



DIABETE OGGI

prevenzione e cura al centro
del cambiamento

Latina, 7 giugno 2025

OLTRE LO STILE DI VITA: QUALI OPZIONI CHIRURGICHE?

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**Dipartimento di Scienze e Biotecnologie Medico-Chirurgiche
Sapienza Polo Pontino**



***“Surgery represents the only effective
therapeutic modality for morbid obesity”***



L'EVOLUZIONE DELLA CHIRURGIA BARIATRICA



Doctor Hasdai Ibn Shaprut

X secolo

Cucì le labbra del re di Leon Sancho che per la sua obesità rischiava di perdere il trono e lo nutrì con teriaca.



Dalla leggenda..

..AL BISTURI

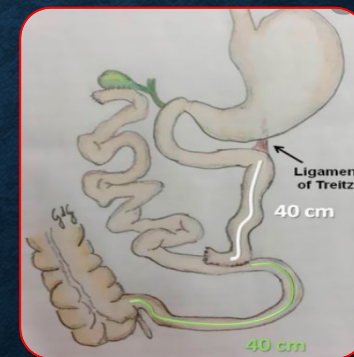
Publ **Kremen AJ**, Linner JH, Nelson CH. An experimental evaluation of the nutritional importance of proximal and distal small intestine. Ann Surg. **1954**;140:439–48.6.



60/70's...

Several modifications (none of them gained widespread acceptance)

jejunioileal bypass: 1963, Payne et al



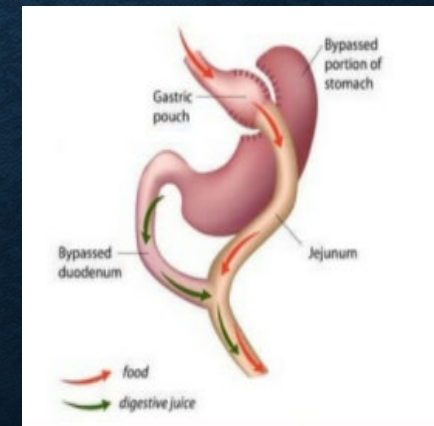
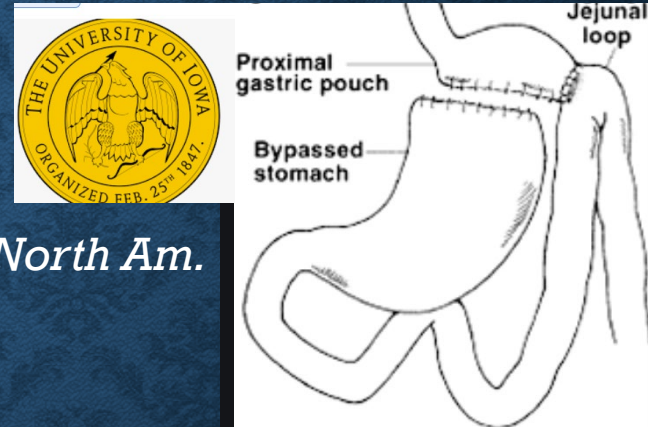
60'S

Bypass ERA

Mason EE, Ito C. Gastric bypass in obesity. Surg Clin North Am. 1967;47:1345–51.9.

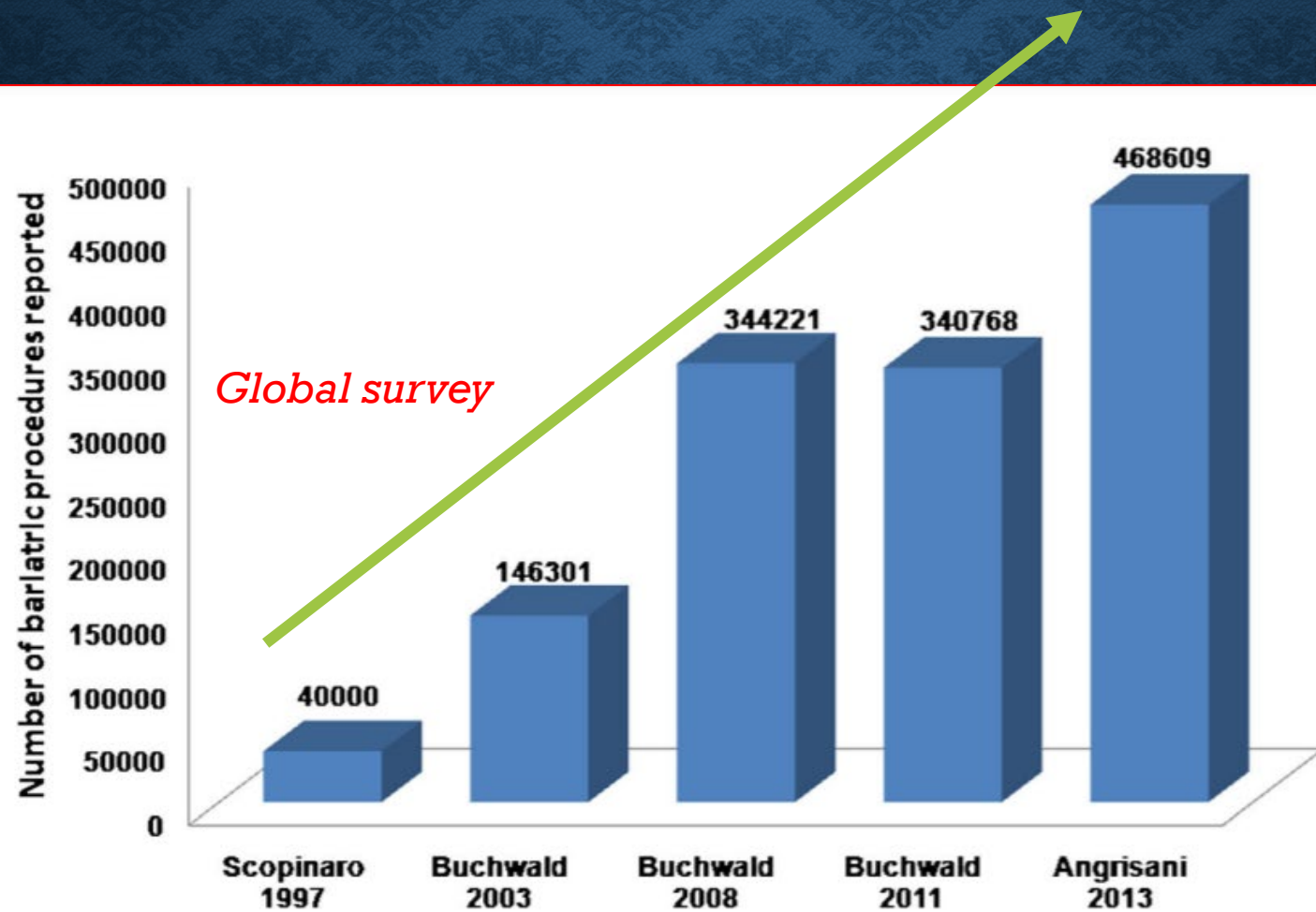


Mason EE, Printen KJ, Hartford CE, Boyd WC. Optimizing results of gastric bypass. Ann Surg. 1975;182:405–14.10



90'S..A BIG NEWS..LAPAROSCOPY!





ORIGINAL CONTRIBUTIONS



IFSO Worldwide Survey 2020–2021: Current Trends for Bariatric and Metabolic Procedures

Luigi Angrisani¹ · Antonella Santonicola² · Paola Iovino² · Rossella Palma³ · Lilian Kow⁴ · Gerhard Prager⁵ · Almino Ramos⁶ · Scott Shikora⁷ · the Collaborative Study Group for the IFSO Worldwide Survey

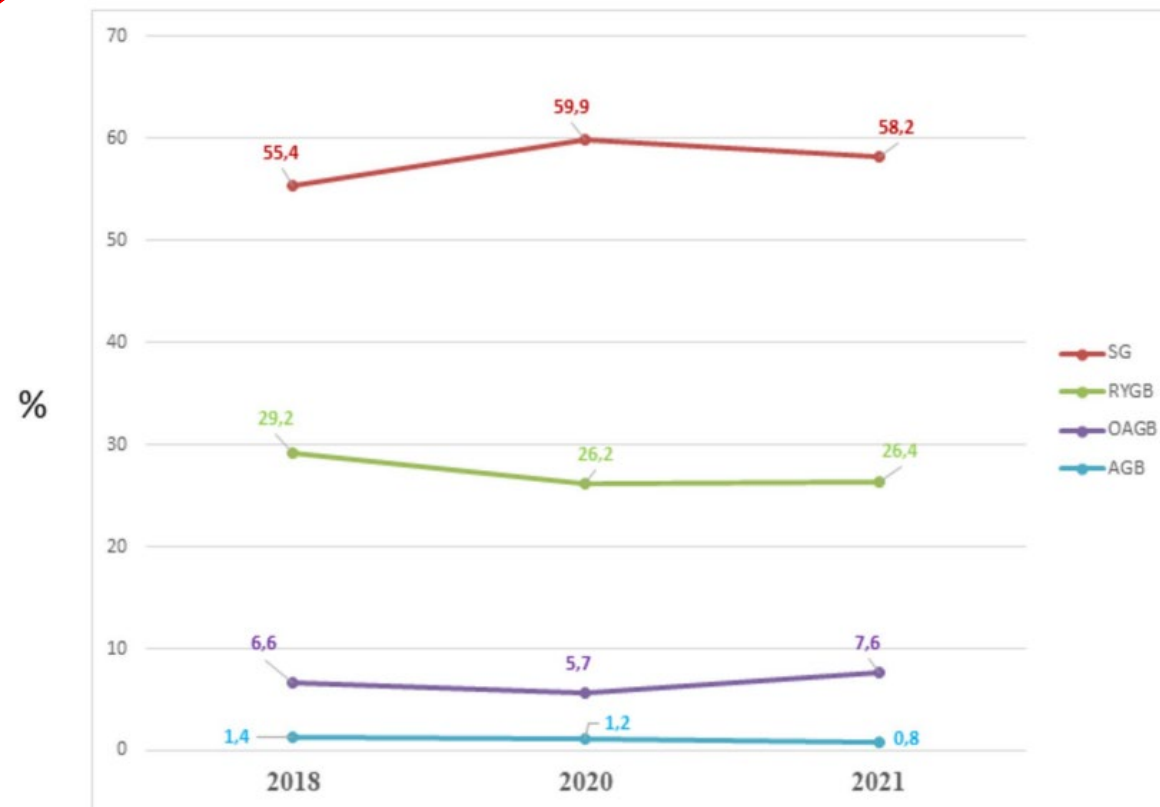
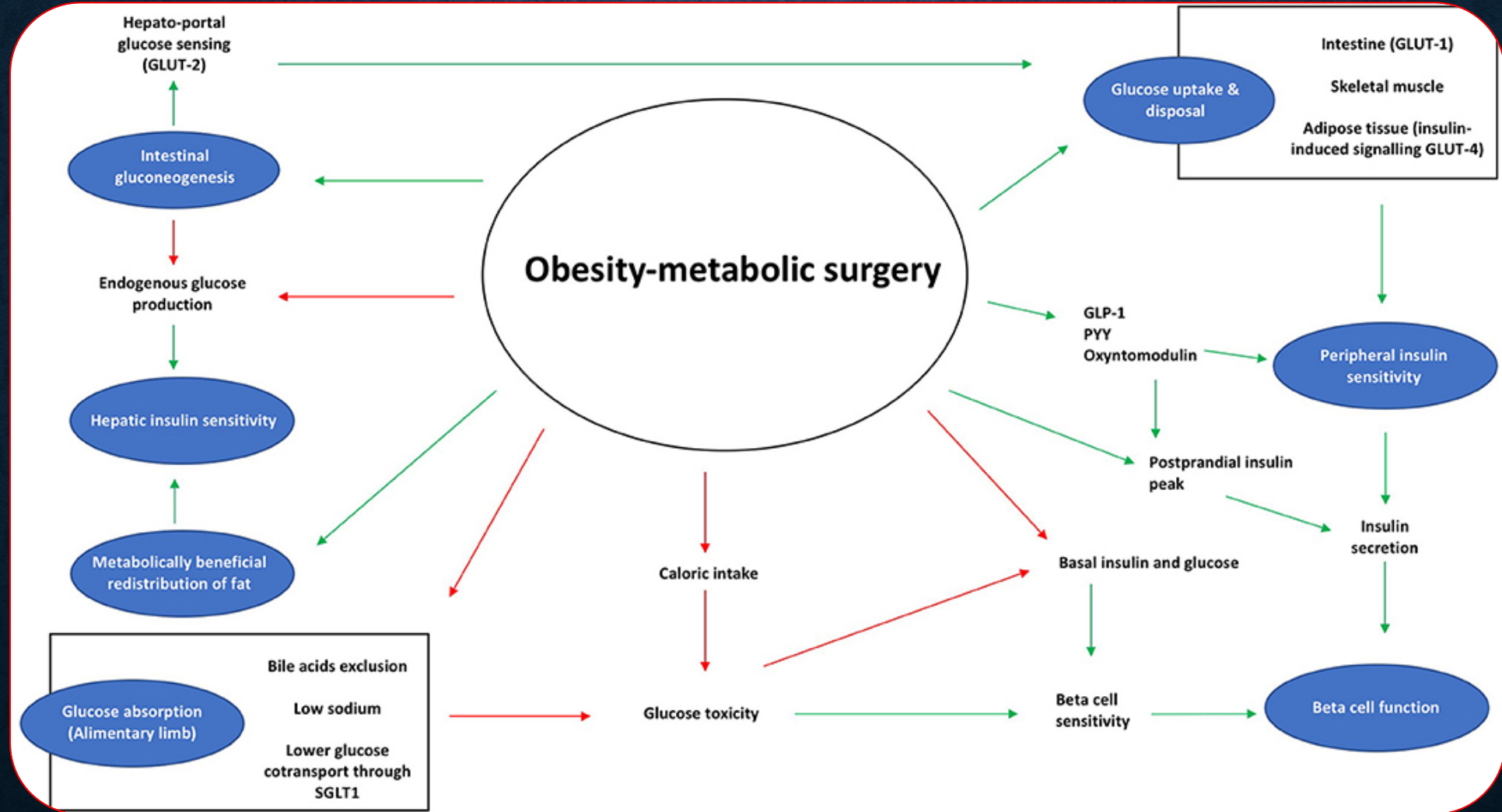


Fig. 2 The worldwide trend from 2018 to 2021 of the main bariatric/metabolic procedures

