

OVERVÆGTS-BEHANDLINGS MANGE ANSIGTER

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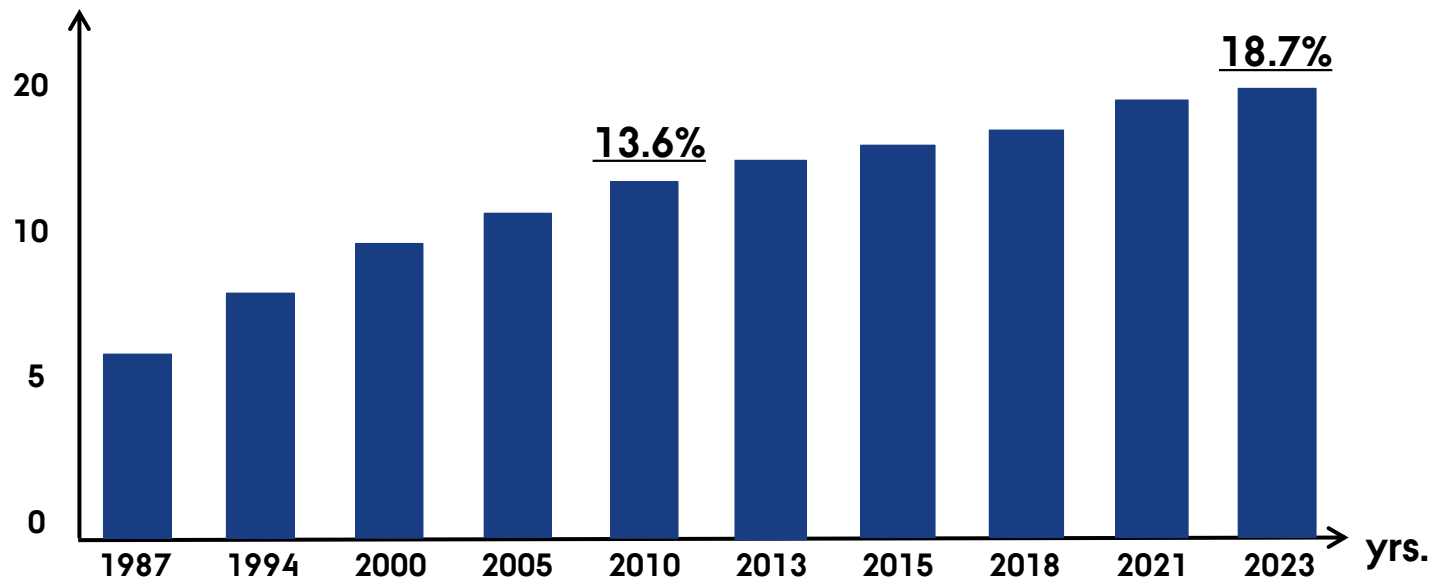
Nationalt Center for overvægt

INTERESSEKONFLIKTER

- ▶ Foredrag/undervisning (sidste 3 år):
Böhringer Ingelheim, Eli Lilly, Landbrug & Fødevarer, Merck, Nestlé & Novo Nordisk
- ▶ Forskningsbevillinger (sidste 3 år):
Aarhus Universitet, Danske Regioner, Novo Nordisk Fonden & Sygeforsikringen danmark

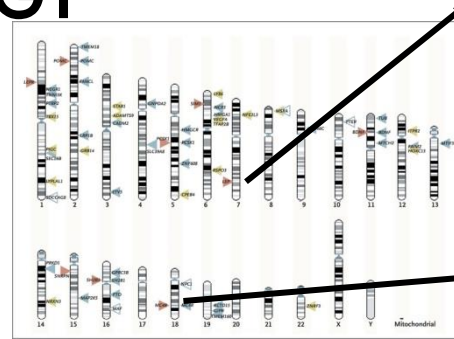
SVÆR OVERVÆGT DANMARK (BMI>30)

Obesity (%)



UDVIKLING AF SVÆR OVERVÆGT

- Genes
- Factors during pregnancy
- Structural/socioeconomic factors
- Psychological factors
- High caloric food intake
- Inactivity/reduced activity
-?



