POST-OP DÖNEMDE GELİŞEN BESLENME İLE İLGİLİ KOMPLİKASYONLAR VE SEZGİSEL YEMENİN YÖNETİMİ

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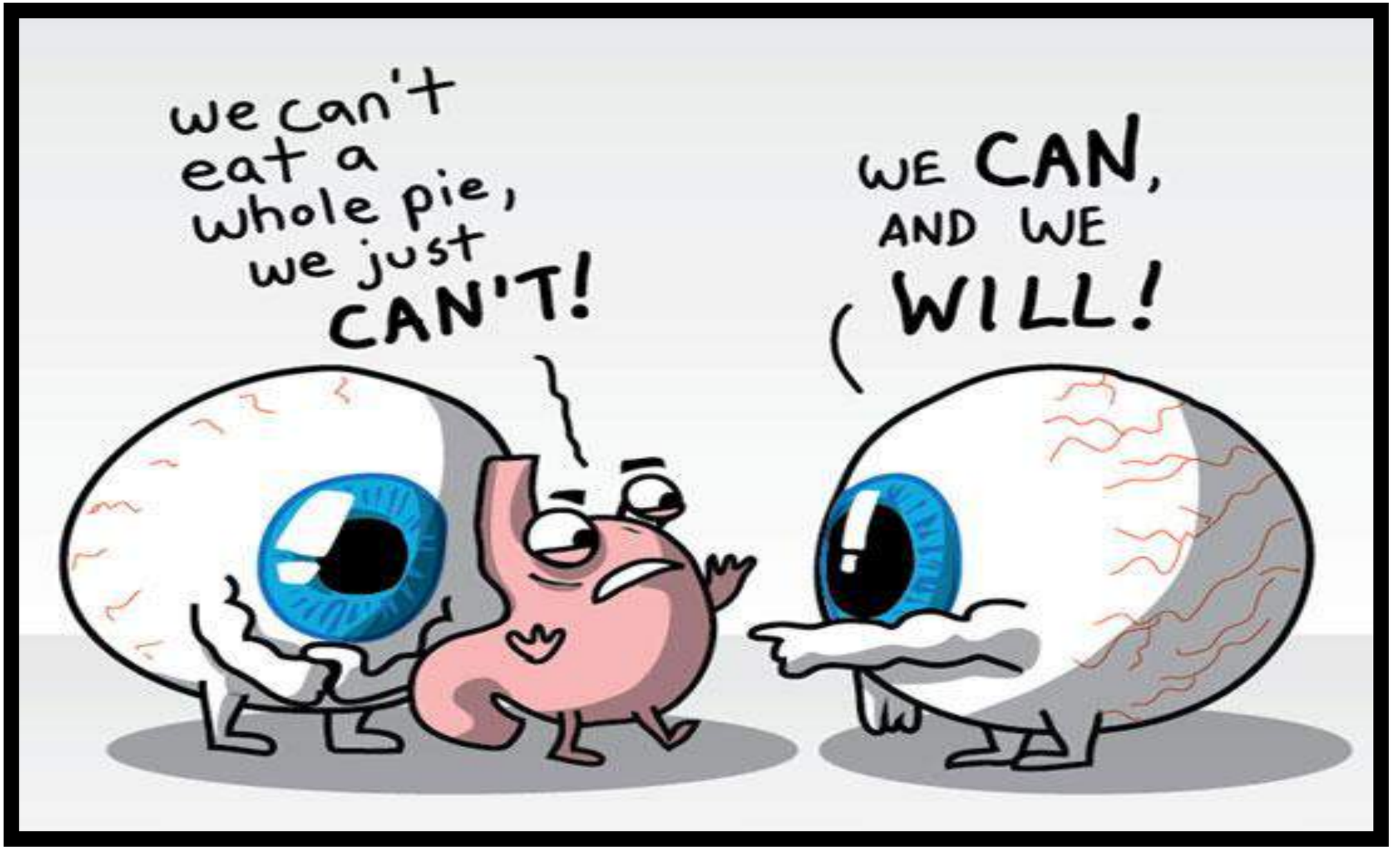
Ameliyat Sonrası Beslenmeye Dayalı Komplikasyonlar

Mide bulantısı ve kusma

- İyi çiğneme!!
- Büyük yudumlar-lokmalar almama
- Gün boyunca minik ve yavaş yudumlar alma
- Protein içeceğini buz ile- baharlar ile içme
- Ilık bitki çayları – Zencefil!!
- Besin tekstürü
- Yeterli sıvı alınıma dikkat!

❖ **Eğer geçmezse kullanılan ilaçların muhtemel yan etkileri ya da anatomik komplikasyonları değerlendirmek için hekim ile görüş!**


we can't eat a whole pie, we just CAN'T!
WE CAN, AND WE WILL!

Ameliyat Sonrası Beslenmeye Dayalı Komplikasyonlar

Dehidrasyon

- Dehidrasyon semptomlarını değerlendir
- Erken dönem dehidrasyon → mide bulantısı –> su içmede zorlanma!
- Ayağa kalkarkan ani baş dönmesi
- Baş ağrısı, yeterli besin alımına rağmen halsizlik ve uyku hali

- Sıvılar yavaş yavaş dehidrasyonu engellemek için yeterli miktarda alınmalıdır. (1,5 lt'den fazla) (**Grade D) – ASMBS 2008 guideline**

❖ **Ciddi dehidrasyonda IV rehidrasyon için hekime danış!**

OBES SURG
DOI 10.1007/s11695-015-1803-7

ORIGINAL CONTRIBUTIONS

Micronutrient and Protein Deficiencies After Gastric Bypass and Sleeve Gastrectomy: a 1-year Follow-up

Eric O. Verger[1,2] · Judith Aron-Wisnewsky[1,2,3] · Maria Carlota Dao[1,2] · Brandon D. Kayser[1,2] · Jean-Michel Oppert[1] · Jean-Luc Bouillot[4] · Adriana Torcivia[5] · Karine Clément[1,2,3]

- 22 hasta → RYGB
- 30 hasta → Sleeve gastrektomi

- RYGB hastalarının %38'inde
- SG hastalarının %52'sinde

→ Protein alımında eksiksiklik

Ameliyat Sonrası Beslenmeye Dayalı Komplikasyonlar

Yetersiz Protein Alımı

- Besin kaydı-günlüğü alma
- Hastaya protein içerikli yiyecekler ve günlük alması gereken protein miktarı hakkında eğitim!
- Kaliteli protein kaynaklarına yönlendirme

Ameliyat Sonrası Beslenmeye Dayalı Komplikasyonlar

Protein-Enerji malnutrisyonu

- Genellikle ilk 3-6 ayda görülüyor!
- RYGB → %5
- BPDDS → %20-30
- DS → ??
- Hastaların %50'si düşük enerji alımını sürdürürken proteinden zengin gıdaları zor tolere ediyor!

Mechanick, J. I., Youdim, A., Jones, D. B., Garvey, W. T., Hurley, D. L., McMahon, M. M., ... & Dixon, J. B. (2013). Clinical practice guidelines for the perioperative nutritional, metabolic, and nonsurgical support of the bariatric surgery patient—2013 update: cosponsored by American Association of Clinical Endocrinologists, the Obesity Society, and American Society for Metabolic & Bariatric Surgery. *Surgery for Obesity and Related Diseases*, *9*(2), 159-191.

Ameliyat Sonrası Beslenmeye Dayalı Komplikasyonlar

Protein-Enerji malnutrisyonu

- Uzun dönemde (2 yıldan daha fazla) kilo kaybı devam eden hastalar PEM açısından değerlendirilmeli

(saç dökülmesi, kas kaybı, halsizlik, güç kaynı ödem, anemi, hipoalbüminemi) Protein alımı günlük 60-120 g/gün (BPD/DS ise %30 daha fazla)

❖Yeterli oral alım sağlanamazsa parenteral olarak tedavisi yürütülmeli.

Via, M. A., & Mechanick, J. I. (2017). Nutritional and micronutrient care of bariatric surgery patients: current evidence update. *Current obesity reports*, *6*(3), 286-296.

Ameliyat Sonrası Beslenmeye Dayalı Komplikasyonlar

Dumping Sendromu

Ameliyat Sonrası Beslenmeye Dayalı Komplikasyonlar

Dumping Sendromu

- Bal, suyu azaltılmış şeker kamışı suyu, fruktoz ve diğer eklenti şekerler az miktarda tüketimde de dumpinge neden olabilir
- Yemek sonrası çok erken sıvı alımı, çok yağlı besin tüketimi, alkol alımı!!
- Tek seferde fazla miktarda rafine karbonhidratın alımına eşlik eden yetersiz protein alımı
- Protein içeceği alımı?!

❖ Gecikmiş dumping sendrom: yemekten 2-3 saat sonra yorgunluk, titreme, iritabilite, baygınlık

Ameliyat Sonrası Beslenmeye Dayalı Komplikasyonlar

Dumping Sendromu

Dumping sendromunun yönetiminde;

- Kompleks karbonhidratların alımı
- Mide boşalım hızını yavaşlatacak öğün düzenlenmesi, ek gıda takviyelerinden yardım alınması
- Öğün içeriğindeki karbonhidrat miktarının düzenlenmesi
- Hastanın yakın takibi

Ameliyat Sonrası Beslenmeye Dayalı Komplikasyonlar

Vitamin ve Mineral Eksiklikleri

- Takip görüşmelerinde mutlaka multivitamin alımı değerlendirilmeli → ömür boyu multivitamin!!
- Marka, doz, kullanım sıklığı
- Diyetisyen multivitamin alımında uyumsuz hastalara bu konuda düzenli eğitim vermeli ve takip etmeli!
- Tablet formunda ürünlerin tolerasyonunda sorun varsa çiğnenebilen formda devam edebilir.

