**Kliiniline küsimus 6:**

Kas patsiendi vahetu operatsioonieelne kaalu langetamine (preoperatiivne dieet) vs kaalu hoidmine samal tasemel (püsimine) vs kaalu mittemõjutamine mõjutab

ravitulemust?

**Tulemusnäitajad**: Liigse kehakaalu ja KMI langus 5 ja enam aastat pärast bariaatrilist

operatsiooni (excess weight loss), ravikulu vähenemine (5 aasta perspektiivis), hilisemate

kirurgiliste ja mittekirurgiliste tüsistuste esinemissagedus?

**Kokkuvõte leitud kirjandusest**

Operatsioonieelne EBW langetamine on seotud vähemate kirurgiliste komplikatsioonidega bypass operatsioonide puhul, pöördvõrdeline seos EBW languse ja komplikatsioonide esinemissageduse vahel[[1]](#footnote-2). Jälgitud on komplikatsioonide esinevust 30 POP jooksul.

2011 publitseeritud süstemaatilises ülevaates leiti operatsioonieelne kaalulangetamine positiivse seosega operatsioonijärgse kaalulangusega 39% uuringutest, 62,5% uuringuid seoseid ei leidnud[[2]](#footnote-3).

2012 süstemaatilises ülevaates leitakse, et uuringute tulemused varieeruvad kogu võimalikus ulatuses ehk operatsioonieelne kaalulangetamine on mõnedes uuringutes positiivselt seotud operatsioonijärgse kaalulangusega, teistes jälle seos puudub või negatiivne – enamike uuringute tulemusi jääb positiivse ja puuduva seose vahele. Samas on paljudes uuringutes täpsustamata preoperatiivse kaalulangetamise kestvus ja ulatus (enamasti 5-10% EBW)[[3]](#footnote-4).

**Kokkuvõte ja täiendused**

Uuringute tulemused varieeruvad kogu võimalikus ulatuses. Konkreetset trendi ega statistilist olulist seost preoperatiivse kaalulangetamise ja operatsioonijärgse kaalulanguse vahel pole. On üksikud uuringud, mis näitavad mõlemapidist seost. Operatsioonieelsel kaalulangetamisel on üksikutes uuringutes seos lühema operatsiooniaja ja vähemate kirurgiliste komplikatsioonide vahel.

2008 ASPEN ravijuhend viitab, et kahes uuringus leiti, et operatsioonieelne kaalulangetamine 10% on seotud suurema kaalulangusega 1 aasta pärast operatsiooni [[4]](#footnote-5)[[5]](#footnote-6). Alami jt leidsid, et preoperatiivne kaalulangetamine 10% on seotud lühiajalise operatsioonijärgse (6 kuud) suurenenud kaalulangusega, kuid mitte pikas perspektiivis[[6]](#footnote-7). Samas kirjeldab üks uuring, et operatsioonieelne kaalulangetamine ei paranda operatsioonijärgset kaalulangust ja on seotud pigem kehvema ravisoostumisega[[7]](#footnote-8). On leitud, et 2 nädalat enne operatsiooni väga madala kalorsusega dieet parandab operatsiooniaegset ligipääsu operatsioonipiirkonnale (maksa suuruse langus) [[8]](#footnote-9).

2010 SIGN ravijuhend väidab selgelt, et bypass operatsiooni puhul patsiendi osalemine operatsioonieelses kaalulangetamise programmis ei mõjuta operatsioonijärgset kaalulangust[[9]](#footnote-10) [[10]](#footnote-11).

2009 publitseeritud süstemaatilises ülevaates leitakse, et operatsioonieelselt kaalulangetamine on seotud suurema kaalulangusega 1 aasta möödudes operatsioonist ja lühema operatsiooniajaga (keskmiselt 23.3 minutit)[[11]](#footnote-12).