Wang Z et al, Nat Gen 2022



Lep

Farooqi S et al. JCI 2002

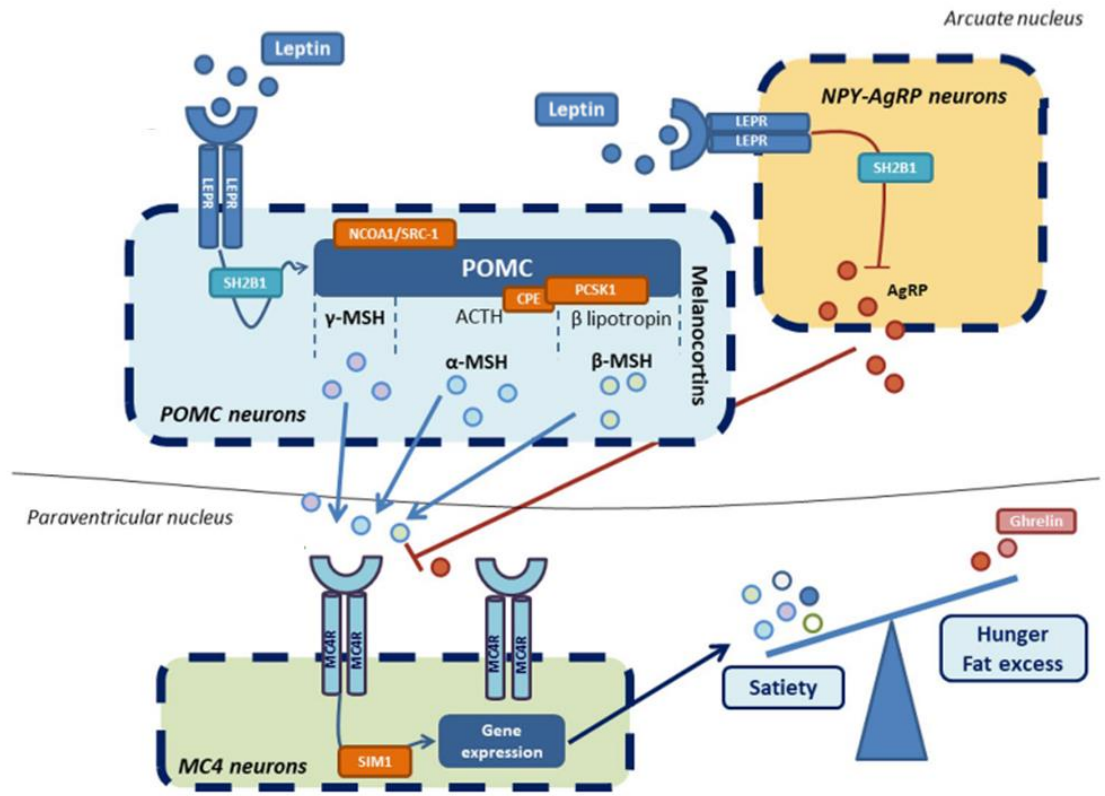
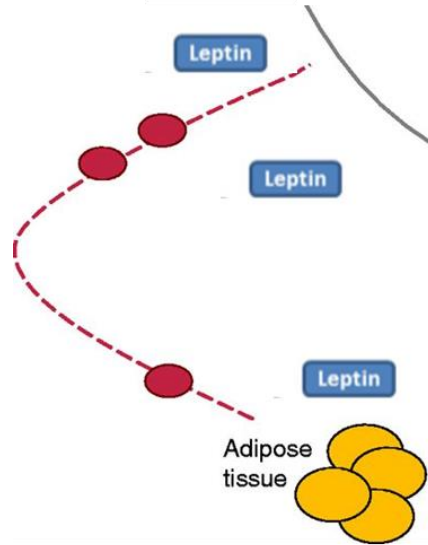