OBES SURG
DOI 10.1007/s11695-016-2211-3

ORIGINAL CONTRIBUTIONS

Investigating Nutritional Deficiencies in a Group of Patients 3 Years Post Laparoscopic Sleeve Gastrectomy

Nazy Zarshenas[1] · Maria Nacher[1] · Ken W. Loi[1] · John O. Jorgensen[1]

Hastaların multivitamin kullanımları
6. ay: %86
1. yıl: %90
2. yıl: %78
3. yıl: %66

Vitamin kullanımı ile kan değerlerindeki düzeyler arasında anlamlı ilişki var.

Ameliyat Sonrası Beslenmeye Dayalı Komplikasyonlar

Diyare

- Bariatrik cerrahi sonrası ortaya çıkan laktoz intoleransı
- Dumping sendromu
- Basit karbonhidrat tüketimi değerlendirilmesi ve eliminasyon yapılmalı

❖ **Devam ediyorsa hekime danışılmalı.**

- DS sonrası yağ malabsorpsiyonu ile steatöre!
- Değişen bağırsak miktrobiyotası? → Probiyotik kullanımı

❖ **Ameliyat sonrası gelişen/tanı koyulan ülseratif kolit ve crohn case reportları mevcut!**

Ameliyat Sonrası Beslenmeye Dayalı Komplikasyonlar

Kabızlık

- Yeterli sıvı alımı
- Fiziksel aktivite
- Lif alımı
  - Erken dönemde gastrik kapasitenin düşüklüğü ve protein alımına verilen öncelik nedeniyle azalabilir. Çözünen lif alımı önerilebilir.

Ameliyat Sonrası Beslenmeye Dayalı Komplikasyonlar

Erken Plato

- Yeme sıklığı
- Sıvı kaloriler
- Hastanın bildirdiği besin alımındaki sapmalar
- Fiziksel aktivitenin sıklığı, süresi ve yoğunluğu
- Atıştırma sıklığını azaltma, kalorisi yüksek yiyecekleri farketme (kabak çekirdeği )

Ameliyat Sonrası Beslenmeye Dayalı Komplikasyonlar

Geri Kilo Alımı

- Her kilo artışı ameliyat başarısızlığı olarak değerlendirilemez.
- Kesin bir tanı kriteri yok
  - Ameliyat sonrası artan yaşam kalitesinin geri kilo alımı nedeniyle tekrar azalması
  - Obeziteye bağlı komorbiditelerin geri kilo alımına takiben tekrar nüks etmesi
  - 5 kg/m2 ya da olunan en düşük kiloya göre verilen kilonun ≥%15'inin geri alınması

Ameliyat Sonrası Beslenmeye Dayalı Komplikasyonlar

Geri Kilo Alımı

- Başarıya ulaşamama oranı %20-30!!
- Takipten çıkan hastalar yüzünden ameliyattan sonra geri kilo alma oranını saptamak çok zor

Ameliyat Sonrası Beslenmeye Dayalı Komplikasyonlar

Geri Kilo Alımı

Geri Kilo Alımı Nedenleri

- **Hormonal adaptasyonlar**
- **Besin tercihi, beslenme alışkanlıkları, yaşam tarzı**
- **Mide hacminin genişlemesi, tüketilen porsiyonların artması**
- **Psikolojik etmenler, yeme davranışı bozuklukları, maladaptif yeme davranışları**
- **Besin alımını ve beslenme davranışını ve enerji metabolizmasını etkileyen kompleks genetik ve fizyolojik faktörler**

Geri Kilo Alımı Sonrası Beslenme Yaklaşımı

Geri Kilo Alımı Yönetimi

- Kalori alımı< 1300 kcal/gün +kcal postoperatif bir yıldan sonra
- Protein kaynağı olarak PDCAA skoru yüksek besin kaynakları tercih edilmeli, dallı zincirli amigo asit içeren besinler (leusin vb.) ve gıda takviyeleri tercih edilmeli
- Karbonhidrat alımı 130 gr/gün den az tutulmalı, düşük glisemik yüklü karbonhidrat kaynakları tercih edilmeli, basit korbonhidrat kaynakları azaltılmalı, karbonhidrat protein oranı 1,5:1 olarak ayarlanmalı
- Doymuş yağ alımı azaltılarak çoklu ya da tekli doymamış yağ alımı arttırılmalı
- Sıvı alımı arttırılmalı, minimum 1,5 lt/gün olmalı, çevresel faktörler ve egzersize göre bu miktar arttırılmalı

Geri Kilo Alımı Sonrası Beslenme Yaklaşımı

Geri Kilo Alımı Yönetimi

- Günün geç saatlerinde kalori alımı azaltılmalı
- Proteinden zengin kahvaltı ile güne başlanmalı
- Öğünler arasında kalorisiz içecekler alınmalı
- Karbonhidratlar meyveler, sebzeler ve tahıllardan alınmalı, kaliteli gıdalar beslenmeye mutlaka dahil edilmelidir.

Geri Kilo Alımı Sonrası Beslenme Yaklaşımı

Geri Kilo Alımı Yönetimi

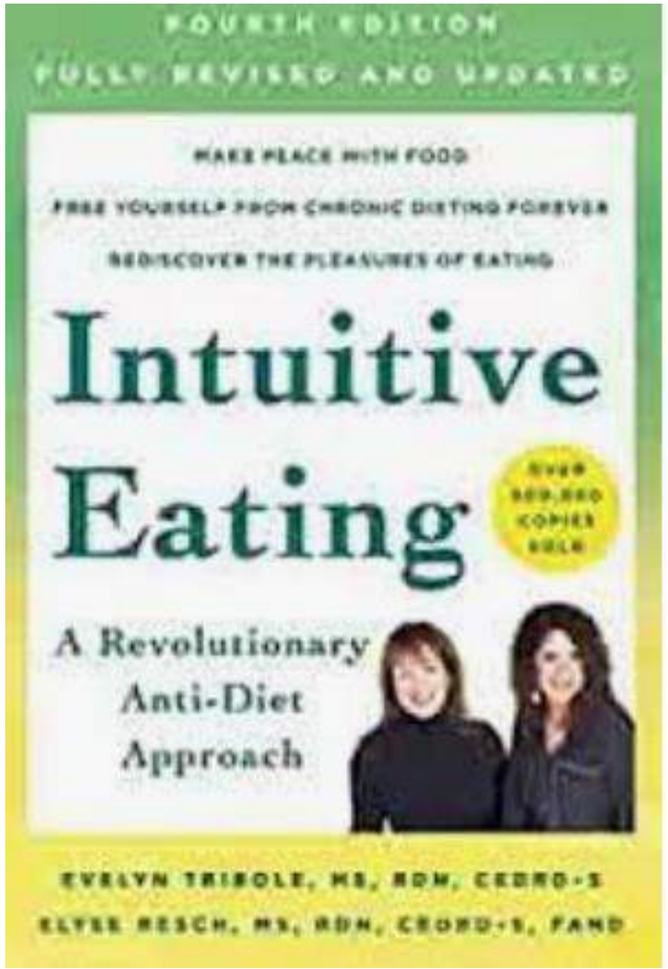
Mide Reset Diyeti??

Sezgisel Yeme Nedir?

- 1995’te iki diyetisyen (Resch ve Tribole) tarafından tanımlanmıştır.
- Besin alımı için açlık ve tokluk sinyallerini temel alır.

•Diyetsiz yaklaşım
•Akıllıca yeme
•Bilinçli yeme

•**Yeme eyleminden tamamı süresince**



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(intuitive) AND (eating)

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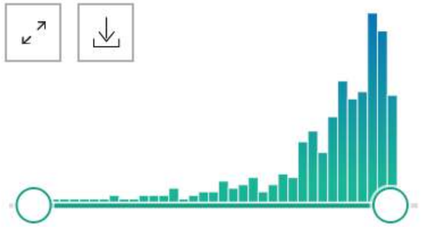
284 results

RESULTS BY YEAR



TEXT AVAILABILITY

- [ ] Abstract
- [ ] Free full text
- [ ] Full text

ARTICLE ATTRIBUTE

- [ ] Associated data

ARTICLE TYPE

1 Cite Share

Relationships between **intuitive eating** and health indicators: literature review.

Van Dyke N, Drinkwater EJ.

Public Health Nutr. 2014 Aug;17(8):1757-66. doi: 10.1017/S1368980013002139. Epub 2013 Aug 21.

PMID: 23962472 Review.

We define the fundamental principles of **intuitive eating** as: (i) **eating** when hungry; (ii) stopping **eating** when no longer hungry/full; and (iii) no restrictions on types of food eaten unless for medical reasons. ...CONCLUSIONS: Research on **intuitive** ...

2 Cite Share

A structured literature review on the role of mindfulness, mindful **eating** and **intuitive eating** in changing **eating** behaviours: effectiveness and associated potential mechanisms.

Warren JM, Smith N, Ashwell M.

Nutr Res Rev. 2017 Dec;30(2):272-283. doi: 10.1017/S0954422417000154. Epub 2017 Jul 18.

PMID: 28718396 Review.

The role of mindfulness, mindful **eating** and a newer concept of **intuitive eating** in modulating **eating** habits is an area of increasing interest. ...Mindfulness-based approaches appear most effective in addressing binge **eating**, emotional **eating** ...