2020 507,806
2021 598,834



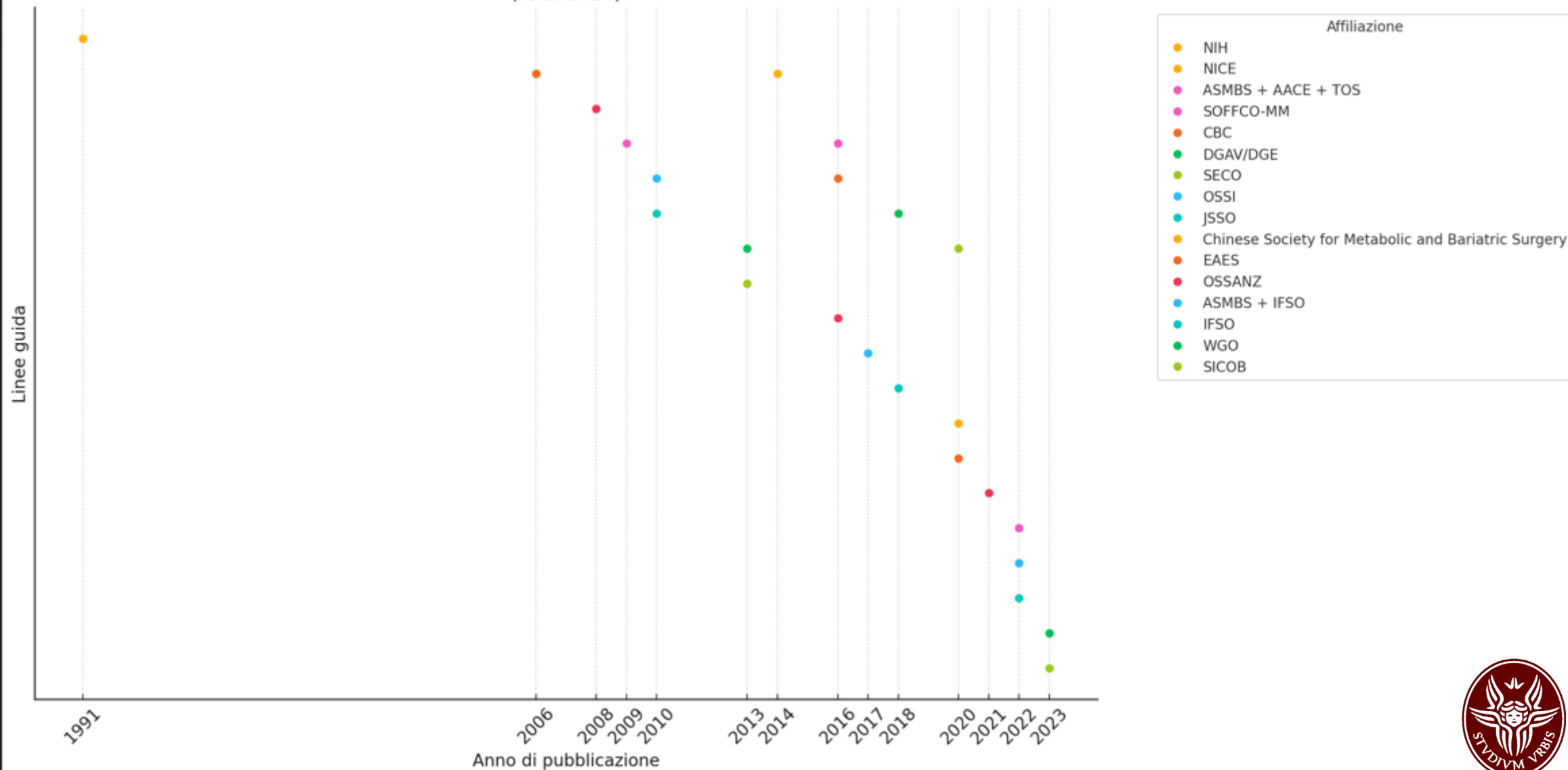
BARIATRIC AND METABOLIC



INDICATIONS



Linee guida bariatriche pubblicate nel mondo (Totale: 24)





Clinical practice guidelines of the European Association for Endoscopic Surgery (EAES) on bariatric surgery: update 2020 endorsed by IFSO-EC, EASO and ESPCOP

Nicola Di Lorenzo¹ · Stavros A. Antoniou^{2,3} · Rachel L. Batterham^{4,5} · Luca Busetto⁶ · Daniela Godoroja⁷ · Angelo Iossa⁸ · Francesco M. Carrano⁹ · Ferdinando Agresta¹⁰ · Isaias Alarçon¹¹ · Carmil Azran¹² · Nicole Bouvy¹³ · Carmen Balagué Ponz¹⁴ · Maura Buza¹⁵ · Catalin Copaescu¹⁵ · Maurizio De Luca¹⁶ · Dror Dicker¹⁷ · Angelo Di Vincenzo⁶ · Daniel M. Felsenreich¹⁸ · Nader K. Francis¹⁹ · Martin Fried²⁰ · Berta Gonzalo Prats¹⁴ · David Goitein²¹ · Jason C. G. Halford^{22,23} · Jitka Herlesova²⁰ · Marina Kalogridaki²⁴ · Hans Ket²⁵ · Salvador Morales-Conde¹¹ · Giacomo Piatto¹⁶ · Gerhard Prager¹⁸ · Suzanne Pruijssers¹³ · Andrea Pucci^{4,5} · Shlomi Rayman²¹ · Eugenia Romano^{22,23} · Sergi Sanchez-Cordero²⁶ · Ramon Vilallonga²⁷ · Gianfranco Silecchia⁸

Received: 24 February 2020 / Accepted: 7 April 2020

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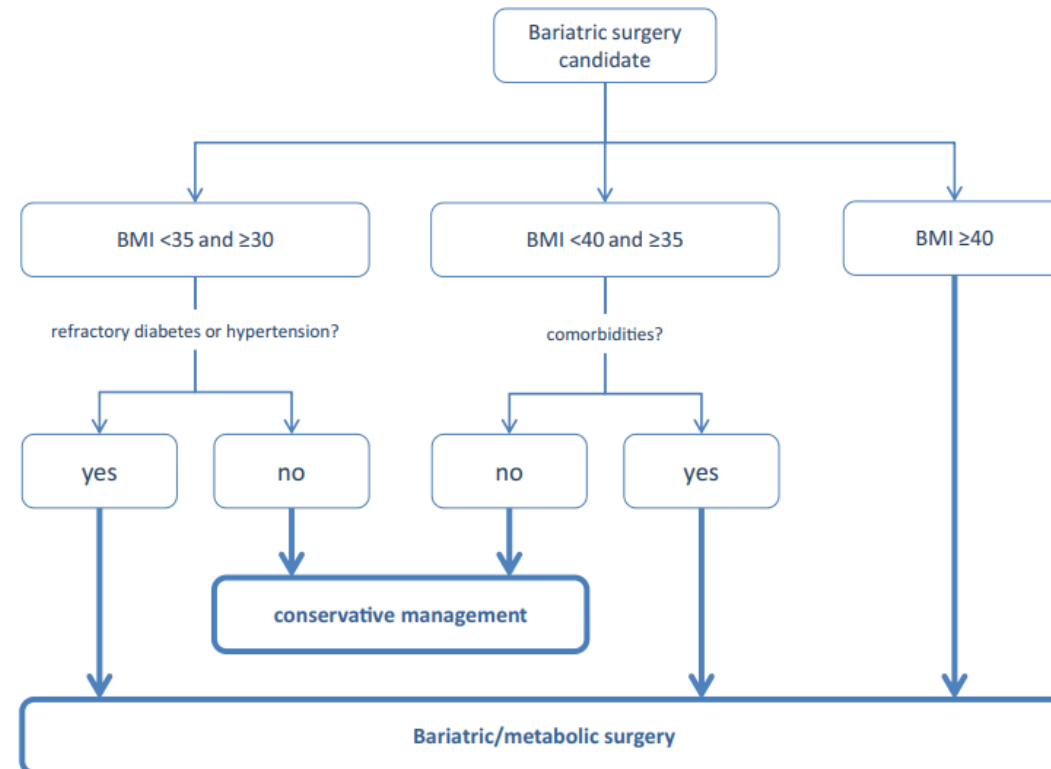
BMI ≥ 40 kg/m²

BMI ≥ 35 – 40 kg/m² with associated weight loss

Strong recommendation

BMI 30 – 35 kg/m² and type 2 diabetes despite optimal medical therapy

Strong recommendation



Original article

2022 American Society for Metabolic and Bariatric Surgery (ASMBS) and International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO): Indications for Metabolic and Bariatric Surgery

Dan Eisenberg, M.D.^{a,*}, Scott A. Shikora, M.D.^b, Edo Aarts, M.D., Ph.D.^c, Ali Aminian, M.D.^d, Luigi Angrisani, M.D.^e, Ricardo V. Cohen, M.D., Ph.D.^f, Maurizio De Luca, M.D.^g, Silvia L. Faria, Ph.D.^h, Kasey P. S. Goodpaster, Ph.D.^d, Ashraf Haddad, M.D.ⁱ, Jacques M. Himpens, M.D., Ph.D.^j, Lilian Kow, B.M.B.S., Ph.D.^k, Marina Kurian, M.D.^l, Ken Loi, M.B.B.S., B.Sc. (Med)^m, Kamal Mahawar, M.B.B.S., M.Sc.ⁿ, Abdelrahman Nimeri, M.D., M.B.B.Ch.^o, Mary O'Kane, M.Sc., R.D.^p, Pavlos K. Papasavas, M.D.^q, Jaime Ponce, M.D.^r, Janey S. A. Pratt, M.D.^{a,s}, Ann M. Rogers, M.D.^t, Kimberley E. Steele, M.D., Ph.D.^u, Michel Suter, M.D.^{v,w}, Shanu N. Kothari, M.D.^x



Major updates to 1991 National Institutes of Health guidelines for bariatric surgery

- Metabolic and bariatric surgery (MBS) is recommended for individuals with a body mass index (BMI) $\geq 35 \text{ kg/m}^2$, regardless of presence, absence, or severity of co-morbidities.
- MBS should be considered for individuals with metabolic disease and BMI of 30–34.9 kg/m^2 .
- BMI thresholds should be adjusted in the Asian population such that a BMI $\geq 25 \text{ kg/m}^2$ suggests clinical obesity, and individuals with BMI $\geq 27.5 \text{ kg/m}^2$ should be offered MBS.
- Long-term results of MBS consistently demonstrate safety and efficacy.
- Appropriately selected children and adolescents should be considered for MBS.

(Surg Obes Relat Dis 2022;18:1345–1356.) © 2022 The Author(s) Published by Elsevier Inc on behalf of American Society for Metabolic & Bariatric Surgery (ASMBS) and Springer Nature on behalf of International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO). All rights reserved. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Keywords: Obesity; Metabolic and bariatric surgery; IFSO; ASMBS; Criteria; Indications



Methods



1991 consensus guidelines

Literature review & update

Procedure type



Indications

Results



Indications expanded



BMI 30-34.9



Related medical problems



BMI ≥ 35



Related medical problems

Results



Indications expanded



Asians threshold



BMI 25-27.5

Results



Special population



Bridge to joint replacement > 2 yrs prior



Bridge to abdominal wall hernia



Bridge to organ transplant

Results



Age limits expanded



Age ≥ 70



Frailty



Risk Vs Benefit



Children/ Adolescents



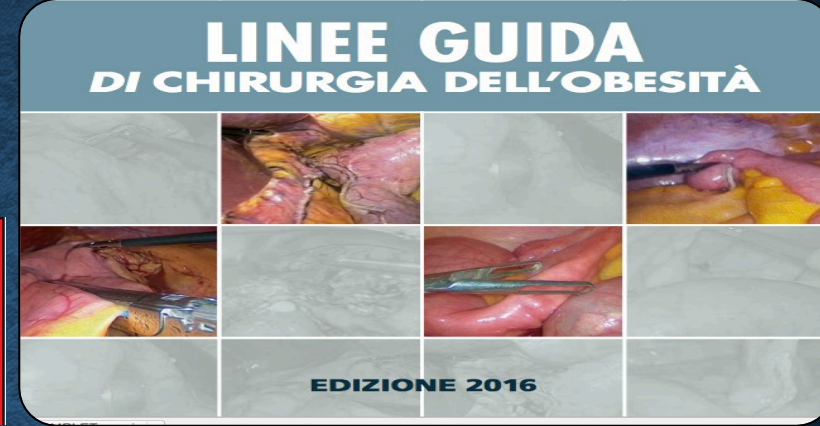
BMI >120%
95th Pc +
BMI >140%
95th Pc



Related medical problems



2016



- **BMI >40 kg/m²**, in assenza di ogni altra comorbidità;
- **BMI >35 kg/m²** in presenza di comorbidità tra cui il diabete mellito di tipo 2 (T2DM) resistente al trattamento medico
- **BMI >30 <35 kg/m²** qualora abbiano condotto senza risultato una terapia medica e comportamentale adeguata (grado di raccomandazione: a)
- **BMI <30 kg/m²** solo nel contesto di studi scientifici prospettici e controllati
- Efficace in pazienti obesi di età <18 anni (livello di evidenza: 2; grado di raccomandazione: b) e >60 anni (livello di evidenza: 2; grado di raccomandazione: a)

Controindicazioni assolute

- La schizofrenia e la psicosi non in compenso (livello di evidenza: 2; grado di raccomandazione: b).
- La Dipendenza da alcol (livello di evidenza: 3; grado di raccomandazione: b).



UPDATE...



**LINEE GUIDA DELLA SICOB SOCIETÀ ITALIANA DI
CHIRURGIA DELL'OBESITÀ E DELLE MALATTIE
METABOLICHE**

*La terapia chirurgica dell'obesità e delle complicanze
associate*



Update 2023

La seguente linea guida è stata sviluppata da **SICOB** in collaborazione con:

- ACOI:** Associazione Chirurghi Ospedalieri Italiani
- ADI:** Associazione Italiana di dietetica e nutrizione clinica
- AME:** Associazione Medici Endocrinologi
- ANSISA:** Associazione Nazionale Specialisti in Scienze dell'Alimentazione
- ASAND:** Associazione Scientifica Alimentazione Nutrizione e Dietetica
- SIC:** Società Italiana di Chirurgia
- SICE:** Società Italiana di Chirurgia Endoscopica e nuove tecnologie
- SID:** Società Italiana di Diabetologia
- SIO:** Società Italiana dell'Obesità
- SIEC:** Società Italiana Endocrinologia
- SIMG:** Società Italiana di Medicina Generale e delle Cure Primarie
- SIP:** Società Italiana di Pediatria
- SIUEC:** Società Italiana Unitaria di Endocrinochirurgia



INDICAZIONI ALLA CHIRURGIA

- *BMI >40 kg/m²*, in assenza di ogni altra comorbidità (debole a favore);
- *BMI 30-35 kg/m²* in presenza di comorbidità tra cui il diabete mellito di tipo 2, ipertensione arteriosa, dislipdemia, OSAS non controllate da terapia medica o malattia osteoarticolare degli arti inferiori (raccomandazioni deboli e forti a favore)
- *Age limit*
- Efficace in pazienti obesi di età 14-18 anni e >65enni (debole a favore)

Non chiare indicazioni per

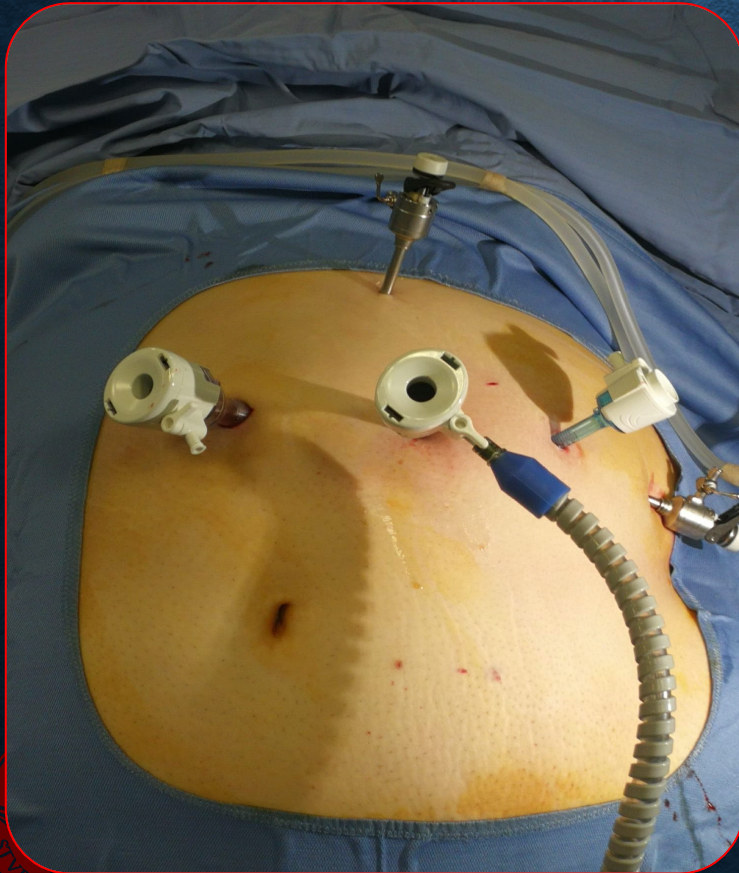
- Bridge a trapianti di organo
- Prevenzione di malattie tumorali

BARIATRIC SURGERY GOALS



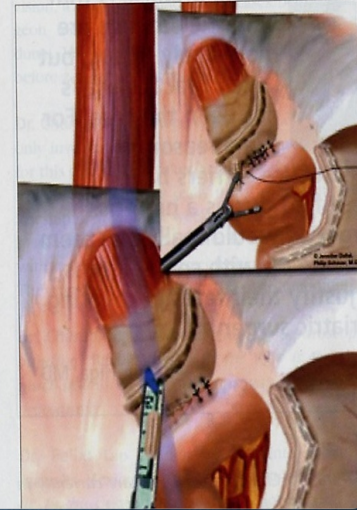
- **1. Weight loss**
 - **IMC < 30 ideale, < 35**
 - **EWL > 50 %**
- **2. Long-term results**
- **3. Comorbidities amelioration/cure!!!**

HOW?