|  |  |  |  |
| --- | --- | --- | --- |
| Ravijuhend | Ravijuhendis sisalduv tekst küsimuse kohta | Viited | Ravijuhendis hõlmatud kirjanduse otsingu vahemik |
| American Association of Clinical Endocrinologists, The Obesity Society,and American Society for Metabolic & Bariatric Surgery MedicalGuidelines for Clinical Practice for the Perioperative Nutritional,Metabolic, and Nonsurgical Support of the Bariatric Surgery Patient. 2008 | A controversial issue that is reflected by the divergent preoperative strategies among various bariatric programs in theUnited States is whether or not patients should lose weight (approx. 10%) *before* bariatric surgery. Two studiessuggested that pre-operative weight loss was associated with greater weight loss 1 year postoperatively [49 **[EL 3],** 50 **[EL 2]**]. In a randomized study of 100 patients undergoing RYGB, Alami et al [51 **[EL 2]**] found that preoperative weight loss of 10% was associated with improved short-term (6 months) but not long-term weight loss. In contrast, another study found that insurance-mandated preoperative weight loss did not improve postoperative weight loss and was associated with increaseddropout rates before gastric bypass surgery [52 **[EL 3]**]. A recent study, however, suggested a more functional benefit of preoperative weight loss. In this prospective trial, at least 2 weeks of a very-low-calorie meal plan preoperatively significantly reduced liver volume and thereby potentially improvedoperative exposure [54 **[EL 2]**]. On balance, consideration should be given to recommendation of preoperative weightloss, particularly in patients with hepato-megaly. | Still CD, Benotti P, Wood GC, et al. Outcomes of preoperativeweight loss in high-risk patients undergoing gastric bypass surgery.Arch Surg 2007;142:994 –998. **[EL 2]**[51] Alami RS, Morton JM, Schuster R, et al. Is there a benefit topreoperative weight loss in gastric bypass patients? A prospectiverandomized trial. Surg Obes Relat Dis 2007;3:141–145. **[EL 2]**[52] Jamal MK, DeMaria EJ, Johnson JM, et al. Insurance-mandatedpreoperative dietary counseling does not improve outcome and increases dropout rates in patients considering gastric bypass surgeryfor morbid obesity. Surg Obes Relat Dis 2006;2:122–127. **[EL 3]**[53] Gibbons LM, Sarwer DB, Crerand CE, et al. Previous weight lossexperiences of bariatric surgery candidates: how much have patientsdieted prior to surgery? Obesity 2006;14(suppl 2):70S–76S. **[EL 3]**[54] Colles SL, Dixon JB, Marks P, Strauss BJ, O’Brien PE. Preoperativeweight loss with a very-low-energy diet: quantitation of changes inliver and abdominal fat by serial imaging. Am J Clin Nutr 2006;84:304–311. **[EL 2]** | Kuni 2008 |
| Management of Obesity. SIGN, 2010. | In patients scheduled to receive gastric bypass surgery, participation in pre-operative weightloss programmes does not lead to greater post-surgical weight loss.200-202 2+ | 200. Jamal MK, DeMaria EJ, Johnson JM, Carmody BJ, Wolfe LG, KellumJM, et al. Insurance-mandated preoperative dietary counselingdoes not improve outcome and increases dropout rates in patientsconsidering gastric bypass surgery for morbid obesity. Surg ObesRelat Dis 2006;2(2):122-7.201. Riess KP, Baker MT, Lambert PJ, Mathiason MA, Kothari SN.Effect of preoperative weight loss on laparoscopic gastric bypassoutcomes. Surg Obes Relat Dis 2008;4(6):704-8.202. Solomon H, Liu GY, Alami R, Morton J, Curet MJ. Benefits topatients choosing preoperative weight loss in gastric bypasssurgery: new results of a randomized trial. J Am Coll Surg2009;208(2):241-5. | Kuni 2010 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Autor/Aasta/Uuringumeetod/Tõendusmaterjali kvaliteedi (TK) hinnang | Uuringu kestvus | Patsientide arv | Ravimeetodid | Peamised tulemused |
| **Livhits et al / 2009/ süstemaatiline ülevaade / TK – kõrge** |  | 3404 | Kaalulangus preoperatiivselt.  | Of the 15 articles (n ! 3404 patients) identified, 5 found a positive effect of preoperativeweight loss on postoperative weight loss, 2 found a positive short-term effect that was not sustainedlong term, 5 did not find an effect difference, and 1 found a negative effect. A meta-analysis revealeda significant increase in the 1-year postoperative weight loss (mean difference of 5% EWL, 95%confidence interval 2.68 –7.32) for patients who had lost weight preoperatively. A meta-analysis ofother outcomes revealed a decreased operative time for patients who had lost weight preoperatively(mean difference 23.3 minutes, 95% confidence interval 13.8 –32.8). |
| **Benotti / 2009 / retrospektiivne ülevaade / TK - mõõdukas** | 2002-2006 | 881 | Kaalulangus preoperatiivselt | Of the 881 patients, 592 (67.2%) lost5%or moreEBW and 423 (48.0%) lost more than 10% EBW. Patientsreferred for open gastric bypass (n=466) were generallyolder (*P*\_.001), had a higher body mass index (*P*\_.001),and were more often men (*P*\_.001) than those undergoinglaparoscopic gastric bypass (n=415). Total and majorcomplication rates were higher in patients undergoing opengastric bypass (*P*\_.001 and *P*=.03, respectively). Univariateanalysis revealed that increasing preoperative weightloss is associated with reduced complication frequenciesfor the entire group for total complications (*P*=.004) andmost likely for major complications (*P*=.06). Controllingfor age, sex, baseline body mass index, and type of surgeryin a multiple logistic regression model, increased preoperativeweight loss was a predictor of reduced complicationsfor any (*P*=.004) and major (*P*=.03) complications. |
| **Cassie / 2011/ süstemaatiline ülevaade/ TK - kõrge** |  | 6686 | Kaalulangus preoperatiivselt | A total of 17 trials, including approximately 4611 patients, deemed preoperative weight loss beneficial, and 10 studies, including 2075 patients, deemed preoperative weight loss to be of no benefit. The operative time was 12.5 minutes shorter for the preoperative weight loss patients undergoing laparoscopic Roux-en-Y gastric bypass. With regard to the effects of preoperative weight loss on postoperative weight loss, 9 studies (39%) reported a positive correlation, and 15 (62.5%) reported no benefit. Nine studies reporting perioperative complications (852 patients) revealed no difference in the complication rates, and 2 studies (1234 patients) suggested a significant decrease was associated with preoperative weight loss. |
| **Ochner / 2012 / süstemaatiline ülevaade / TK – kõrge** | 1991-2011 | 29 artiklit | Kaalulangus preoperatiivselt | Given the inconsistency and questionable validity of the extantresearch discussed above on the question of the effect ofpreoperative weight loss on peri and postoperative outcomes(see Tables 2–4), it is the opinion of these authors that insufficientevidence is currently available to justify a pre-bariatric surgeryweight loss mandate. |