PubMed.gov

(intuitive) AND (eating)

Search

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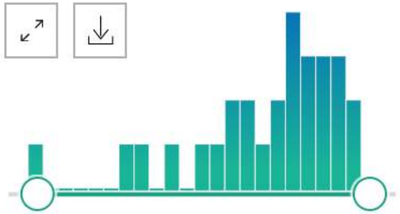
MY NCBI FILTERS

24 results

RESULTS BY YEAR



TEXT AVAILABILITY

- [ ] Abstract
- [ ] Free full text
- [ ] Full text

ARTICLE ATTRIBUTE

- [ ] Associated data

Filters applied: Randomized Controlled Trial. Clear all

1 Cite Share

An uncontrolled pilot feasibility trial of an **intuitive eating** intervention for college women with disordered **eating** delivered through group and guided self-help modalities.

Burnette CB, Mazzeo SE.

Int J Eat Disord. 2020 Sep;53(9):1405-1417. doi: 10.1002/eat.23319. Epub 2020 Jun 1.

PMID: 32476164 Clinical Trial.

OBJECTIVE: College women engage in high rates of disordered **eating** behaviors (DEBs), and most do not receive treatment. Campuses lack resources to meet this need, thus accessible and affordable treatment options are important. **Intuitive eating** (IE) is gaining ...

2 Cite Share

Brief non-dieting intervention increases **intuitive eating** and reduces dieting intention, body image dissatisfaction, and anti-fat attitudes: A randomized controlled trial.

Wilson RE, Marshall RD, Murakami JM, Latner JD.

Appetite. 2020 May 1;148:104556. doi: 10.1016/j.appet.2019.104556. Epub 2020 Jan 1.

PMID: 31901439 Clinical Trial.

Sezgisel Yeme Ne Zaman Başlar?

Sezgisel Yeme Kimlere Uygundur?

- Kronik hastalığı olmayan herkes!
  - Kronik diyetçiler
  - Kısıtlanmaktan hoşlanmayan danışanlar
  - Yeme bozuklukları
  - Binge eating gibi yeme davranış bozuklukları
  - …

Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity
https://doi.org/10.1007/s40519-020-00894-8

ORIGINAL ARTICLE

Intuitive eating is associated with glycemic control in type 2 diabetes

Fabíola Lacerda Pires Soares[1] · Mariana Herzog Ramos[2] · Mariana Gramelisch[1] · Rhaviny de Paula Pego Silva[1] · Jussara da Silva Batista[1] · Monica Cattafesta[3] · Luciane Bresciani Salaroli[1,3,4]

- >20 yaş, en az 1 yıl önce T2DM tanısı almış bireyler
- Yeme bozukluğu,hamile/emzikli,alkolik, tekrarlayan hipoglisemi,psikiyatrik hastalar exclude edilmiş.
- 179 kişi dahil edilmiş (K n:133, elderly n: 97)
- N: 142 fazla kilolu/obez
- Çoğu antidiyabetik alıyor.

Keywords Eating behavior · Nutrition · Diabetes mellitus · Glycosylated hemoglobin

Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity
https://doi.org/10.1007/s40519-020-00894-8

ORIGINAL ARTICLE

Intuitive eating is associated with glycemic control in type 2 diabetes

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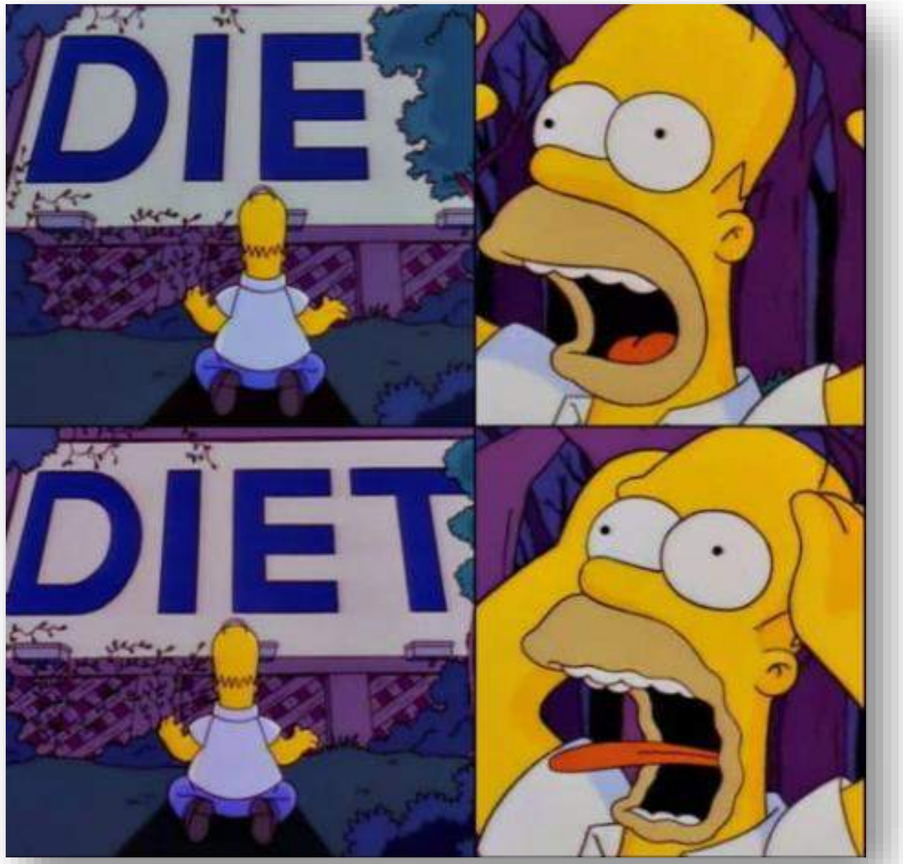
- IES-2 skoruna göre değerlendirilmiş.
- Yeterli glisemik kontrole sahip bireylerin IES-2 skoru anlamı olarak yüksek tespit edilmiş.
- Sezgisel olarak bedenin ihtiyaçlarına göre beslenme, T2DM'de glisemik sağlamaya yardımcı olabilir

Keywords Eating behavior · Nutrition · Diabetes mellitus · Glycosylated hemoglobin

