic surgery, with validation through a multidisciplinary consultation meeting (RCP). Perioperative management should be personalised and ideally modelled after the protocols already in place for bariatric and metabolic surgery to ensure satisfactory and lasting weight and metabolic outcomes. Adherence to follow-up visits is a significant predictor of successful weight loss outcomes after ESG. Additionally, all endoscopic surgical procedures should be documented in a registry affiliated with a recognised scientific society, as is standard for other bariatric surgical procedures.

WHICH HEALTHCARE PROFESSIONALS CAN PERFORM ESG?: ESG must be performed by a practitioner trained in endoscopy and obesity management, capable of ensuring thorough preoperative care and comprehensive postoperative follow-up, supported by an experienced multidisciplinary team. In France, Notice No. 2021.0040/AC/SEAP of 10 June 2021, issued by the Haute Autorité de santé (HAS) college, specifies that "the technology of ESG via the trans-oral approach, involving wide plication of the greater gastric curvature […] with an endoscopic suture placement device, enables a gastroenterologist or a visceral and digestive surgeon to perform gastric plication through digestive endoscopy by placing sutures in the stomach". Ideally, this should take place in an accredited centre authorised to perform bariatric and metabolic surgery, such as those approved by the Agence régionale de santé (ARS), in accordance with Article R6123-212 of December 2022 of the French Public Health Code.

WHAT ARE THE RECOMMENDATIONS AND VIEWS OF OTHER INTERNATIONAL SCIENTIFIC SOCIETIES?: ESG is an integral part of the therapeutic arsenal available to bariatric and metabolic surgeons, offering an effective and valuable treatment option for obesity in specific patient populations. The International Federation for the Surgery of Obesity (IFSO) Bariatric Endoscopy Committee, following a comprehensive systematic review and meta-analysis, endorsed ESG as an effective and valuable treatment for obesity. ESG is particularly beneficial for patients with class I and II obesity, as well as for those with class III obesity who are not suitable candidates for metabolic bariatric surgery. Additionally, it can be proposed as an addition to lifestyle interventions in adolescent patients with class II obesity. The SOFFCOMM endorses endoscopic sleeve gastroplasty (ESG) as an effective and valuable treatment for obesity and highlights the importance of appropriate patient selection, coupled with rigorous evaluation of long-term outcomes, to refine its indications further.

READING 7 – SAGES GUIDELINES FOR MANAGEMENT OF CO-MORBIDITIES RELEVANT TO METABOLIC AND BARIATRIC SURGERY

Kumar SS,[1] Wunker C,[2] Collings A,[3] Bansal V,[4] Zoumpou T,[5] Chang J,[6] Rodriguez N,[7] Aleassa EM,[7] Sabour A,[8] Hilton LR,[9] Ghanem OM,[10] Kushner BS,[11] Loss LJ,[12] Haskins IN,[13] Ayloo S,14 Reid A,[15] Overby DW,[16] Hallowell P,[17] Kindel TL,[18] Slater BJ,[19] Palazzo F.[20] **SAGES guidelines for the management of comorbidities relevant to metabolic and bariatric surgery. Surg Endosc. 2025 Jan;39(1):1-10. PMID: 39663246.**

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ABSTRACT
BACKGROUND: Patients who are under consideration for or have undergone metabolic and bariatric surgery frequently have comorbid medical conditions that might make their perioperative care more complex. These recommendations address routine intraoperative cholangiography in patients with bypass-type anatomy, the management of reflux disease after sleeve gastrectomy, and the optimal bariatric procedure for patients with comorbid inflammatory bowel disease.

METHODS: A systematic review was conducted including studies published from 1990 to 2022 to address these questions. These results were then presented to a panel of bariatric surgeons who formulated recommendations based on the best available evidence or utilised expert opinion when the evidence base was lacking.