MC4R

Bruun JM et al
Ugeskr Laeger 2004



FEDT OG HJERNE



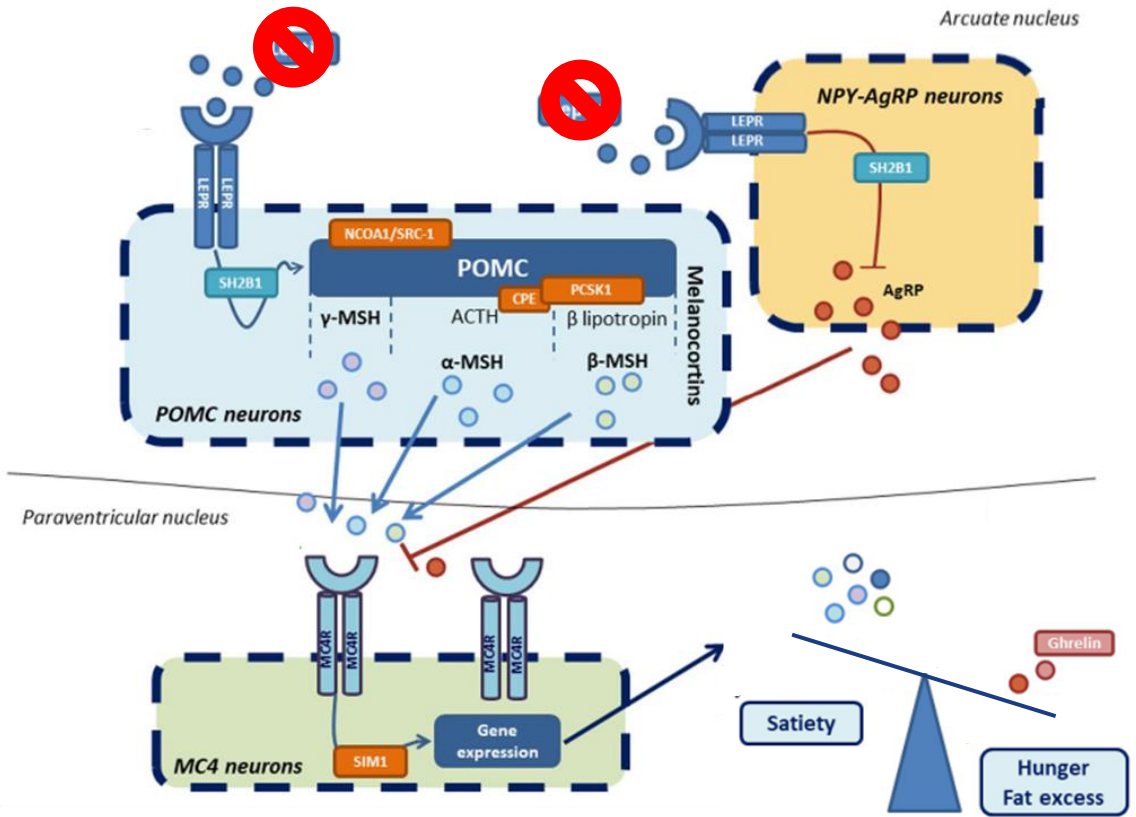
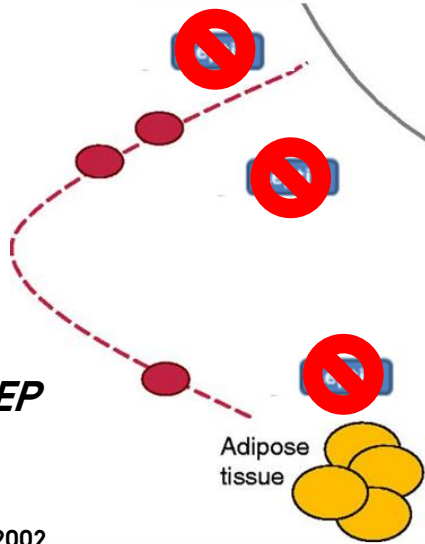
Mainieri F, Eur J Ped 2023