Sezgisel Yemenin İlkeleri

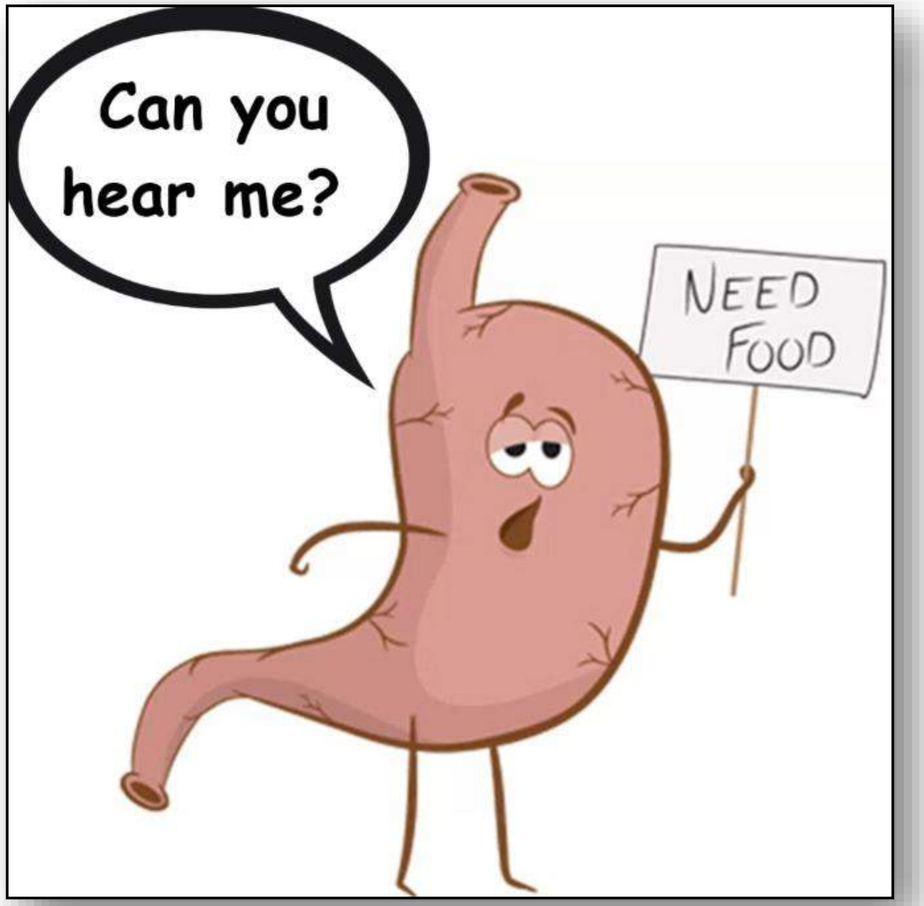
Sezgisel Yemenin İlkeleri

1. Diyet Zihniyetini Reddetmek



Sezgisel Yemenin İlkeleri

2. Açlığı Onurlandırmak – Biyolojik Açlığı Keşfetmek

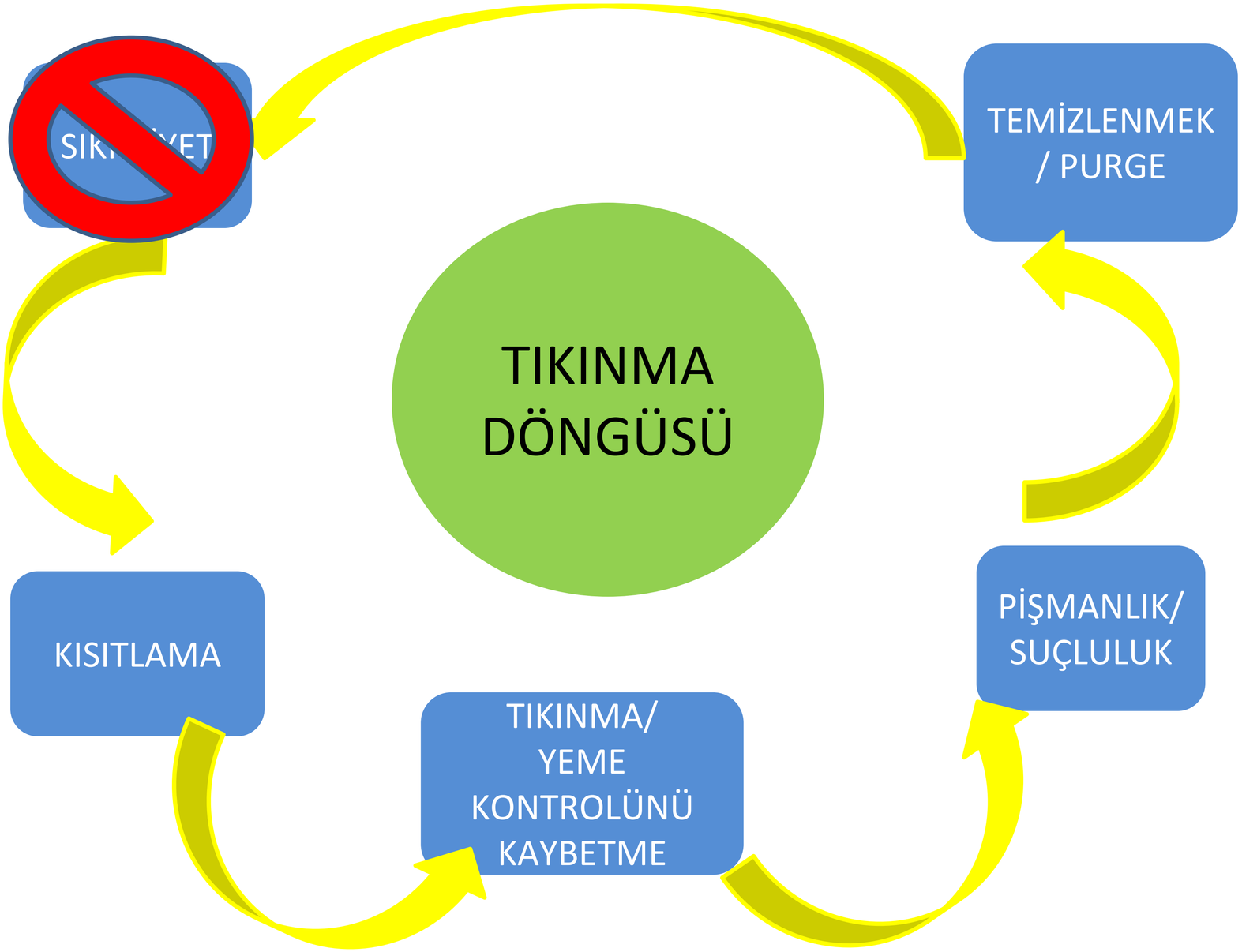


Sezgisel Yemenin İlkeleri

3. Besinlerle Yeniden Sağlıklı İlişki Kurma

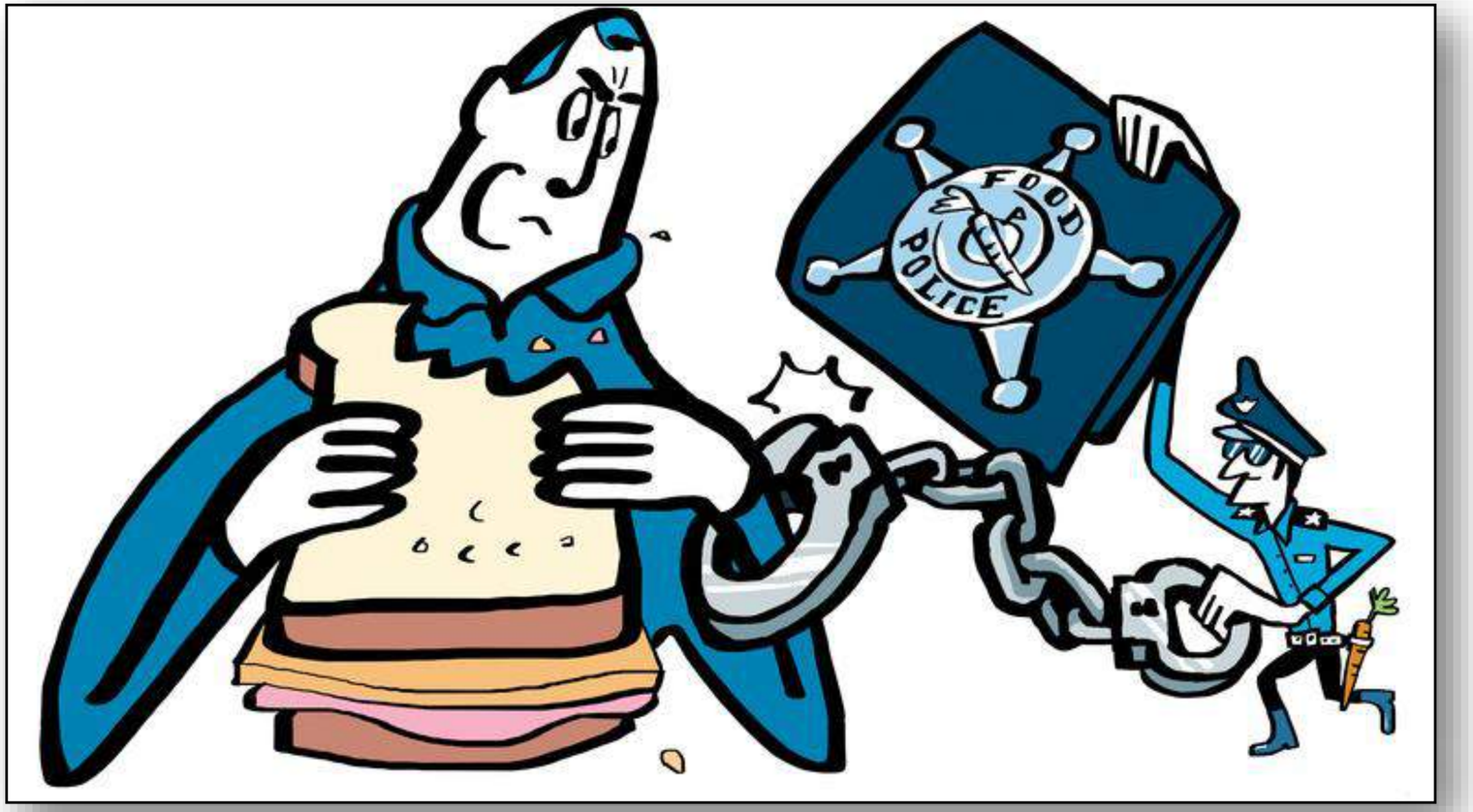
Ateşkes yap!
Savaşı durdur!
İstediğini yemek için koşulsuz izin ver!

Don't Reward Yourself with Food.
You're Not a Dog.