RESULTS: Conditional recommendations were made in favour of routine intraoperative cholangiography in patients with bypass-type anatomy undergoing laparoscopic cholecystectomy, trialling medical management prior to surgical management in patients with reflux after sleeve gastrectomy, and sleeve gastrectomy rather than Roux-en-Y gastric bypass in patients with inflammatory bowel disease. The strength of these recommendations was limited by the quality of evidence available. Recommendations for future research were made for all questions.

CONCLUSIONS: These recommendations should provide guidance regarding management of these comorbidities in patients who are under consideration for or have undergone metabolic and bariatric surgery. These recommendations also identify important areas where future research should focus on to strengthen the evidence base.

READING 8 – PHARMACOTHERAPY FOR OBESITY MANAGEMENT IN ADULTS

Pedersen SD,[1] Manjoo P,[1] Dash S,[1] Jain A,[1] Poddar M,[1] Pearce N.[2] Pharmacotherapy for obesity management in adults: 2025 clinical practice guideline update. CMAJ. 2025 Aug 10;197(27):E797-E809. PMID: 40789597.

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ABSTRACT
BACKGROUND: Pharmacotherapy is a key component of comprehensive obesity management, alongside behavioural therapy and metabolic and bariatric surgery. In this guideline, we update the pharmacotherapy recommendations in the 2020 Canadian clinical practice guideline on obesity in adults and in the 2022 pharmacotherapy for obesity management revision to provide current recommendations for clinicians on the efficacy, safety, and appropriate use of pharmacotherapy in the management of obesity in adults.

METHODS: This guideline update follows the same methodology as the 2020 Canadian guideline on obesity in adults, adhering to the Appraisal of Guidelines for Research and Evaluation instrument and using the Shekelle framework to assess and grade evidence and to formulate recommendations. Building on the search conducted for the 2022 pharmacotherapy revision, we conducted a systematic literature review (search dates January 2022 to July 2024), supplemented by relevant trials published through May 2025, to identify studies assessing the efficacy of pharmacotherapy for weight management. We also conducted 13 targeted searches on the management of weight-related complications in 13 subpopulations with important adiposity-related health issues. We engaged primary care physicians, obesity medicine specialists, and people with lived experience of obesity to provide feedback on the recommendations.

RECOMMENDATIONS: This update includes six new and seven revised recommendations since the 2022 pharmacotherapy guideline revision (all 2020 pharmacotherapy recommendations are updated). Measures of central adiposity, in addition to ethnicity-specific body mass index and adiposity-related complications, should be used to guide the decision to initiate pharmacotherapy. Obesity pharmacotherapy should be used in conjunction with health behaviour changes and individualised based on a person's specific health needs and in keeping with their values and preferences. Recommendations support long-term use of obesity pharmacotherapy for sustained weight loss and maintenance of weight loss. We provide recommendations for use of specific obesity pharmacotherapies with proven benefit in specific subpopulations—atherosclerotic cardiovascular disease, heart failure with preserved ejection fraction, metabolic dysfunction-associated steatohepatitis, prediabetes, type 2 diabetes, obstructive sleep apnoea, osteoarthritis—and for those with certain specific monogenic causes of obesity. We recommend against the use of compounded medications or medications other than those approved for weight loss in people with excess adiposity.

INTERPRETATION: Pharmacotherapy in obesity facilitates clinically meaningful weight loss and important improvements in obesity-related health complications. Clinicians who treat people with obesity with or without obesity-related health complications should appropriately use pharmacotherapy as an integral part of their treatment paradigm.

READING 9 – NUMBER NEEDED TO TREAT FOR SEMAGLUTIDE IN POPULATIONS WITH OVERWEIGHT OR OBESITY

Lübker C,[1] Bhavsar J,[2] Duque do Vale R,[3] Nørtoft E,[3] Tarp JM,[3] Emerson SS,[4] Plutzky J,[5] Roberts G,[6] Lincoff AM.7 The Composite Number Needed to Treat for Semaglutide in Populations with Overweight or Obesity and Established Cardiovascular Disease Without Diabetes. Adv Ther. 2025 May;42(5):2513-2525. PMID: 40156748.