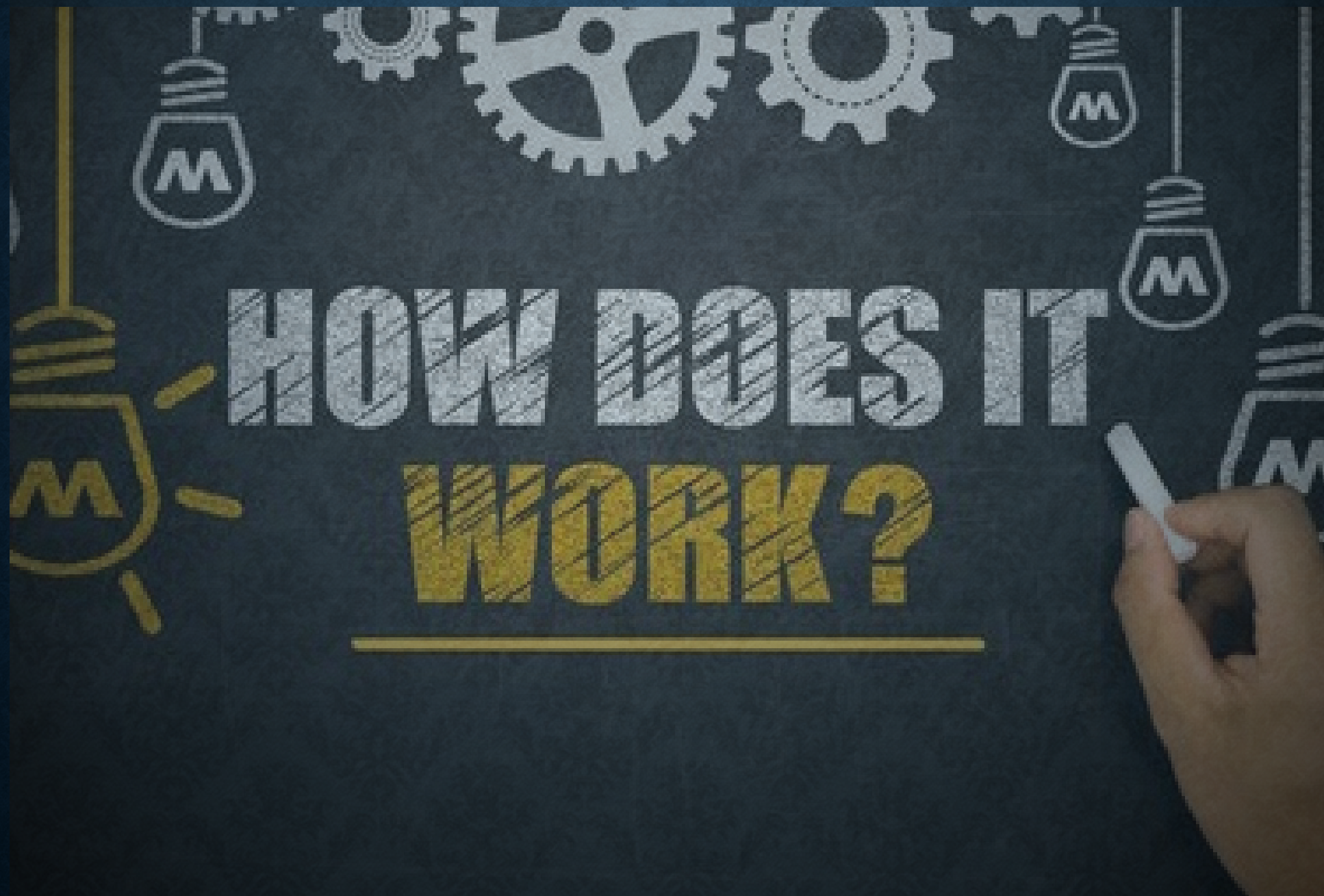


The Bariatric Surgery Explosion

*A Discussion of Clinical
And Professional Issues*



MIS
represents the
GOLD
standard



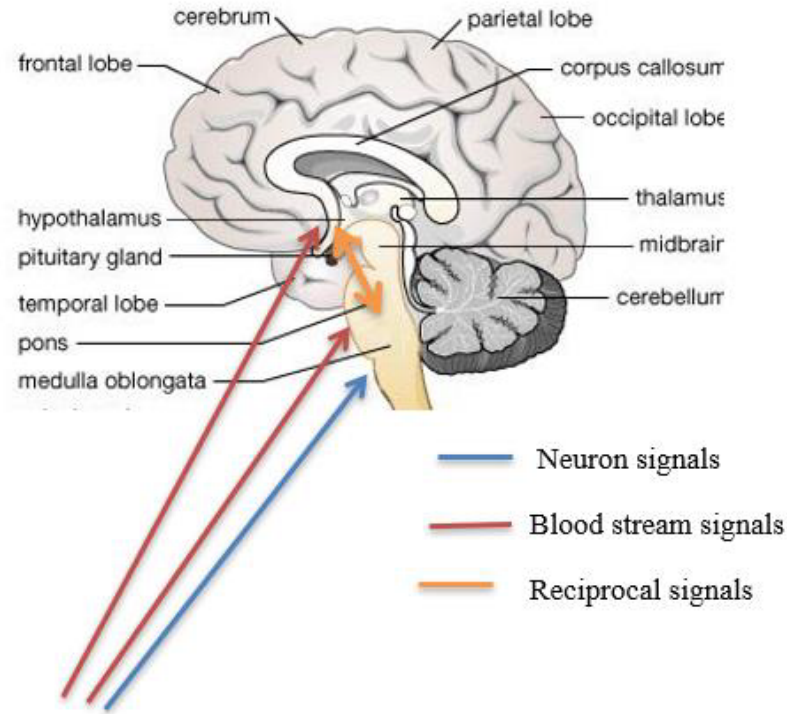
HOW DOES IT
WORK?



ONE STEP BEYOND...



ONE STEP BEYOND...



Integration of satiety and hunger signals involve several brain areas. Gut brain communication is through circulation reaching the median eminence of the hypothalamus and area postrema of the brainstem as well as the vagus nerve afferents that project to the nucleus tractus solitaries in the brain stem

Appetite control

In the arcuate nucleus of the hypothalamus (ARH)
Anorexigenic (appetite suppressing)
 proopiomelanocortin (POMC) neurons

vs

Orexigenic (appetite-increasing) neuropeptide Y
 (NPY)/agouti-related peptide (AgRP)