SIKI YET
TEMİZLENMEK / PURGE
TIKINMA DÖNGÜSÜ
KISITLAMA
PİŞMANLIK/ SUÇLULUK
TIKINMA/ YEME KONTROLÜNÜ KAYBETME

Sezgisel Yemenin İlkeleri

4. Yiyecek Polisine Meydan Okuma



Sezgisel Yemenin İlkeleri

5. Tokluğunuzu Hissedin

Sezgisel Yemenin İlkeleri

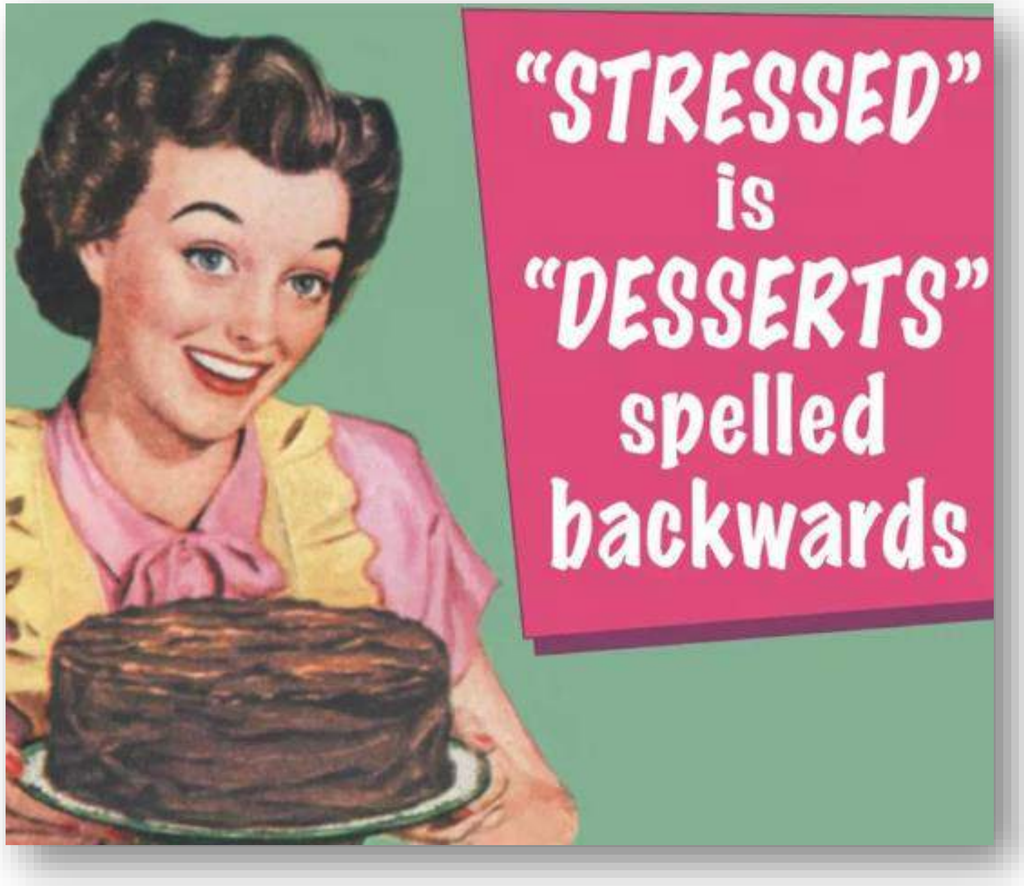
6. Memnuniyet Faktörlerini Keşfedin

Sezgisel Yemenin İlkeleri

7. Yiyecekleri Kullanmadan Duygularınızla Başedin

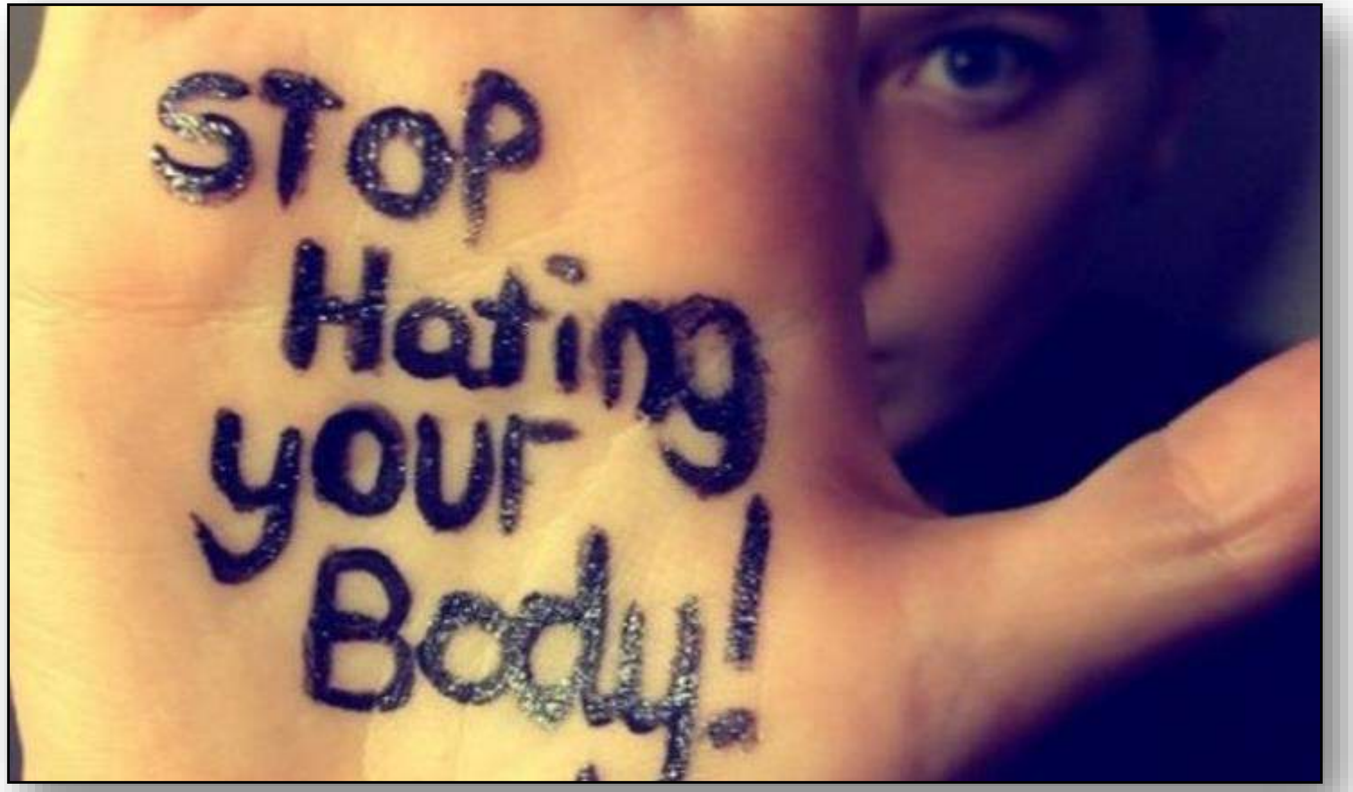
Yiyecekler duygular ile baş etmeye çalışmak faydasızdır. Yiyecekler kısa vadede rahatlatabilir ancak uzun vadede daha kötü hissettirir.

Duygusal olarak aç hissedildiğinde sorunun derinine inip “şu an asıl ihtiyacım olan şey ne?”



Sezgisel Yemenin İlkeleri

8. Bedeninize Saygı Duyun



Sezgisel Yemenin İlkeleri

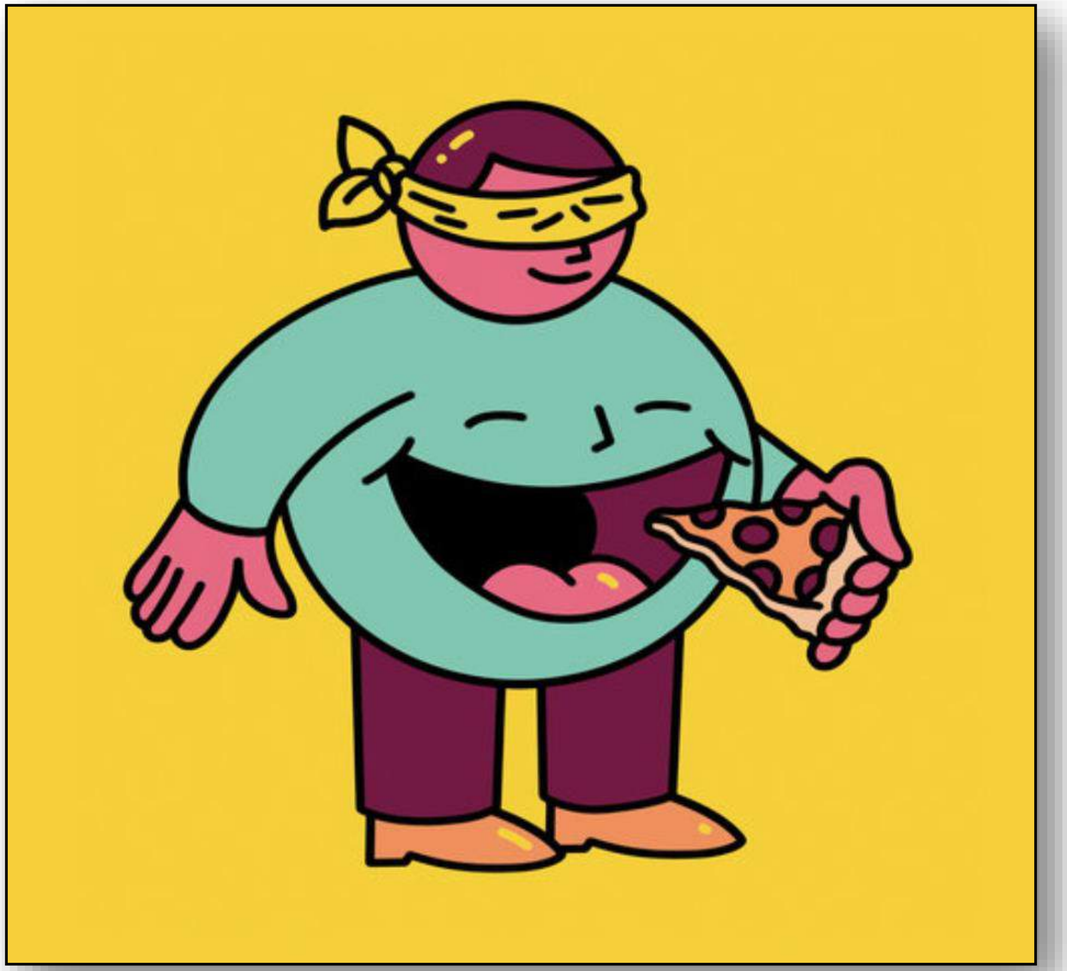
9. Egzersiz – Farkı Hissedin

Sezgisel Yemenin İlkeleri

10. Sağlığınızı Onurlandırın: Hafif Beslenin

Mükemmellik değil ilerleme hedeflenmeli!
<u>Beslenme en temel özbakım: Özşefkat!!</u>

Bariatri Cerrahi Kılavuzlarında Sezgisel Yeme



ELSEVIER

Surgery for Obesity and Related Diseases 4 (2008) S109-S184

SURGERY FOR OBESITY AND RELATED DISEASES

AACE/TOS/ASMBS Guidelines

American Association of Clinical Endocrinologists, The Obesity Society, and American Society for Metabolic & Bariatric Surgery Medical Guidelines for Clinical Practice for the Perioperative Nutritional, Metabolic, and Nonsurgical Support of the Bariatric Surgery Patient

Jeffrey I. Mechanick, M.D., F.A.C.P., F.A.C.E., F.A.C.N., Robert F. Kushner, M.D., Harvey J. Sugerman, M.D., J. Michael Gonzalez-Campoy, M.D., Ph.D., F.A.C.E., Maria L. Collazo-Clavell, M.D., F.A.C.E., Safak Guven, M.D., F.A.C.P., F.A.C.E., Adam F. Spitz, M.D., F.A.C.E., Caroline M. Apovian, M.D., Edward H. Livingston, M.D., F.A.C.S., Robert Brolin, M.D., David B. Sarwer, Ph.D., Wendy A. Anderson, M.S., R.D., L.D.N., and John Dixon, M.D.