**Viited**

Alami RS, M. J. (2007). Is there a benefit to preoperative weight loss in gastric bypass patients? A prospective randomized trial. *Surg Obes Relat Dis*.

Alvarado R, A. R. (2008). The impact of preoperative weight loss in patients undergoing laparoscopic Roux-en-Y gastric bypass. *Obes Surg*.

Benotti BN, S. C., & al., e. (2009). Preoperative weight loss before bariatric surgery. *Arch Surg*.

Cassie S, M. C., & al., e. (2011). Effect of preoperative weight loss in bariatric surgical patients: a systematic review. *Surgery for Obesity and Related Diseases*.

CN, O., & al., e. (2012). Pre-bariatric surgery weight loss requirements and the effect. *International Journal of Obesity*.

Colles SL, D. J. (2006). Preoperative weight loss with a very-low-energy diet: quantitation of changes in liver and abdominal fat by serial imaging. *Am J Clin Nutr*.

Jamal MK, D. E. (2006). Insurance-mandated preoperative dietary counseling does not improve outcome and increases dropout rates in patients considering gastric bypass surgery for morbid obesity. *Surg Obes Relat Dis*.

Livhits, & al., e. (2009). Does weight loss immediately before bariatric surgery improve outcomes: a systematic review. *Surgery for Obesity and Related Diseases*.

Riess KP, B. M. (2008). Effect of preoperative weight loss on laparoscopic gastric bypass outcomes. *Surg Obes Relat Dis*.

Solomon H, L. G. (2009). Benefits topatients choosing preoperative weight loss in gastric bypass surgery: new results of a randomized trial. *J Am Coll Surg*.

Still CD, B. P. (2007). Outcomes of preoperative weight loss in high-risk patients undergoing gastric bypass surgery. *Arch Surg*.

Otsisõna PUBMEDis: weight, preoperative, surgery; otsitud metaanalüüse ja süstemaatilisi ülevaateid.

1. (Benotti BN & al., 2009) [↑](#footnote-ref-2)
2. (Cassie S & al., 2011) [↑](#footnote-ref-3)
3. (CN & al., 2012) [↑](#footnote-ref-4)
4. (Alvarado R, 2008) [↑](#footnote-ref-5)
5. (Still CD, 2007) [↑](#footnote-ref-6)
6. (Alami RS, 2007) [↑](#footnote-ref-7)
7. (Jamal MK, 2006) [↑](#footnote-ref-8)
8. (Colles SL, 2006) [↑](#footnote-ref-9)
9. (Riess KP, 2008) [↑](#footnote-ref-10)
10. (Solomon H, 2009) [↑](#footnote-ref-11)
11. (Livhits & al., 2009) [↑](#footnote-ref-12)