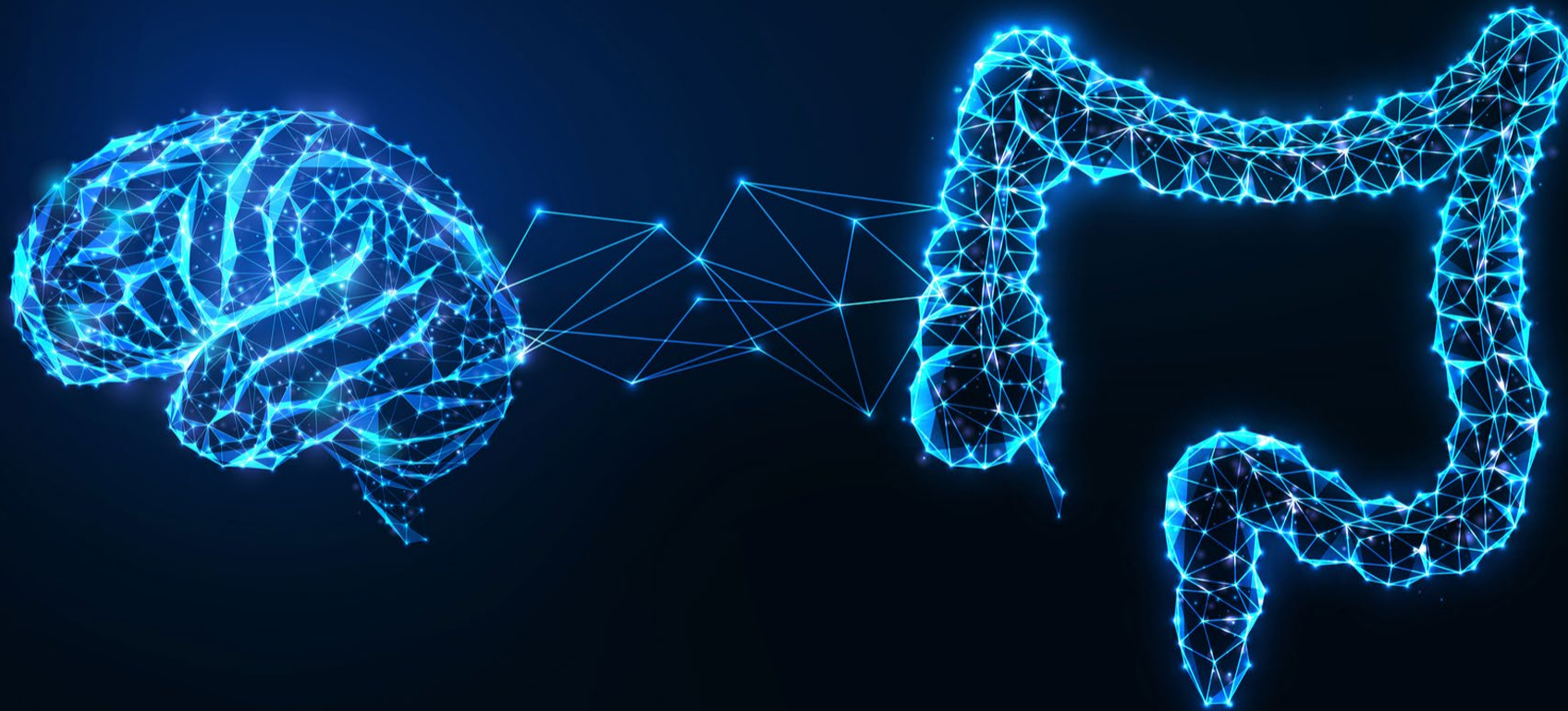


Paraventricular nucleus

MC4R

Paraventricular nucleus

MC4R



Ghrelin

Leptin

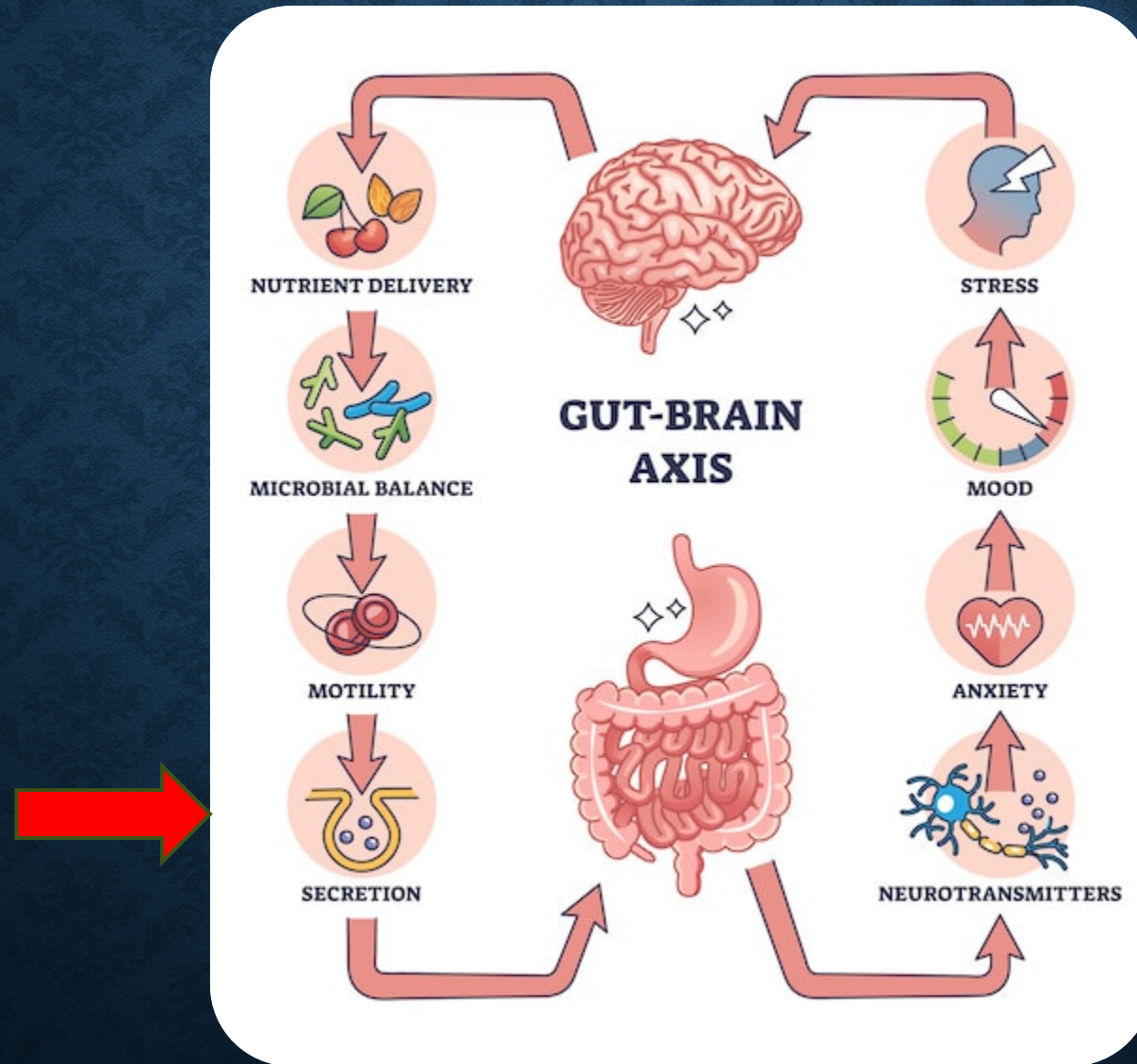
Insulin

Stomach

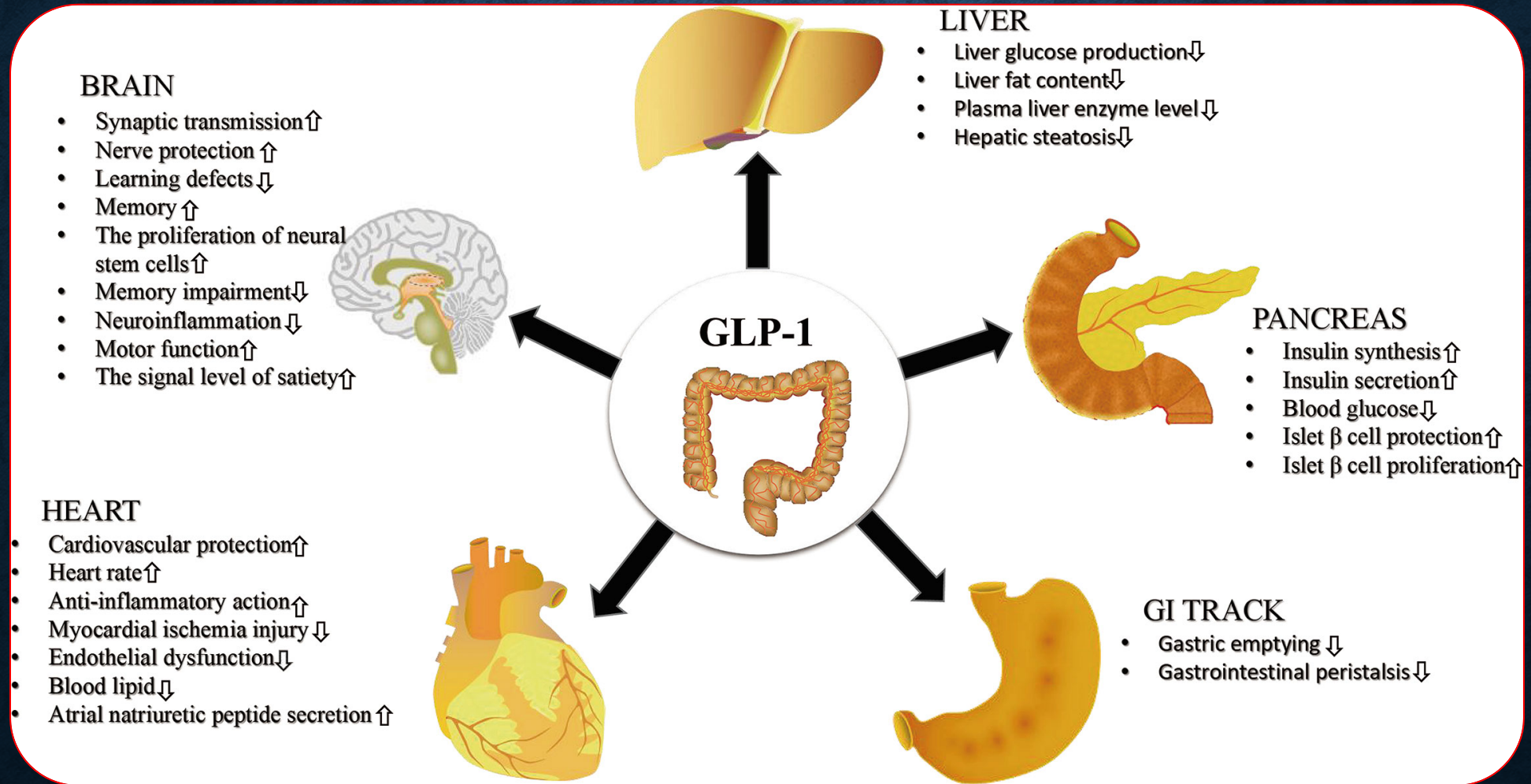
Adipose Tissue

Pancreas

The Endocrine System of the Gut and the Control of Appetite



INCRETIN HORMONES

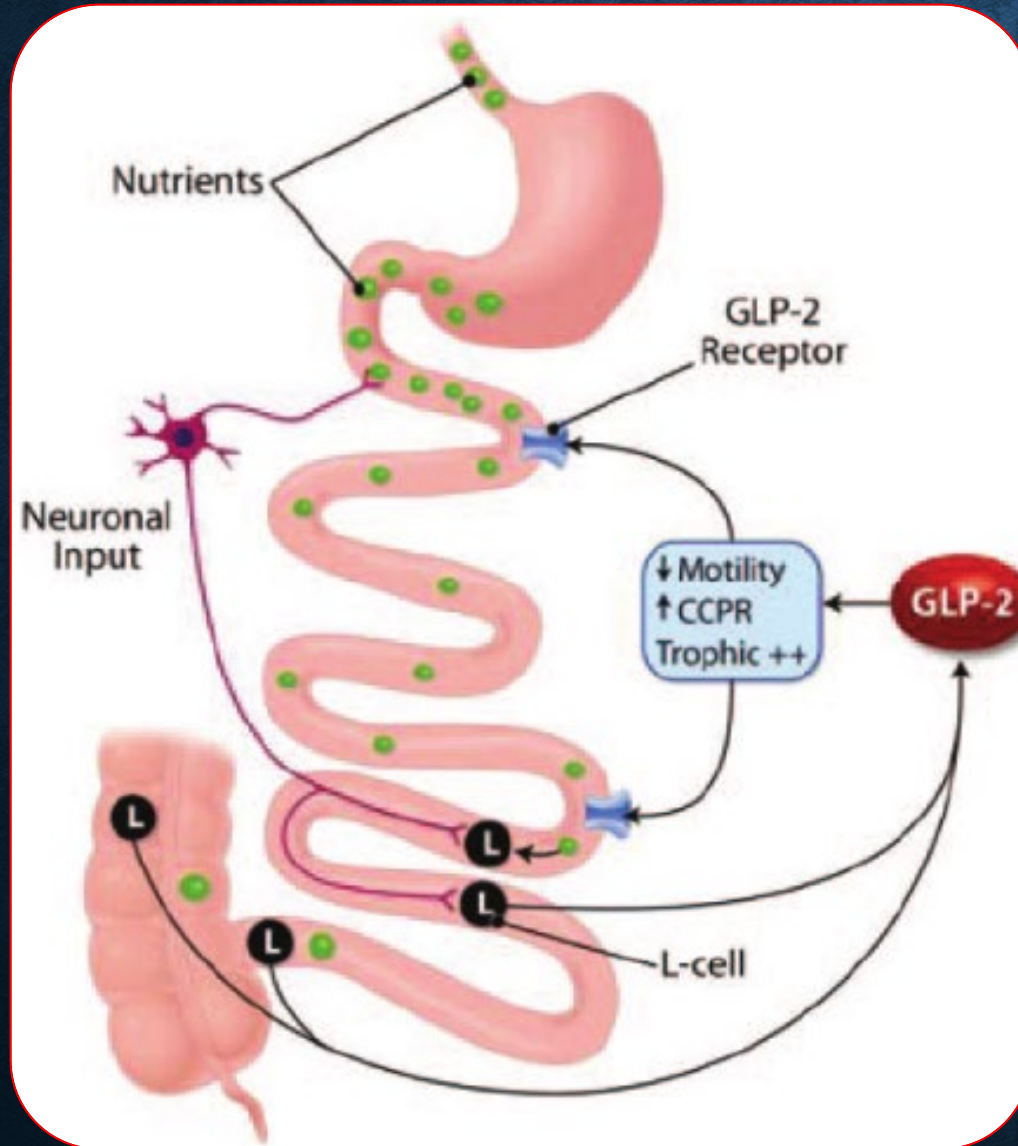


Atrial natriuretic peptide secretion $\downarrow$
 Blood lipid $\uparrow$
 Endothelial dysfunction $\uparrow$
 Myocardial ischemia injury $\uparrow$