American Association of Clinical Endocrinologists, The Obesity Society, and American Society for Metabolic & Bariatric Surgery Medical Guidelines for Clinical Practice are systematically developed statements to assist healthcare professionals in medical decision making for specific clinical conditions. Most of the content herein is based on literature reviews. In areas of uncertainty, professional judgment was applied.

These guidelines are a working document that reflects the state of the field at the time of publication. Because rapid changes in this area are expected, periodic revisions are inevitable. We encourage medical professionals to use this information in conjunction with their best clinical judgment. The presented recommendations may not be appropriate in all situations. Any decision by practitioners to apply these guidelines must be made in light of local resources and individual patient circumstances.

The American Society for Parenteral & Enteral Nutrition fully endorses sections of these guidelines that address the metabolic and nutritional management of the bariatric surgical patient. (Surg Obes Relat Dis 2008;4:S109-S184.)

Abbreviations: **AACE** = American Association of Clinical Endocrinologists; **ACS** = American College of Surgeons; **ASMBS** = American Society for Metabolic & Bariatric Surgery; **BEL** = "best evidence" rating level; **BMD** = bone mineral density; **BMI** = body mass index; **BPD** = biliopancreatic diversion; **BPD/DS** = biliopancreatic diversion with duodenal switch; **CAD** = coronary artery disease; **CK** = creatine kinase; **CPAP** = continuous

Table 10
Suggested meal progression after laparoscopic adjustable gastric band procedure

Diet stage[a]	Begin	Fluids/food	Guidelines
Stage I	Postop days 1 and 2	Clear liquids Noncarbonated; no calories No sugar; no caffeine	On postop day 1, patients may begin sips of water and Crystal Light; avoid carbonation
Stage II **Begin supplementation:** **Chewable** multivitamin with minerals, × 2/d **Chewable or liquid** calcium citrate with vitamin D	Postop days 2-3 (discharge diet)	**Clear liquids** • Variety of no-sugar liquids or artificially sweetened liquids **PLUS full liquids** • ≤15 g of sugar per serving • Protein-rich liquids (≤3 g fat per serving)	Patients should consume a minimum of 48-64 ounces of total fluids per day: 24-32 ounces or more of clear liquids plus 24-32 ounces of any combination of full liquids: • 1% or skim milk mixed with whey or soy protein powder (limit 20 g protein per serving) • Lactaid milk or soy milk mixed with soy protein powder • Light yogurt, blended • Plain yogurt
Stage III	Postop days 10-14[a]	Increase clear liquids (total liquids 48-64 fl oz or more per day) and replace full liquids with soft, moist, diced, ground or pureed protein sources as tolerated **Stage III, week 1:** eggs, ground meats, poultry, soft, moist fish, added fat-free gravy, bouillon, light mayonnaise to moisten, cooked bean, hearty bean soups, low-fat cottage cheese, low-fat cheese, yogurt	**NOTE:** Patients should be reassured that hunger is common and normal postop. Protein food (moist, ground) choices are encouraged for 3-6 small meals per day, to help with satiety, since hunger is common within ~1 week postop. Mindful, slow eating is essential. Encourage patients not to drink with meals and to wait ~30 minutes after each meal before resuming fluids. Eat from small plates and advise using small utensil to help control portions
Stage III	4 weeks postop	Advance diet as tolerated; if protein foods tolerated in week 1, add well-cooked, soft vegetables and soft and/or peeled fruit	Adequate hydration is essential and a priority for all patients during the rapid weight-loss phase. Consume protein at every meal and snack, especially if increased hunger noted before initial fill or adjustment. Very well-cooked vegetables may also help to increase satiety
Stage III	5 weeks postop	Continue to consume protein with some fruit or vegetable at each meal; some people tolerate salads at 1 month postop	If patient is tolerating soft, moist, ground, diced, and/or pureed proteins with small amounts of fruits and vegetables, may add crackers (use with protein) **AVOID** rice, bread, and pasta
Stage IV Vitamin and mineral supplementation daily[b]	As hunger increases and more food is tolerated	Healthy solid food diet	Healthy, balanced diet consisting of adequate protein, fruits, vegetables, and whole grains. Eat from small plates and advise using small utensil to help control portions. Calorie needs based on height, weight, and age
Fill/adjustment	~6 weeks postop and possibly every 6 weeks until satiety reached	Full liquids × 2-3 days post-fill, then advance to Stage III, week 1 guidelines above, as tolerated for another 2-3 days, then advance to the final stage and continue	Same as Stage II liquids above × 48-72 hours (and/or as otherwise advised by surgeon). **NOTE:** When diet advanced to soft solids, special attention to mindful eating and chewing until in liquid form, since more restriction may increase risk for obstruction above stoma of band if food not thoroughly chewed (consistency of applesauce)

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SURGERY FOR OBESITY AND RELATED DISEASES

ASMBS Guidelines

ASMBS Allied Health Nutritional Guidelines for the Surgical Weight Loss Patient

Allied Health Sciences Section Ad Hoc Nutrition Committee:
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This document is intended to provide an overview of the elements that are important to the nutritional care of the bariatric patient. It is not intended to serve as training, a statement of standardization, or scientific consensus. It should be viewed as an educational tool to increase awareness among medical professionals of the potential risk of nutritional deficiencies common to bariatric surgery patients.

The goal of this document is to provide suggestions for conducting a nutrition assessment, education, supplementation, and follow-up care. These suggestions are not mandates and should be treated with common sense. When needed, exceptions should be made according to individual variations and the evaluation findings. It is intended to present a reasonable approach to patient nutrition care and at the same time allow for flexibility among individual practice-based protocols, procedures, and policies. Amendments to this document are anticipated as more research, scientific evidence, resources, and information become available.

nutrition assessment should be conducted preoperatively by a dietitian, physician, and/or well-informed, qualified multidisciplinary team to identify the patient's nutritional and educational needs. It is essential to determine any preexisting nutritional deficiencies, develop appropriate dietary interventions for correction, and create a plan for postoperative dietary intake that will enhance the likelihood of success.

The management of postoperative nutrition begins preoperatively with a thorough assessment of nutrient status, a strong educational program, and follow-up to reinforce important principals associated with long-term weight loss maintenance. A comprehensive nutrition evaluation goes far beyond assessing the actual dietary intake of the bariatric patient. It takes into account the whole person, encompassing several multidisciplinary facets. Not only should the practitioner review the standard assessment components (i.e., medical co-morbidities, weight history, laboratory values, and nutritional intake), it is also important to evaluate other issues that could affect nutrient status, including readiness for change, realistic goal setting, general nutrition knowledge, as well as behavioral, cultural, psychosocial

Table 2
Suggested Preoperative Nutrition Education

Recommended	Suggested	Other considerations
Discuss/include		
Importance of taking personal responsibility for self-care and lifestyle choices	Realistic goal setting	Appropriate monitoring of weight loss
Techniques for self-monitoring and keeping daily food journal	Benefits of physical activity	
Preoperative diet preparation (if required by program)		
Postoperative intake	Common complaints	Long-term maintenance
Adequate hydration	Dehydration	Self-monitoring
Texture progression	Nausea/vomiting	Nutrient dense food choices for disease prevention
Vitamin/mineral supplements	Anorexia	
Protein supplements	Effects of ketosis	Restaurants
Meal planning and spacing	Return of hunger	Label reading
Appropriate carbohydrate, protein, and fat intake, and food/fluid choices to maximize safe weight loss, nutrient intake, and tolerance	Stomal obstruction from food	Healthy cooking techniques
	Dumping syndrome	Relapse management
	Reactive hypoglycemia	
Concepts of intuitive eating	Constipation	
Techniques and tips to maximize food and fluid tolerance	Diarrhea/steatorrhea	
	Flatulence/bowel sounds	
Possibility of nutrient malabsorption and importance of supplement compliance	Lactose intolerance	
	Alopecia	
Possibility of weight regain		

Table 3
Suggested Postoperative Nutrition Follow-up

Recommended	Suggested	Other considerations
Anthropometric		
Current and accurate height, weight, BMI, and percentage of excess body weight	Overall sense of well-being	Use of contraception to avoid pregnancy
Biochemical	Activity level	Psychosocial
Review laboratory findings when available	Amount, type, intensity, and frequency of activity	Changing relationship with food
		Changes in support system
		Stress management
		Body image
Medication review		
Encourage patients to follow-up with PCP regarding medications that treat rapidly resolving co-morbidities (e.g., hypertension, diabetes mellitus)		
Vitamin/mineral supplements		
Adherence to protocol		
Dietary intake		
Usual or actual daily intake	Estimated caloric intake of usual or actual intake	Promote anti-obesity foods containing:
Protein intake	Reinforce intuitive eating style to improve food tolerance	Omega-3 fatty acids
Fluid intake	Appropriate meal planning	High fiber
Assess intake of anti-obesity foods		Lean quality protein sources
Food texture compliance		Whole fruits and vegetables
Food tolerance issues (e.g., nausea/vomiting, "dumping")		Foods rich in phytochemicals and antioxidants
Appropriate diet advance		Low-fat dairy (calcium)
Address individual patient complaints		Discourage pro-obesity processed foods containing:
Address lifestyle and educational needs for long term weight loss maintenance		Refined carbohydrates
		Trans and saturated fatty acids

BMI = body mass index; PCP = primary care physician.