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ABSTRACT
INTRODUCTION: Number needed to treat (NNT), an outcome measure derived from the estimated risk results of clinical trials, is widely used to demonstrate value to stakeholders by identifying how many patients require treatment to avoid one event of interest. However, NNTs calculated for primary trial endpoints might underestimate a treatment's value by not considering other outcomes. In this secondary analysis of data from the SELECT cardiovascular (CV) outcomes trial, we aimed to determine the NNT for semaglutide for major adverse cardiovascular events (MACE), in addition to NNTs when other clinically and payer-relevant outcomes are included.

METHODS: This study is a secondary analysis of data from the randomised, double-blind SELECT trial (ClinicalTrials.gov NCT03574597) of once-weekly subcutaneous administration of semaglutide compared with placebo in 17,604 patients with overweight or obesity and with established cardiovascular disease (CVD) (39.8 months mean follow-up). The outcomes were NNT3P-MACE (based upon the trial's composite primary endpoint of death from cardiovascular causes, non-fatal myocardial infarction, non-fatal stroke), NNTEXTENDED (inclusive of NNT3P-MACE, hospitalisation for any cause, coronary revascularisation, and non-CV death), and NNTCKM (inclusive of NNTEXTENDED, glycated haemoglobin level [HbA1c] ≥6.5%, and a 5-point nephropathy composite).

RESULTS: The relative risk reductions observed for the events comprising the NNTs were 20% (NNT3P-MACE), 20% (NNTEXTENDED), and 41% (NNTCKM). At 1- and 4-years post-initiation of semaglutide, NNT3P-MACE was 125 and 58, NNTEXTENDED was 49 and 25, and NNTCKM was 20 and 11, respectively.

CONCLUSION: When clinically and payer-relevant outcomes from the SELECT trial are included in calculations of NNT, semaglutide was associated with greater risk reductions and lower estimates of NNT than for the primary endpoint alone. Our findings suggest that including the broader effects of semaglutide beyond the primary trial endpoint recognises additional value to stakeholders.

READING 10 – STRATEGIES FOR MINIMISING MUSCLE LOSS DURING USE OF INCRETIN-MIMETIC DRUGS FOR TREATMENT OF OBESITY

Mechanick JI,[1] Butsch WS,[2] Christensen SM,[3] Hamdy O,[4] Li Z,[5] Prado CM,[6] Heymsfield SB.[7] Strategies for minimising muscle loss during use of incretin-mimetic drugs for treatment of obesity. Obes Rev. 2025 Jan;26(1): e13841.PMID: 39295512.

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ABSTRACT
The rapid and widespread clinical adoption of highly effective incretin-mimetic drugs (IMDs), particularly semaglutide and tirzepatide, for the treatment of obesity has outpaced the updating of clinical practice guidelines. Consequently, many patients might be at risk for adverse effects and uncertain long-term outcomes related to the use of these drugs. Of emerging concern is the loss of skeletal muscle mass and function that can accompany rapid substantial weight reduction; such losses can lead to reduced functional and metabolic health, weight cycling, compromised quality of life, and other adverse outcomes.

Available evidence suggests that clinical trial participants receiving IMDs for the treatment of obesity lost 10% or more of their muscle mass during the 68- to 72-week interventions, approximately equivalent to 20 years of age-related muscle loss. The ability to maintain muscle mass during caloric restriction-induced weight reduction is influenced by two key factors: nutrition and physical exercise. Nutrition therapy should ensure adequate intake and absorption of high-quality protein and micronutrients, which might require the use of oral nutritional supplements. Additionally, concurrent physical activity, especially resistance training, has been shown to effectively minimise loss of muscle mass and function during weight reduction therapy.

All patients receiving IMDs for obesity should participate in comprehensive treatment programmes emphasising adequate protein and micronutrient intakes, as well as resistance training, to preserve muscle mass and function, maximise the benefit of IMD therapy, and minimise potential risks.