Gastrointestinal peristalsis $\downarrow$
 Gastric emptying $\uparrow$



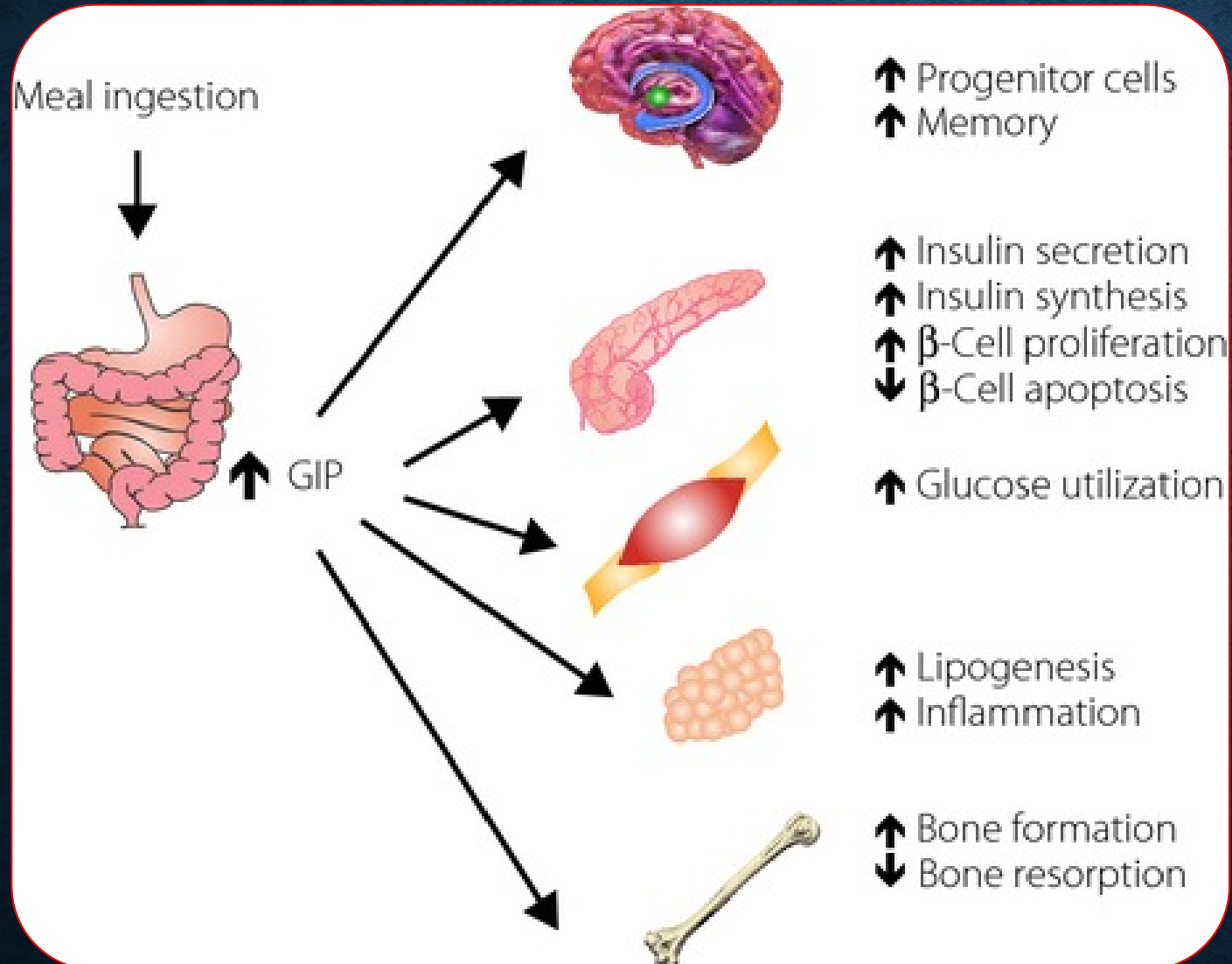
INCRETIN HORMONES

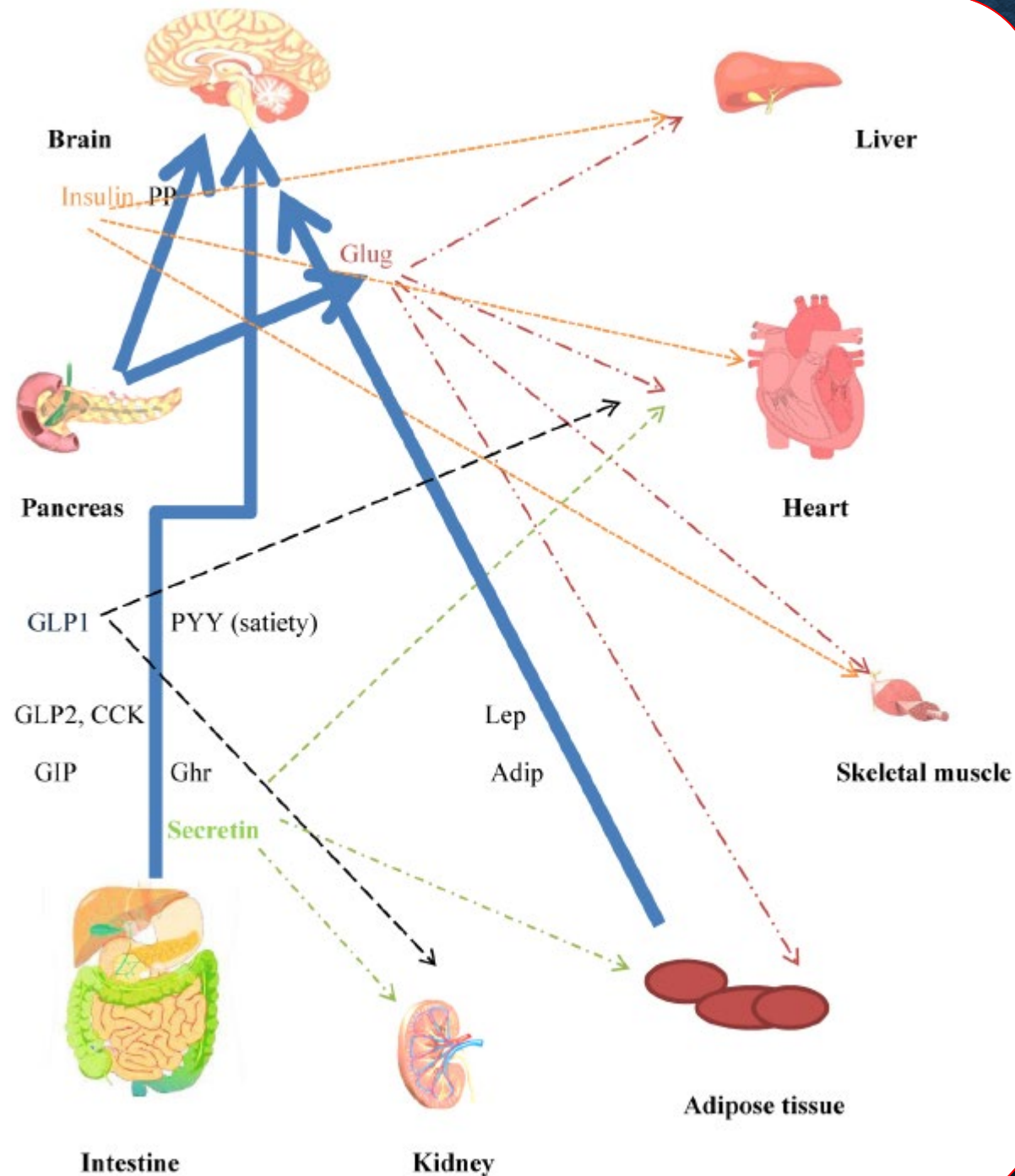


*crypt cell
proliferation rates*



INCRETIN HORMONES



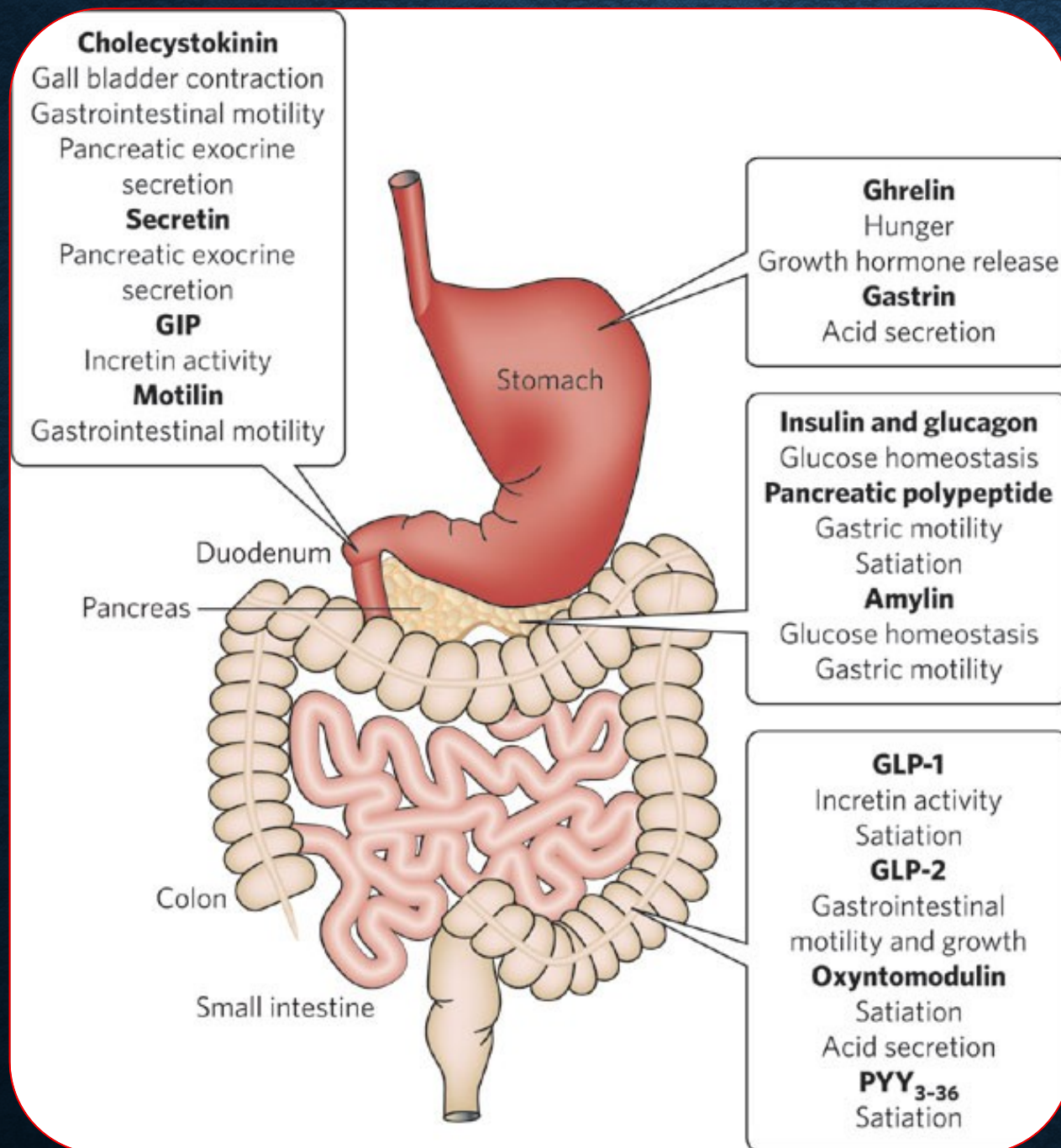


CCK (decreases food intake),
Lep: (anorexigenic),
Adip: adiponectin (orexigenic),
Ghr: ghrelin (orexigenic),
Sec: secretin (satiety hormone),



***BARIATRIC SURGERY
SECRET***





HORMONAL ROUTE



LAGB

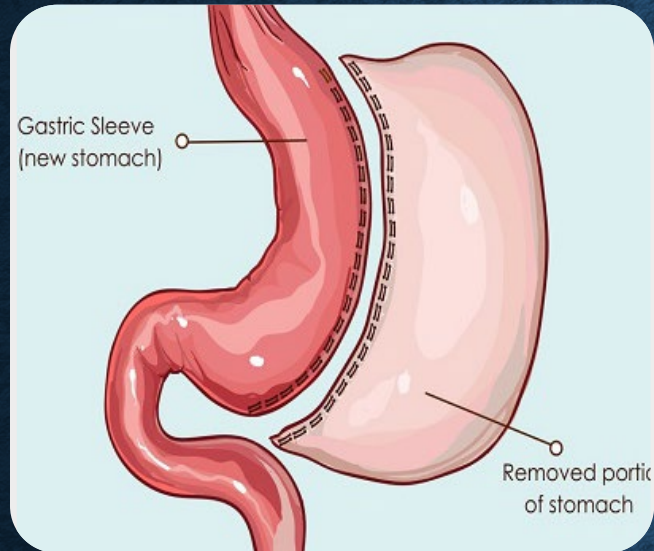


↓ Hunger,
meal frequency and
caloric intake

Metabolic effects weight loss mediated



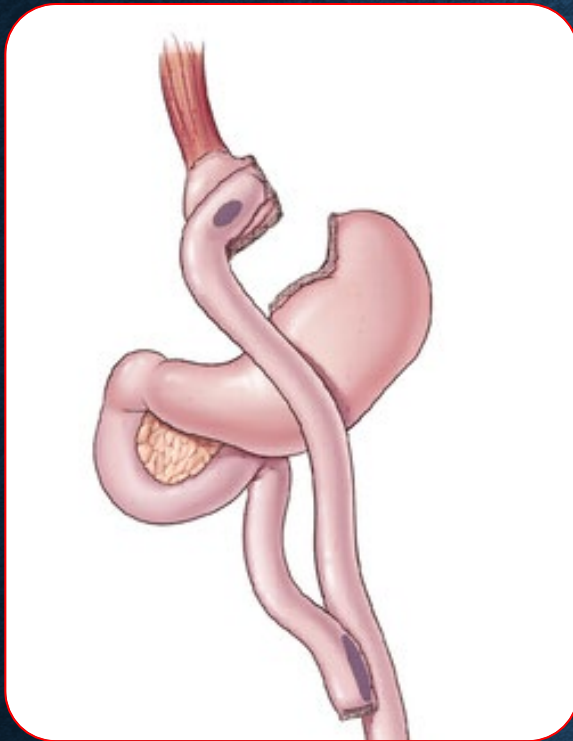
LSG



Calorie restriction	+
Vagal nerve signaling	↑
Taste and smell changes	+
Food aversions	+
Ghrelin	↓↓↓
Bile acid secretion	↑
Intestinal glucose uptake	
Fat malabsorption	
GLP-1	↑
PYY3-36	↑
GIP	
Oxyntomodulin	
FGF-19	↑
CCK	↑
Gastrin	↑
Neurotensin	



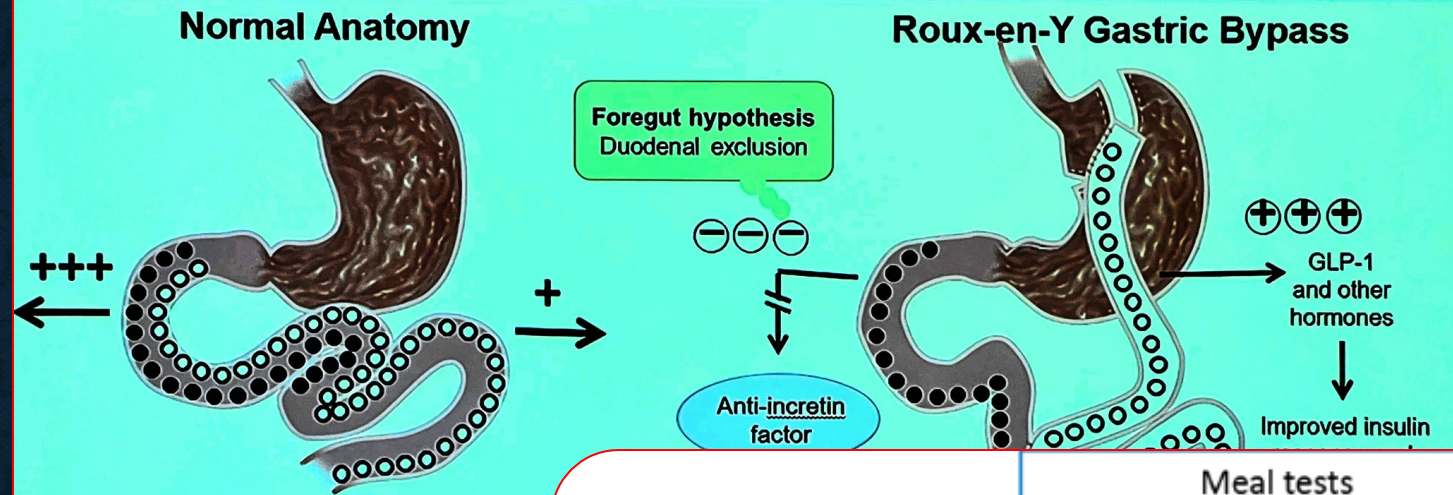
RYGB



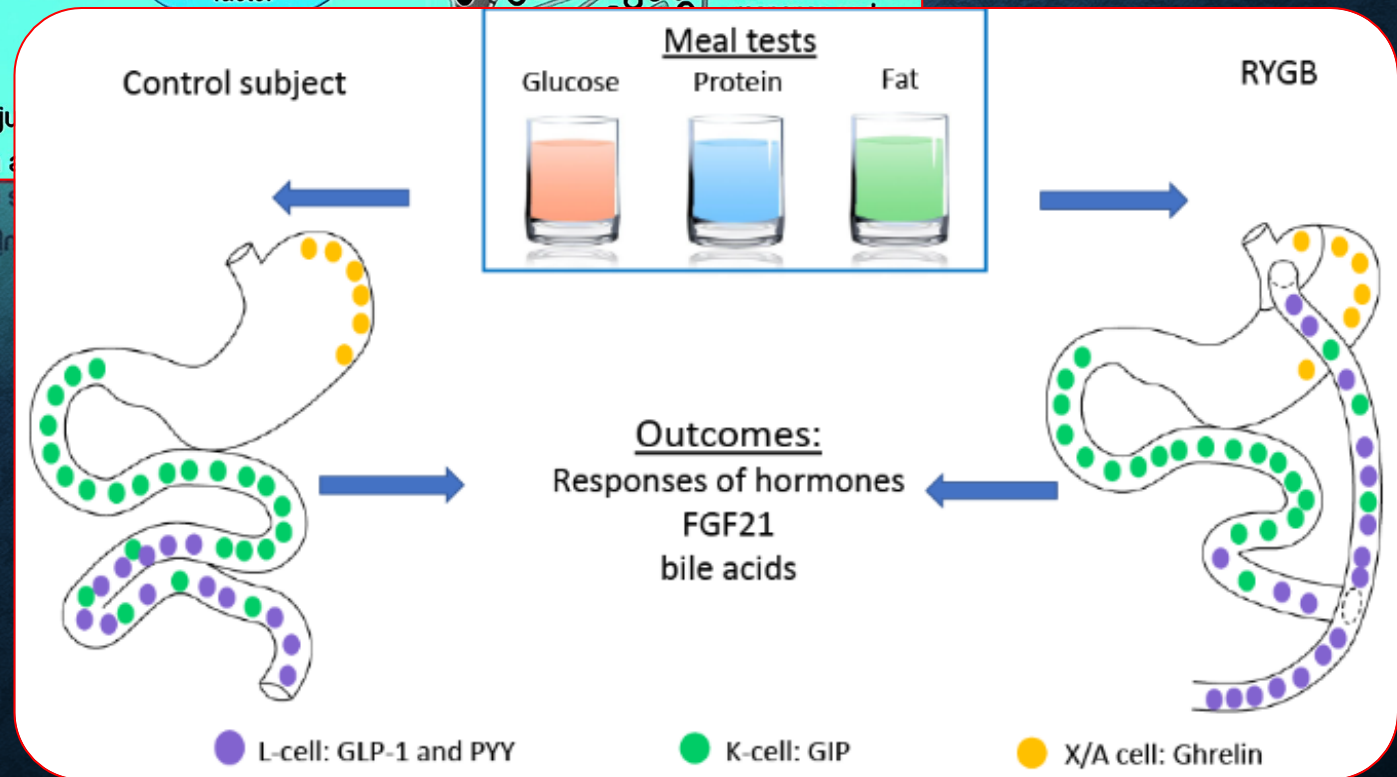
+	Calorie restriction
↑	Vagal nerve signaling
+	Taste and smell changes
+	Food aversions
↓	Ghrelin
↑	Bile acid secretion
↑	Intestinal glucose uptake
+	Fat malabsorption
↑↑	GLP-1
↑↑	PYY3-36
↓	GIP
↑	Oxyntomodulin
↑↑	FGF-19
↑	CCK
↓	Gastrin
↑	Neurotensin



Foregut & Hindgut Hypothesis



- Cells producing incretins (duodenum, jejunum)
- Cells producing the unknown factor with a
- Cells producing the unknown factor with a
- Cells producing incretins (duodenum, jejunum)



◆ **Weight and fat-mass loss** 3 4

◆ **Endocrine pancreatic function** 2
 - **α cells:** GLP-1 paracrine secretion
 - **β cells:** changed β cell mass?