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A mindfulness-based intervention to control weight after bariatric surgery: Preliminary results from a randomized controlled pilot trial

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ABSTRACT

Objective: This study aimed to develop and test a novel mindfulness-based intervention (MBI) designed to control weight after bariatric surgery.
Design: Randomized, controlled pilot trial.
Setting: Beth Israel Deaconess Medical Center, Boston, MA, USA.
Interventions: Bariatric patients 1–5 years post-surgery (n = 18) were randomized to receive a 10-week MBI or a standard intervention.
Main outcome measures: Primary outcomes were feasibility and acceptability of the MBI. Secondary outcomes included changes in weight, eating behaviors, psychosocial outcomes, and metabolic and inflammatory biomarkers. Qualitative exit interviews were conducted post-intervention. Major themes were coded and extracted.
Results: Attendance was excellent (6 of 9 patients attended ≥7 of 10 classes). Patients reported high satisfaction and overall benefit of the MBI. The intervention was effective in reducing emotional eating at 6 months (−4.9 ± 13.7 in mindfulness vs. 6.2 ± 28.4 in standard, p for between-group difference = 0.03) but not weight. We also observed a significant increase in HbA1C (0.34 ± 0.38 vs. −0.06 ± 0.31, p = 0.03). Objective measures suggested trends of an increase in perceived stress and symptoms of depression, although patients reported reduced stress reactivity, improved eating behaviors, and a desire for continued mindfulness-based support in qualitative interviews.
Conclusions: This novel mindfulness-based approach is highly acceptable to bariatric patients post-surgery and may be effective for reducing emotional eating, although it did not improve weight or glycemic control in the short term. Longer-term studies of mindfulness-based approaches may be warranted in this population.
Clinical trial registration: ClinicalTrials.gov identifier NCT02603601.

1. Introduction

Bariatric surgery is the most effective treatment for severe obesity,[1] yet weight regain is common and typically begins 1–2 years post-surgery. Approximately 30% of patients regain weight at 18 months to 2 years after surgery[2] with a small minority regaining most of their weight. Although factors driving weight regain are not fully understood, it is widely believed that psychological and behavioral factors play a major role.[3] Studies suggest weight regain is more likely among patients who fare worse psychologically after surgery.[3]

Treatment options to prevent weight regain, however, are not well studied. Traditional behavioral strategies incorporating diet, physical activity, and behavioral modification, although effective in the short term, are generally not successful in maintaining weight loss in the long term and are not effective in patients with severe obesity.[4] These approaches may lack effectiveness because they do not adequately emphasize coping skills for handling stress, a frequent trigger of disordered eating behaviors.

Mindfulness-based approaches, in contrast, provide a systematic method of stress reduction that may be particularly well suited for bariatric patients who face unusually high levels of obesity-related stigma, discrimination, and social bias.[5,6] Mind-

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Mindfulness-based intervention (MBI -bariatrik cerrahi sonrası kilo kontrolü için geliştirilmiş bir program) vs standart beslenme müdahalesi

MBI için geçerlilik güvenilirlik de çalışılmış.

6 ay takip edilen katılımcılarda programa devamlılık yüksek (6/9)

6. Ayda duygusal yeme davranışında azalma
Stres ve yeme davranışlarında iyileşme
MBI devamlılık isteği

<u>Kilo kaybında bir değişiklik gözlenmedi</u>

Intuitive eating is associated with weight loss after bariatric surgery in women

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ABSTRACT

Background: Although the data on eating behavior after bariatric surgery are substantial, data on "intuitive eating" are lacking.

Objective: The aim of this study was to evaluate the link between intuitive eating and weight loss after bariatric surgery.

Methods: This cross-sectional study used a self-administered questionnaire freely available on social networks and targeted women who had undergone bariatric surgery. Intuitive eating was evaluated with the Intuitive Eating Scale-2 (IES-2). The 3 questionnaire subscores (Eating for Physical Rather than Emotional Reasons, Reliance on Hunger and Satiety Cues, and Unconditional Permission to Eat) were also analyzed. The relation between IES-2 scores and the relative variation in body mass index [BMI (in kg/m^2)] was assessed with linear regression models. Adjusted β (β_{Adj}) and standardized β (β^{STD}_{Adj}) were reported.

Results: We analyzed the responses of 401 women with a mean age of 39 ± 11 y, a mean preoperative BMI of 45.5 ± 7.9, and a mean current BMI of 30.5 ± 7. The mean relative BMI loss was 32.7 ± 12.9%, and the mean IES-2 score was 3.3 ± 0.6. The total IES-2 score was associated with the relative BMI loss, with ~2.6% BMI loss for each 1-point increase in the IES-2 score [P_{Adj} = 0.007; β_{Adj} = −2.57 (95% CI: −4.44, −0.70); β^{STD}_{Adj} = −0.12] after adjusting for elapsed time since surgery and type of surgery. Eating for Physical Rather than Emotional Reasons was the subscore most strongly associated with BMI change after adjustment [P_{Adj} = 0.002; β_{Adj} = −2.08 (95% CI: −3.37, 0.79); β^{STD}_{Adj} = −0.14].

Conclusions: This study highlights a significant association between intuitive eating and BMI decrease after bariatric surgery. Furthermore, eating behaviors changed with increasing time since surgery. An intuitive nutritional approach may be complementary with bariatric surgery in the postoperative phase, which should prompt complementary prospective studies to evaluate the effectiveness of therapeutic education programs centered on intuitive eating in the postoperative period. *Am J Clin Nutr* 2019;110:10–15.

Keywords: bariatric surgery, intuitive eating, weight loss, obesity, Intuitive Eating Scale-2

Introduction

The rise in the prevalence of obesity and overweight during the past several decades has become a worrisome problem in many countries (1–3). WHO has reported that worldwide obesity prevalence doubled from 1980 to 2014 (1), with 39% of today's adults being overweight and 13% being obese. The continuing rise in obesity (4) has prompted the development of management strategies to better prevent and control comorbidities (5–7) and reduce mortality (8–10). Obesity management currently revolves around nutritional, pharmaceutical, and surgical treatments, in addition to global patient support. Nutritional management has been revolutionized in the past few years, with changes made to the classic restrictive diets (11) and an orientation toward more behavioral therapies centered on intuitive eating (12–15). Intuitive eating is an adaptive eating style characterized by eating in response to physiological cues (hunger and satiety) rather than emotional cues and by not forbidding certain foods, as seen in cognitive restraint (16). The main advantage of this intuitive therapy is its adaptability to the patient-specific physiological or pathological characteristics that have accumulated during life, without the adverse metabolic and psychological effects of restrictive diets. Bariatric surgery, however, is recommended as the last option for patients suffering from severe obesity after failure of medical care (17, 18). Nevertheless, in the latter case, nutritional management remains essential in both the preoperative and postoperative phases. The benefits of bariatric surgery have been well described in terms of weight loss (19, 20),

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Supplemental Figure 1 and Supplemental Tables 1 and 2 are available from the "Supplementary data" link in the online posting of the article and from the same link in the online table of contents at https://academic.oup.com/ajcn/.

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Abbreviations used: AGB, adjustable gastric banding; GB, gastric bypass; SG, sleeve gastrectomy.

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401 kadın hastada
%6,8 AGB
%50,3 SG
%42,9 GB
6-66 ay
Postop 6-66. aylarında IES-2 ölçeği ile anket çalışması
%81,5 başarılı
%13,3 orta düzeyde başarı
%5,1 başarısız
Ameliyat sonrası BMI azalması ve sezgisel yeme arasında anlamlı ilişki vardır.
Sezgisel yeme yaklaşımı postoperatif bariatrik cerrahide tamamlayıcı unsur olabilir.

TABLE 2 Subscore of IES-2 and characteristics of participants according to the quartiles of IES-2 adapted from NutriNet Santé (n = 379) (13)[1]

	$Q1_{NutriNet}$, n = 79 (20.8%)	$Q2_{NutriNet}$, n = 116 (30.6%)	$Q3_{NutriNet}$, n = 91 (24.0%)	$Q4_{NutriNet}$, n = 93 (24.5%)	P
IES-2 score, median [min–max]					
Total score	2.56 [1.72–2.78]	3.06 [2.83–3.28]	3.5 [3.33–3.67]	4.06 [3.72–4.83]	
Score: Eating for Physical Rather than Emotional Reasons	2.25 [1.13–4.13]	2.88 [1.50–4.50]	3.50 [2.38–5.00]	4.13 [2.88–5.00]	<0.001[2]
Score: Reliance on Hunger and Satiety Cues	3.00 [1.00–4.33]	3.67 [1.50–5.00]	4.00 [2.67–5.00]	4.17 [3.00–5.00]	<0.001[2]
Score: Unconditional Permission to Eat	2.50 [1.00–5.00]	2.50 [1.00–5.00]	2.75 [1.00–5.00]	3.75 [2.00–5.00]	<0.001[2]
Characteristics					
Age, y (mean ± SD)	38.8 ± 9.8	39.7 ± 10.4	39.5 ± 10.6	37.6 ± 10.3	0.47[2]
BMI, kg/m^2 (mean ± SD)	31.6 ± 8.6	30.1 ± 6.4	31.7 ± 8.7	28.8 ± 6.1	0.07[2]
Weight status, n (%)					
BMI <25	18 (22.8)	23 (20.0)	20 (22.2)	32 (34.8)	0.21[3]
BMI 25–30	22 (27.9)	41 (35.7)	26 (28.9)	25 (27.2)	
BMI ≥30	39 (49.4)	51 (44.4)	44 (49.9)	35 (38.0)	

[1]IES-2, Intuitive Eating Scale-2.
[2]Wilcoxon–Mann–Whitney test.
[3]Chi-square test.

BC Sonrası Sezgisel Yemeden Uzaklaştıran Bazı Uygulamalar

Gerçekçi Olmayan Kilo Hedefi Belirleme

BC Sonrası Sezgisel Yemeden Uzaklaştıran Bazı Uygulamalar

Geri Kilo Alımı Gerçeğini Görmezden Gelme/Bilmeme

Review

Journal of INTERNAL MEDICINE

doi: 10.1111/joim.12012

Review of the key results from the Swedish Obese Subjects (SOS) trial – a prospective controlled intervention study of bariatric surgery

L. Sjöström

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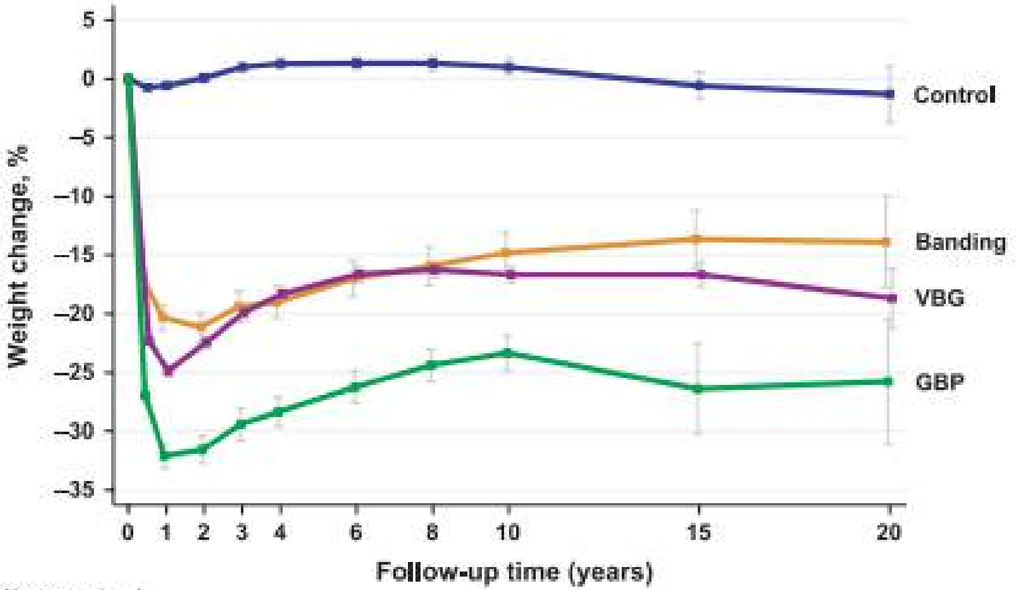
Abstract. L. Sjöström (The Sahlgrenska Academy, The University of Gothenburg, Gothenburg, Sweden). Review of the key results from the Swedish Obese Subjects (SOS) trial – a prospective controlled intervention study of bariatric surgery (Review). *J Intern Med* 2013; **273**: 219–234.

Obesity is a risk factor for diabetes, cardiovascular disease events, cancer and overall mortality. Weight loss may protect against these conditions, but robust evidence for this has been lacking. The Swedish Obese Subjects (SOS) study is the first reports. The mean changes in body weight after 2, 10, 15 and 20 years were −23%, −17%, −16% and −18% in the surgery group and 0%, 1%, −1% and −1% in the control group respectively. Compared with usual care, bariatric surgery was associated with a long-term reduction in overall mortality (primary endpoint) [adjusted hazard ratio (HR) = 0.71, 95% confidence interval (CI) 0.54–0.92; $P = 0.01$] and decreased incidences of diabetes (adjusted HR=0.17; $P < 0.001$), myocardial infarction (adjusted HR = 0.71; $P = 0.02$), stroke (adjusted HR=0.66; $P = 0.008$) and cancer (women:



No. examined

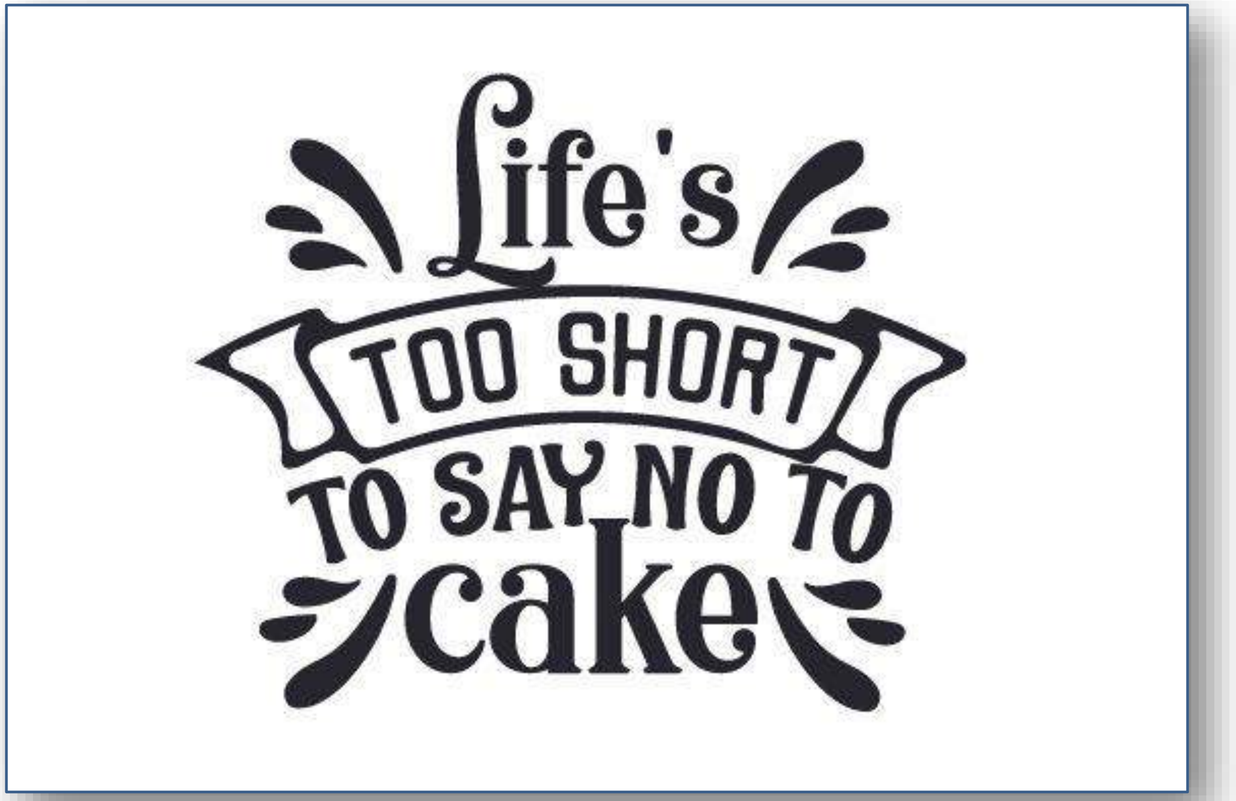
Control	2037	1490	1242	1267	556	176
Banding	376	333	284	284	150	50
VBG	1369	1086	987	1007	489	82
GBP	265	209	184	180	37	13

BC Sonrası Sezgisel Yemeden Uzaklaştıran Bazı Uygulamalar

Çok Sık Beslenme

BC Sonrası Sezgisel Yemeden Uzaklaştıran Bazı Uygulamalar

“Mükemmel” Diyetçiler



BC Sonrası Sezgisel Yemeden Uzaklaştıran Bazı Uygulamalar

Diyetisyen Yiyecek Polisi Değil Beslenme Bilgisi Veren Olmalı

Sonuç

- Ameliyat sonrası nutrisyonel komplikasyonlar ile başa çıkmak için diyetisyen takibi çok önemlidir.
- Hastalar mutlaka beslenme alışkanlıkları, ameliyat sonrası önerileri uyum açısından sorgulanmalıdır.
- Bariatrik cerrahi sonrası ömür boyu takip gereklidir.
- Ameliyat sonrası beslenmeye bağlı komplikasyonların müdahalesinde multidisipliner bir ekip ile çalışmak çok önemlidir.

Sonuç

Sezgisel yeme,

- Erken dönemde;
  - Sindirimi kolaylaştırmak
  - Bulantı kusma şikayetlerini azaltmak
- Orta/uzun dönemde;
  - Optimum kilo kaybını sağlamak için
  - Geri kilo alımını engelleme
  - Geri kilo alımında tekrar kilo verimini sağlamak açısından faydalı olabilir.

"Do not dwell in the past, do not dream of the future, concentrate the mind on the present moment”

Buddha

MBCDD
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