Intestine

Alimentary limb remodeling

- ↑ Gut hormone secretion 1 2 3 ◆
 GLP-1 (secreted along GLP-2), PYY, OXM and CCK
- ↑ Nutrient sensing (↑ intestinal neoglucogenesis and
 ↑ enterocyte glucose uptake (via GLUT1))

Bile acids (BA)

- ↑ circulating and luminal conjugated BA (GUDCA,
 TBMCA) 3 ◆
- ↑ Salt segregation in the biliopancreatic limb
- ↓ Total glucose reabsorption via SGLT1 receptors

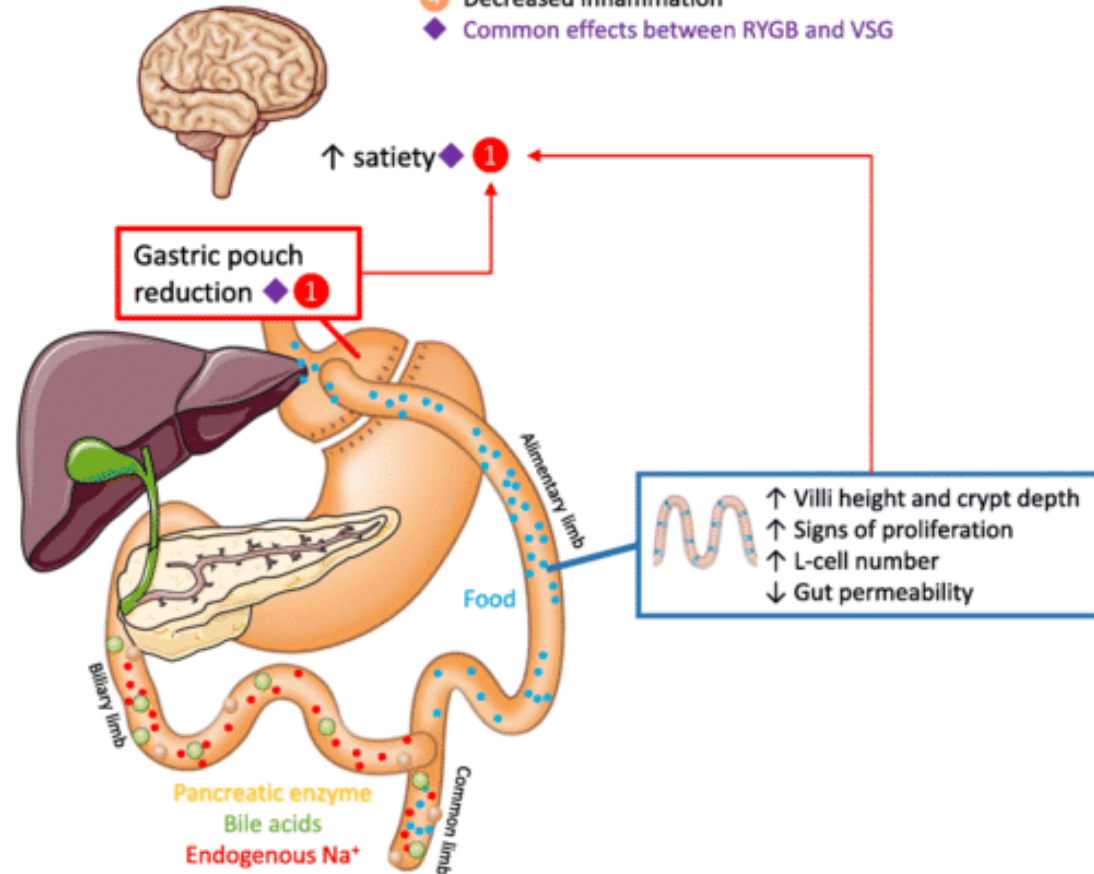
Gut microbiota

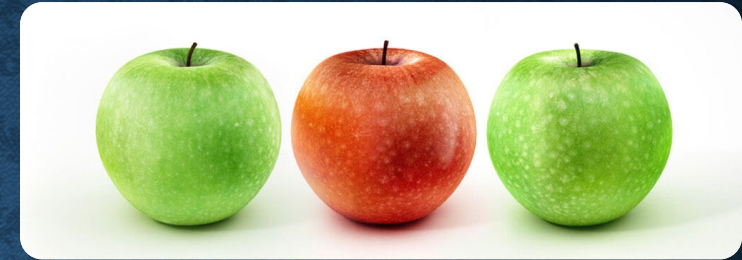
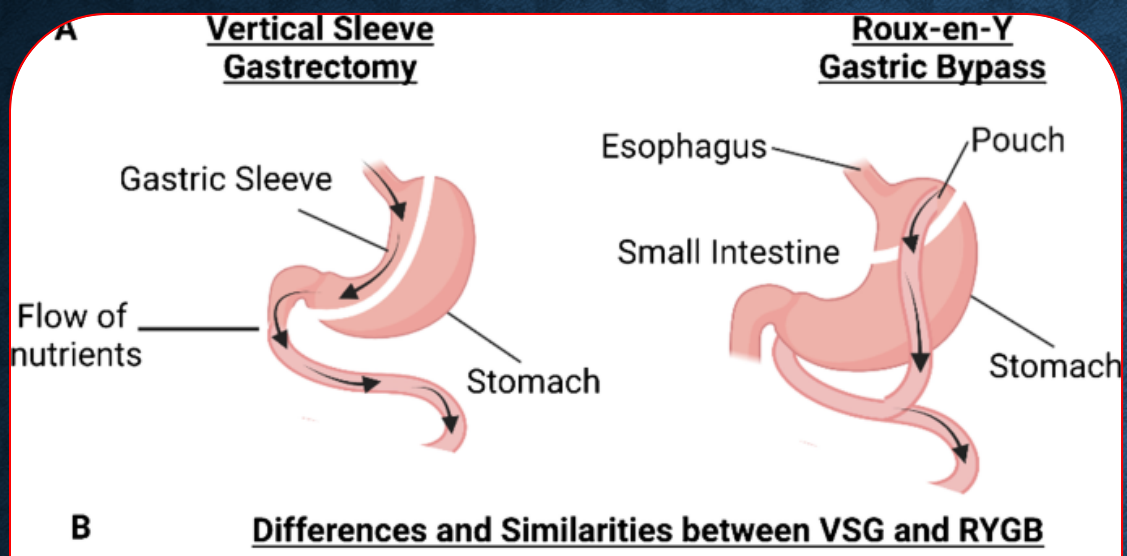
- ↑ Gene richness 2 3 4
- ↑ Abundances of certain species (*Roseburia* spp.,
Akkermansia spp., *Escherichia* spp., *Faecalibacterium*
 spp.) 2 3 4
- ↓ Circulating LPS 3 4

↓ branched chain amino-acids 2 ◆

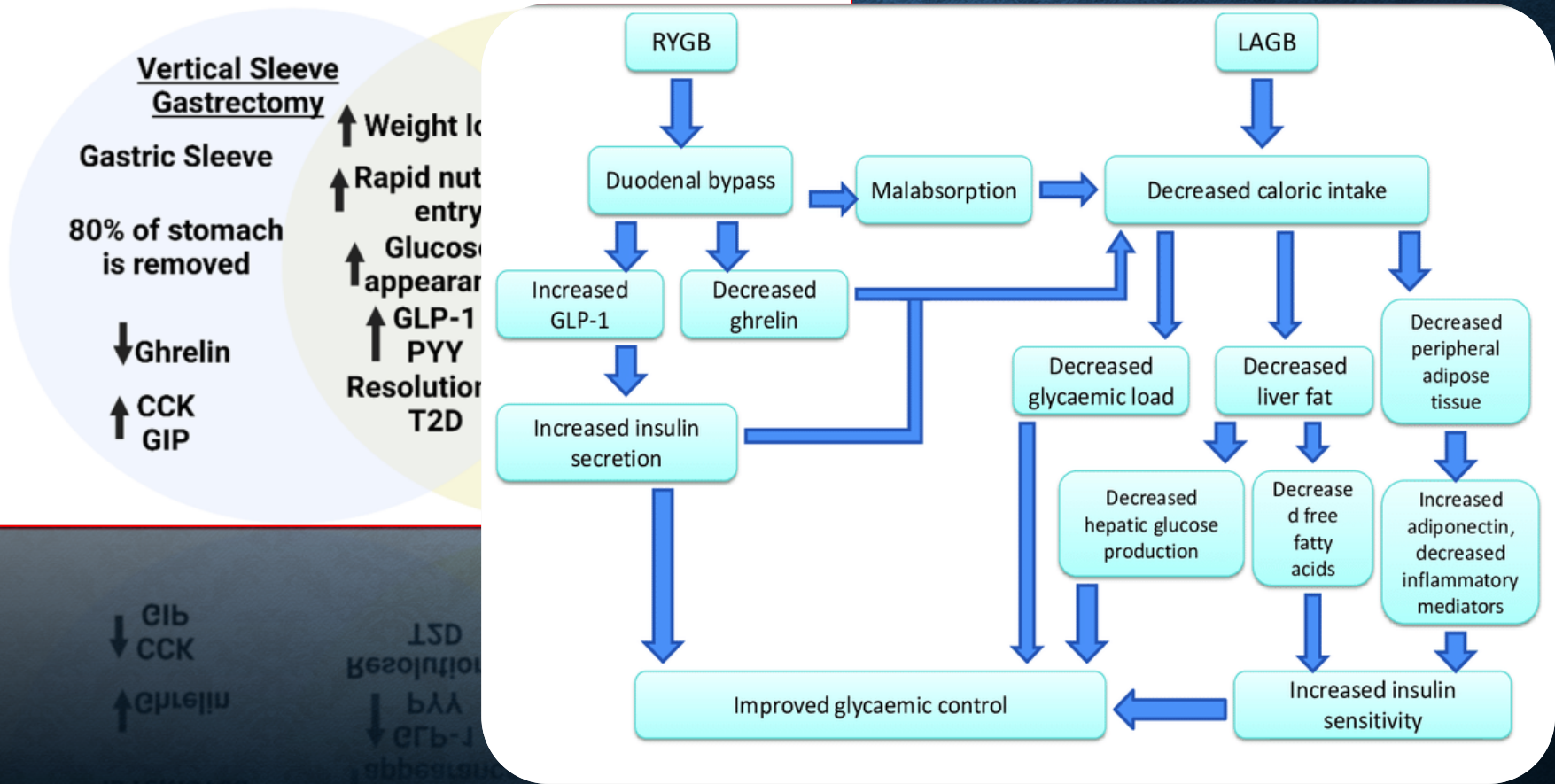
↑ branched chain amino-acids 5 ◆

- 1 Caloric restriction
- 2 Improved insulin-secretion
- 3 Improved insulin-sensitivity
- 4 Decreased inflammation
- ◆ Common effects between RYGB and VSG

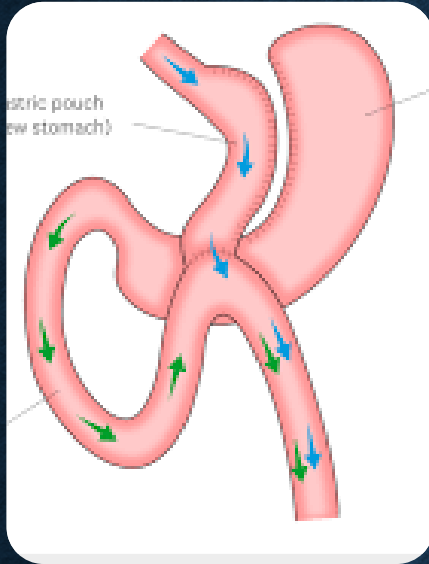




B **Differences and Similarities between VSG and RYGB**



OAGB

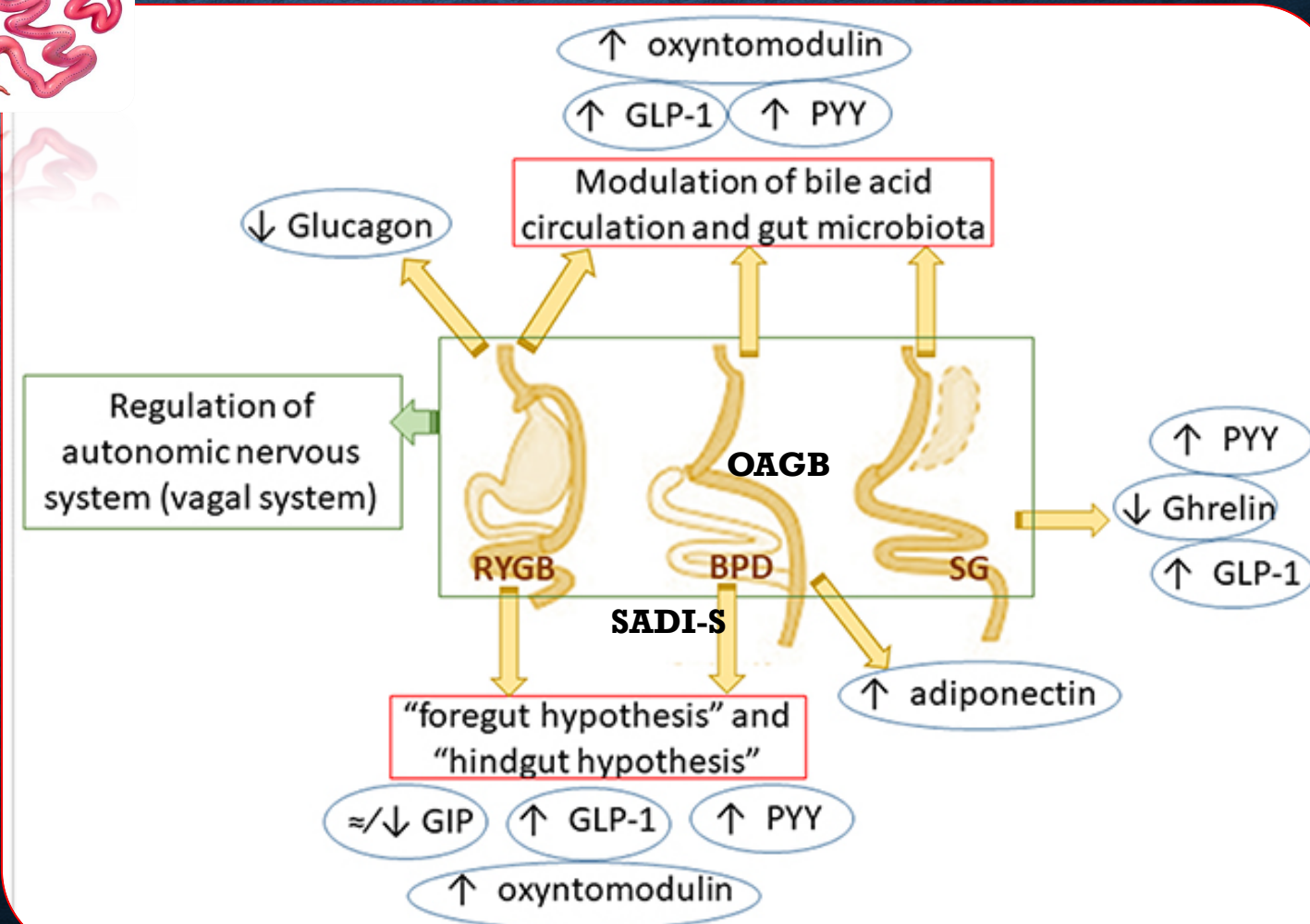
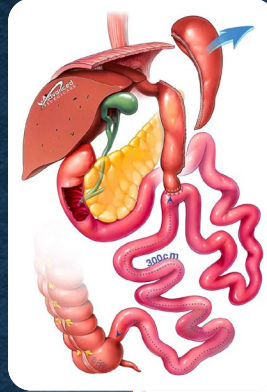
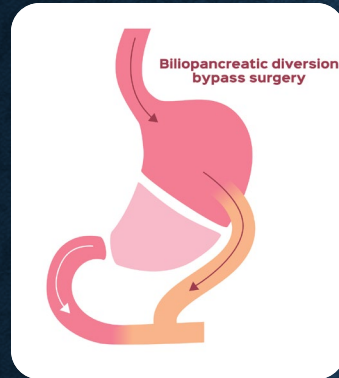


Kular-Rutledge hypothesis: Functional restriction

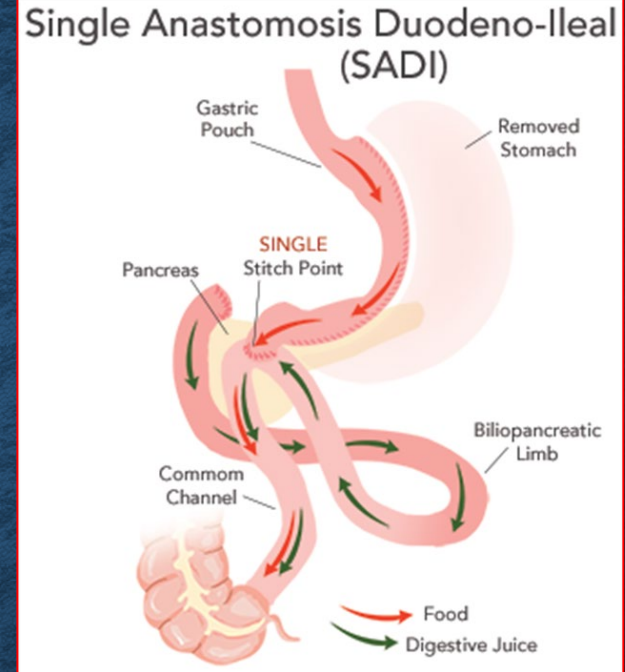
- Long gastric pouch
- Anastomoses size (no restrictive)
- Energy intake reduction (> 25-30%)
- Hormonal stimulation/modification
(PYY-3-36, NPY, Glucagon, GLP1)



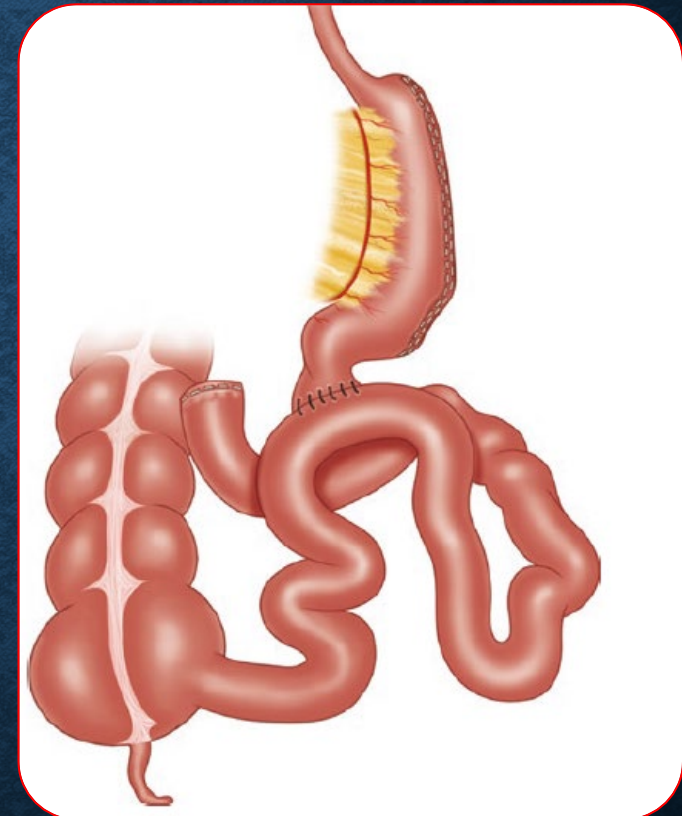
BPD-SADI



- Ideata da Sanchez- Pernaute nel 2007
- Semplificazione della diversione biliopancreatica con duodenal switch (BPD-DS)
- Affronta alcuni limiti di interventi bariatrici standard. (Weight regain/Inadequate weight loss, Relapse delle comorbidità, difficoltà tecniche, ernie interne).



- Prevede l'esecuzione di una Sleeve Gastrectomy seguita da una singola anastomosi termino-laterale tra la prima sezione duodenale prossimalmente il piloro ed ileo
- L'anastomosi singola prende ispirazione dal OAGB
- Preservazione del piloro (Limitazione del reflusso alcalino?)
- Il tratto comune varia dai 250 ai 300 cm
- Un tratto comune < 250 cm aumenta il rischio di riconversione per malnutrizione (fino all'8%)



2020

ASMBS Guidelines/Statements

American Society for Metabolic and Bariatric Surgery updated statement on single-anastomosis duodenal switch

Kara Kallies, M.S.^{*}, Ann M. Rogers, M.D., F.A.C.S., F.A.S.M.B.S., for the American Society for Metabolic and Bariatric Surgery Clinical Issues Committee

Endorsement

“The SADI-S procedure, as a variant of classic DS therefore merits consideration for ASMBS endorsement as a modification of an already-endorsed metabolic/bariatric procedure”.

Surgical Endoscopy (2020) 34:2332–2358
<https://doi.org/10.1007/s00464-020-07555-y>

2020



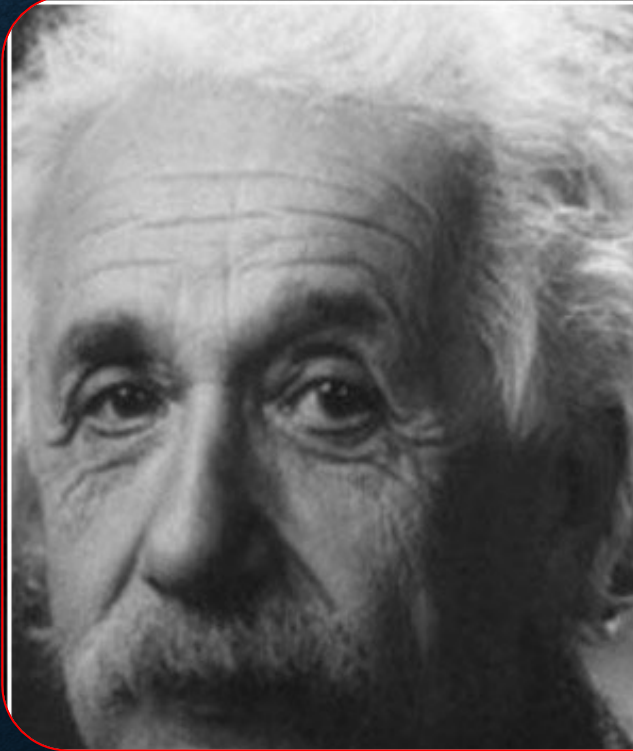
GUIDELINES



Clinical practice guidelines of the European Association for Endoscopic Surgery (EAES) on bariatric surgery: update 2020 endorsed by IFSO-EC, EASO and ESPCOP

Nicola Di Lorenzo¹ · Stavros A. Antoniou^{2,3} · Rachel L. Batterham^{4,5} · Luca Busetto⁶ · Daniela Godoroja⁷ · Angelo Iossa⁸ · Francesco M. Carrano⁹ · Ferdinando Agresta¹⁰ · Isaias Alarçon¹¹ · Carmil Azran¹² · Nicole Bouvy¹³ · Carmen Balaguè Ponz¹⁴ · Maura Buza¹⁵ · Catalin Copăescu¹⁵ · Maurizio De Luca¹⁶ · Dror Dicker¹⁷ · Angelo Di Vincenzo⁶ · Daniel M. Felsenreich¹⁸ · Nader K. Francis¹⁹ · Martin Fried²⁰ · Berta Gonzalo Prats¹⁴ · David Goitein^{21,22} · Jason C. G. Halford²³ · Jitka Herlesova²⁰ · Marina Kalogridaki²⁴ · Hans Ket²⁵ · Salvador Morales-Conde¹¹ · Giacomo Piatto¹⁶ · Gerhard Prager¹⁸ · Suzanne Pruijssers¹³ · Andrea Pucci^{4,5} · Shlomi Rayman^{21,22} · Eugenia Romano²³ · Sergi Sanchez-Cordero²⁶ · Ramon Vilallonga²⁷ · Gianfranco Silecchia⁸

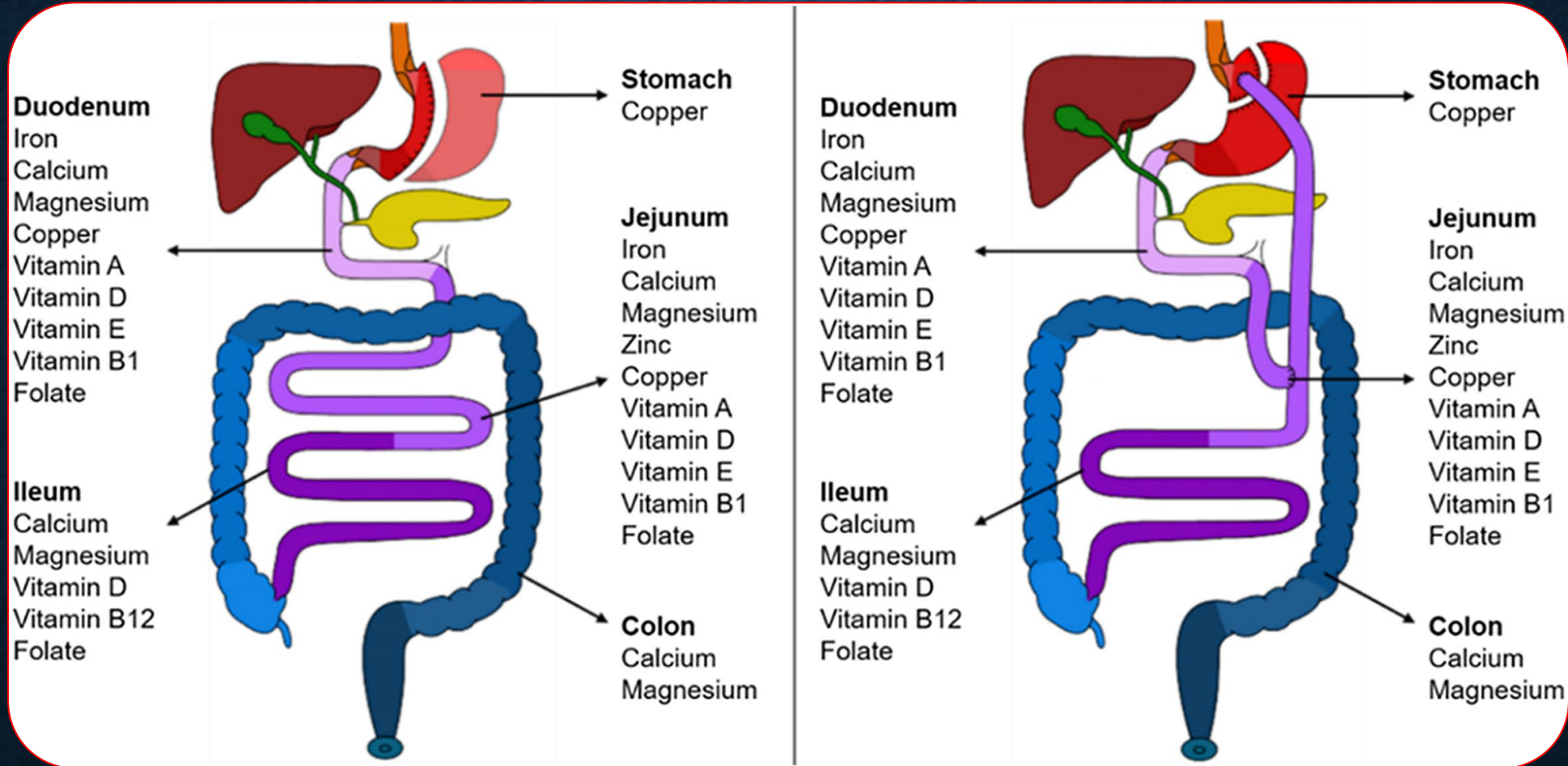
No recommendation on SADI-S compared with OAGB, BPD/DS, RYGB or sleeve gastrectomy can be made on the basis of available evidence



If there is no price to be paid, it is
also not of value.

— *Albert Einstein* —





CONDITION	VITAMIN B ₁	VITAMIN B ₁₂	VITAMIN B ₂	VITAMIN B ₆	FOLATE	VITAMIN D	VITAMIN A	VITAMIN E	COPPER	PROTEIN
Wernicke's encephalopathy, Korsakoff syndrome, Beriberi	X									
Gait abnormalities	X	X		X					X	
Polyradiculoneuropathy	X									
Night blindness							X			
Optic neuropathy	X	X		X	X		X		X	
Myelopathy		X		X					X	
Neuropathy	X	X								
Peripheral neuropathy		X		X	X			X	X	
Polyneuropathy				X						
Myopathy						X		X	X	X
Restless leg syndrome					X					
Burning feet syndrome			X							
Dementia and depression		X								
Sensory ataxia									X	
Decreased immunity						X	X			
Fatigue		X			X					

Fatigue		X			X					
Decreased immunity						X	X			
Sensory ataxia									X	
Dementia and depression		X								
Burning feet syndrome			X							
Restless leg syndrome					X					
Myopathy						X		X	X	X
Polyneuropathy				X						
Peripheral neuropathy		X		X	X			X	X	
Neuropathy	X	X								
Myelopathy		X		X					X	
Optic neuropathy	X	X		X	X		X		X	
Night blindness							X			
Polyradiculoneuropathy	X									
Gait abnormalities	X	X		X					X	
Wernicke's encephalopathy, Korsakoff syndrome, Beriberi	X									



FOLLOW-UP..CRUCIAL

DECISION MAKING PROCESS

Identification and Association of Obese Patients Seeking Bariatric Surgery with Lifestyle and Eating Patterns: One-Year Observational Study in Italy and Proposal of Eating-Pattern Based Decision-Making Process

Angelo Iossa*, Alberto Di Biasio, Ilenia Coluzzi, Maria Chiara Ciccioriccio and Gianfranco Silecchia

Department of Medical-Surgical Science and Biotechnology, University of Rome, Italy

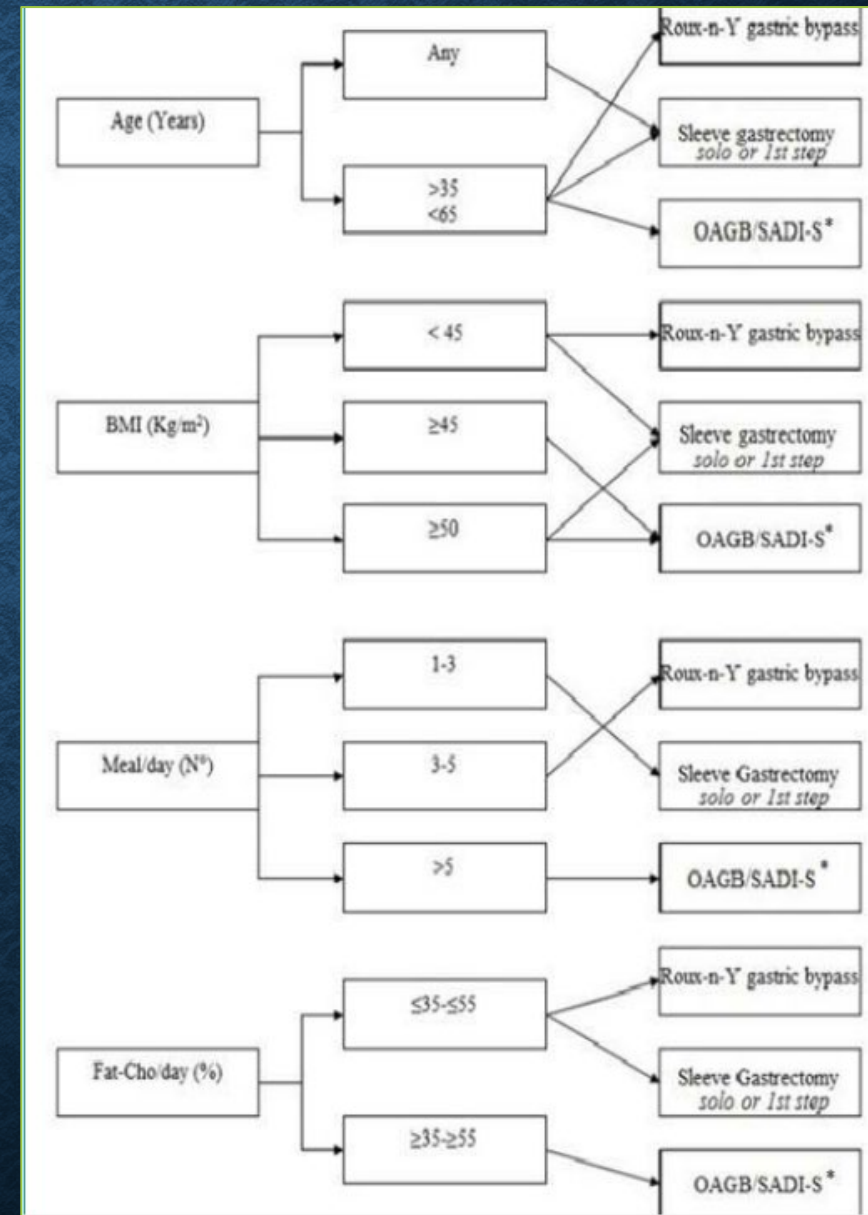
*Corresponding author: Angelo Iossa, Department of Medical-Surgical Science and Biotechnology, Sapienza University of Rome, Italy

Received: September 15, 2020; Accepted: October 05, 2020; Published: October 12, 2020

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NOVITA' TECNICHE..L'ENDOSCOPIA IN BARIATRICA

OBES SURG (2017) 27:2279–2289
DOI 10.1007/s11695-017-2666-x



ORIGINAL CONTRIBUTIONS

Bariatric Surgery and Endoluminal Procedures: IFSO Worldwide Survey 2014

L. Angrisani¹ • A. Santonicola²  • P. Iovino² • A. Vitiello¹ • N. Zundel³ • H. Buchwald⁴
N. Scopinaro⁵

Table 3 Total number and percentage of endoluminal procedures performed worldwide in 2014

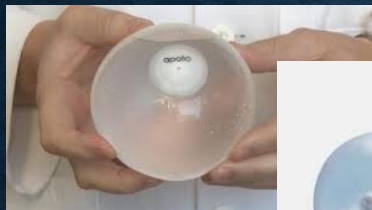
Procedures	Number	Percentage
Orbera/BIB	1664	11.6
Obalon	741	5.2
Spatz adjustable balloon system	62	0.4
Heliosphere bag	7	0.05
POSE	25	0.2
Apollo	6	0.04
Endobarrier	112	0.8
Not specified	11,658	81.6
Total	14,275	100

14,725 (2.4%) endoluminal procedures

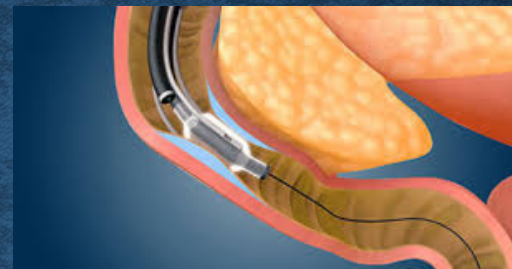
Table 1. Summary of different areas of bariatric endoscopy innovation

Primary procedures		Management of complications		Management of concomitant conditions	
Intragastric balloons	Orbera	Leaks	Septotomy	Achalasia	POEM
	Reshape		Double-pigtail stent		
	Obalon		Endoscopic vacuum therapy		
Aspiration therapy	AspireAssist system	Weight regain	TORe ROSE	Gastroparesis	POP
Endoluminal bypass liners	Duodeno-jejunal bypass sleeve Gastro-duodenal bypass liner			Cholelithiasis	EDGE procedure
Transpyloric shuttle					
Magnetic compression gastrojejunostomy	Incisionless magnetic anastomosis system				
Mucosal resurfacing for diabetes					
Endoscopic sleeve gastropasty	OverStitch				





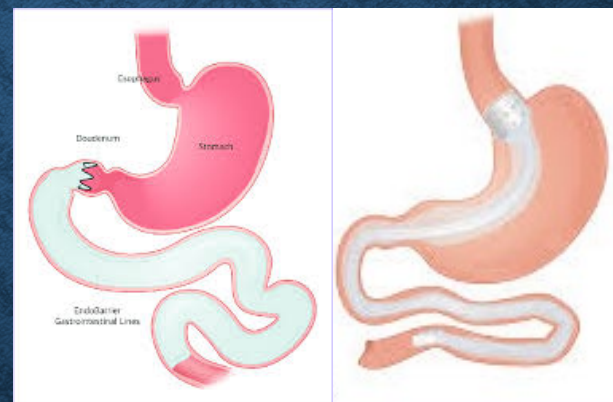
FDA approval
EWL 17.2% 1 y



NO FDA approval
Sustained HbA1c
improvement in
37 pts..12 M FU



FDA approval
EWL 37.2% 1 y
PATHWAY trial
Complications..?



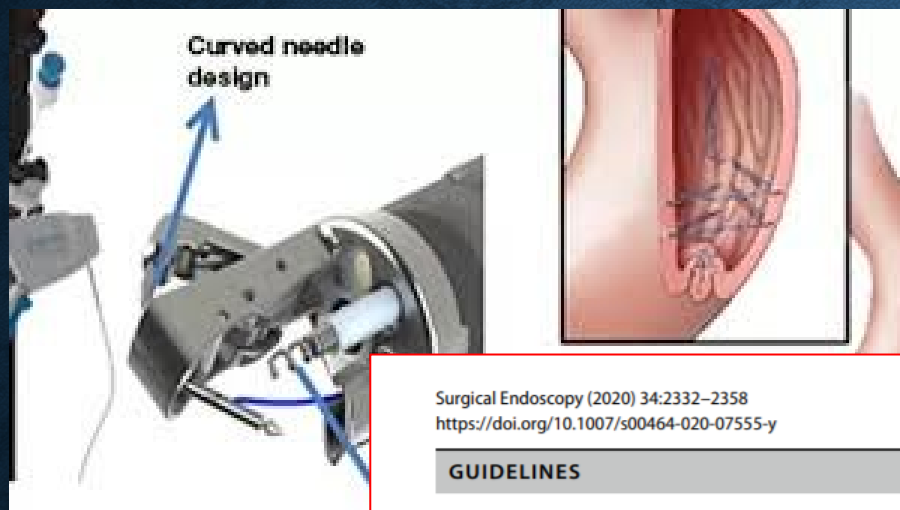
NO FDA approval
EWL 23.2-47% 1 y
Complications..?



FDA approval
EWL 30-50% 1 y



NO FDA approval
1 human study
EWL 40% 1 y



FDA approval
154 pts 85% EWL 25%
3 leaks

Surgical Endoscopy (2020) 34:2332–2358
<https://doi.org/10.1007/s00464-020-07555-y>

2020



GUIDELINES



Clinical practice guidelines of the European Association for Endoscopic Surgery (EAES) on bariatric surgery: update 2020 endorsed by IFSO-EC, EASO and ESPCOP

Nicola Di Lorenzo¹ · Stavros A. Antoniou^{2,3} · Rachel L. Batterham^{4,5} · Luca Busetto⁶ · Daniela Godoroja⁷ · Angelo Iossa⁸ · Francesco M. Carrano⁹ · Ferdinando Agresta¹⁰ · Isaias Alarçon¹¹ · Carmil Azran¹² · Nicole Bouvy¹³ · Carmen Balaguè Ponz¹⁴ · Maura Buza¹⁵ · Catalin Copaescu¹⁵ · Maurizio De Luca¹⁶ · Dror Dicker¹⁷ · Angelo Di Vincenzo⁶ · Daniel M. Felsenreich¹⁸ · Nader K. Francis¹⁹ · Martin Fried²⁰ · Berta Gonzalo Prats¹⁴ · David Goitein^{21,22} · Jason C. G. Halford²³ · Jitka Herlesova²⁰ · Marina Kalogridaki²⁴ · Hans Ket²⁵ · Salvador Morales-Conde¹¹ · Giacomo Piatto¹⁶ · Gerhard Prager¹⁸ · Suzanne Pruijssers¹³ · Andrea Pucci^{4,5} · Shlomi Rayman^{21,22} · Eugenia Romano²³ · Sergi Sanchez-Cordero²⁶ · Ramon Vilallonga²⁷ · Gianfranco Silecchia⁸

Position statement

For duodenal-jejunal bypass sleeves, aspiration devices and duodenal mucosal resurfacing, the quality of evidence was too low to provide any recommendations



Clinical practice guidelines of the European Association for Endoscopic Surgery (EAES) on bariatric surgery: update 2020 endorsed by IFSO-EC, EASO and ESPCOP

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Position statement

Adjustable gastric banding surgeries are associated with a high rate of reoperations for complications or conversion to another bariatric procedure for insufficient weight loss in the long term

Band today

“American Society for Metabolic and Bariatric Surgery 2018 estimate of metabolic and bariatric procedures performed in the United States”

2018

Short Title: “2018 bariatric surgery numbers estimate”

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BPD-DS today

	2011	2012	2013	2014
Sleeve	17.8%	33.0%	42.1%	51.7%
RYGBP	36.7%	37.5%	34.2%	26.8%
Band	35.4%	20.2%	14.0%	9.5%
BPD-DS	0.9%	1.0%	1.0%	0.4%
Revision	6.00%	6.00%	6.00%	11.50%
Other	3.20%	2.30%	2.70%	0.10%
Balloons				

Table 1. Percentage breakdown of all metabolic and bariatric procedures, 2011-2018.

OBES SURG (2018) 28:313–322
DOI 10.1007/s11695-017-2845-9

2018



ORIGINAL CONTRIBUTIONS

Bariatric Surgery Worldwide: Baseline Demographic Description and One-Year Outcomes from the Second IFSO Global Registry Report 2013–2015



Richard Welbourn¹ • Dimitri J. Pournaras¹ • John Dixon² • Kelvin Higa³ • Robin Kinsman⁴ • Johan Ottosson⁵ • Almino Ramos⁶ • Bart van Wagenveld⁷ • Peter Walton⁴ • Rudolf Weiner⁸ • Natan Zundel⁹

21/51.820

0.04%

Table 1—Operations developed for the management of obesity

JIB-related procedures	RYGB-related procedures	VBG-related procedures
1953: R.L. Varco (unpublished observations)—end-to-end jejunioileostomy 1954: Kremen et al. (11)—end-to-end jejunioileostomy with ileocecostomy 1963: Payne and DeWind—end-to-side jejuno (transverse colon) colostomy 1965: Sherman et al.—end-to-side jejunioileostomy 1966: Lewis et al.—end-to-side jejunocostomy 1969: Payne and DeWind—14 in × 4 in end-to-side jejunioileostomy 1971: Scott et al.—end-to-end jejunioileostomy with ileo (transverse colon or sigmoid colon) colostomy 1971: Salmon—end-to-end jejunioileostomy with ileo (transverse colon) colostomy 1971: Buchwald and Varco—40 cm and 4 cm end-to-end jejunioileostomy with ileocecostomy 1977: Forestieri et al.—end-to-side jejunioileostomy with proximal jejunal valve construction 1978: Starkloff et al.—end-to-side jejunioileostomy with proximal jejunal valve construction 1980: Palmer and Marliss—end-to-side jejunioileostomy with proximal jejunal valve construction 1988: Cleator and Gourlay—ileogastrostomy to drain bypassed intestine 1989: Dorton and Kral—duodenoileal bypass	1966: Mason and Ito (12)—horizontal gastric division with loop gastrojejunostomy 1977: Alden (13)—horizontal gastric cross-stapling with loop gastrojejunostomy 1977: Griffen et al. (14)—horizontal gastric cross-stapling with Roux-en-Y gastrojejunostomy 1983: Torres et al.—vertical gastric cross-stapling with Roux-en-Y gastrojejunostomy 1986: Linner and Drew—reinforced gastrojejunostomy with fascial band 1987: Torres and Oca—long-limb RYGB 1988: Salmon—combined RYGB and VBG 1989: Fobi et al. (33)—Silastic ring VBG proximal to RYGB 1994: Wittgrove et al.—first laparoscopic RYGB with end-to-end endoscopic stapling 1999: de la Torre and Scott—all intra-abdominal laparoscopic stapling 1999: Higa et al.—hand-sewn laparoscopic gastrojejunostomy	1973: Printen and Mason (16)—partial horizontal gastric division with greater curvature conduit 1979: Gomez—partial horizontal gastric stapling with suture reinforcement of gastric outlet 1979: Pace et al.—stapled gastric partitioning 1979: LaFave and Alden—total gastric cross-stapling and gastrogastrostomy 1981: Fabito—vertical gastric stapling with suture reinforcement of outlet 1981: Laws and Piatadosi (17)—vertical gastric stapling, Silastic ring outlet restrictor 1982: Mason (18)—vertical gastric stapling, Marlex mesh band through a gastric window outlet restrictor 1983: Molina and Oria—gastric segmentation 1986: Eckhout et al.—vertical gastric stapling using a notched stapler, Silastic ring outlet restrictor 1994: Hess and Hess (21)—first laparoscopic VBG
BPD/DS-related procedures	AGB-related procedures	SG-related procedures
1979: Scopinaro et al. (19)—subtotal horizontal gastrectomy, 250 cm Roux gastrojejunostomy, 50 cm common channel 1993: Marceau et al. (20)—SG, pylorus preservation, cross-stapling of duodenum, duodenoileostomy, ~100 cm common channel 1994: Hess and Hess (21)—SG, pylorus preservation, duodenoileostomy, ~100 cm common channel	1978: Wilkinson et al.—nonadjustable gastric band 1983: Molina and Oria—nonadjustable gastric band 1985: Bashour and Hill—gastro-clip 1986: Kuzmak (24)—AGB 1993: Broadbent et al.—nonadjustable gastric band laparoscopically 1993: Catona et al.—nonadjustable gastric band laparoscopically 1993: Belachew et al.—AGB laparoscopically 1993: Forsell et al.—AGB laparoscopically 1999: Cardiere et al.—AGB robotically	1976: Tretbar et al.—fundoplication 1980: Wilkinson—gastric wrapping with mesh 2003: Regan et al. (26)—free-standing SG as outgrowth of two-stage DS 2007: Talebpour and Amoli—first greater curvature gastric plication 2012: Pothoche et al.—first greater curvature gastric plication
Other innovative procedures		
1974: Quaade et al.—hypothalamic stimulation and ablation 1996: Cigaina et al.—paced gastric electrode stimulation 1999: Mason—ileal transposition 2008: Camilleri et al.—paced vagal nerve blockade 2008: Rodriguez-Grunert et al.—duodenojejunal exclusion 2008: Rodriguez-Grunert—endoluminal sleeve		

Boldface type denotes historical landmark contributions.



2019

Henry Buchwald^{1,2} and Jane N. Buchwald³



Metabolic (Bariatric and Nonbariatric) Surgery for Type 2 Diabetes: A Personal Perspective Review

Diabetes Care 2019;42:331–340 | <https://doi.org/10.2337/dc17-2654>

From 1953 over 50 operations have been suggested and tried..

..more than 40 has been abandoned

IL RAZIONALE DELLA NOVITA' IN CHIRURGIA BARIATRICA

- La chirurgia ha guadagnato lo scettro di trattamento maggiormente efficace nel lungo termine
- Non esistono interventi perfetti
- Bisogna continuare ad imparare dal passato e a saper essere critici verso i propri risultati
- La ricerca in questo ambito rimane uno dei temi piu' dinamici e stimolanti

***THANKS FOR YOUR
ATTENTION***

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