FEDT OG HJERNE



LEP

Farooqi S et al. JCI 2002







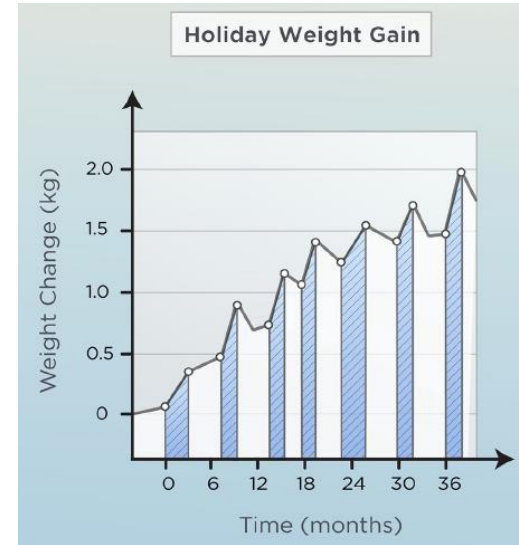
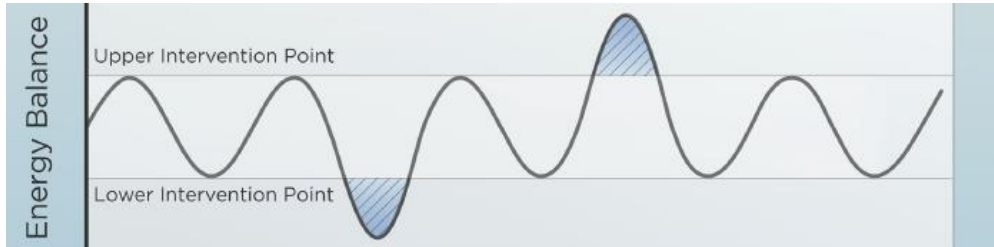
Mainieri F, Eur J Ped 2023

VÆGTUDVIKLING I ET ALMINDELIGT LIV....

UNSOLVED MYSTERY

The unidentified hormonal defense against weight gain

Jens Lund , Camilla Lund , Thomas Morville , Christoffer Clemmensen *



**”The genetic background loads the gun,
but the environment pulls the trigger”**

Swinburn *et al.* (2011). The global obesity pandemic: shaped by global drivers and local environment

FØLGESYGDOMME

- ▶ Især central (abdominal) svær overvægt:

Type 2 diabetes

Hypertension/CVD

Søvnapnø

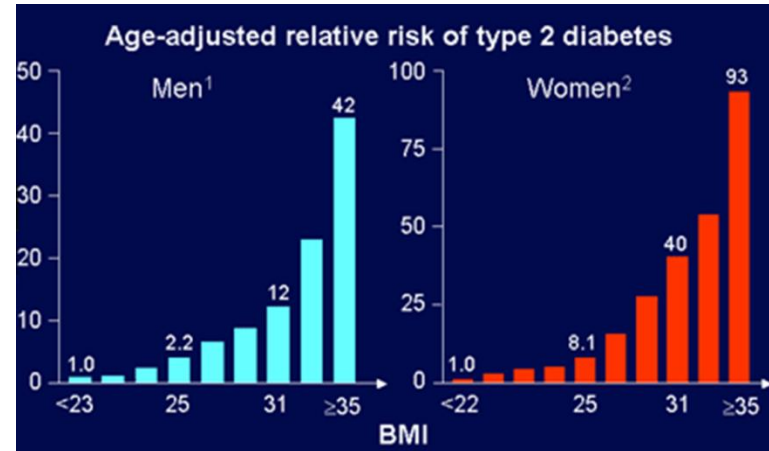
Fedtlever (MAFLD/MASH)

PCOS

Cancer

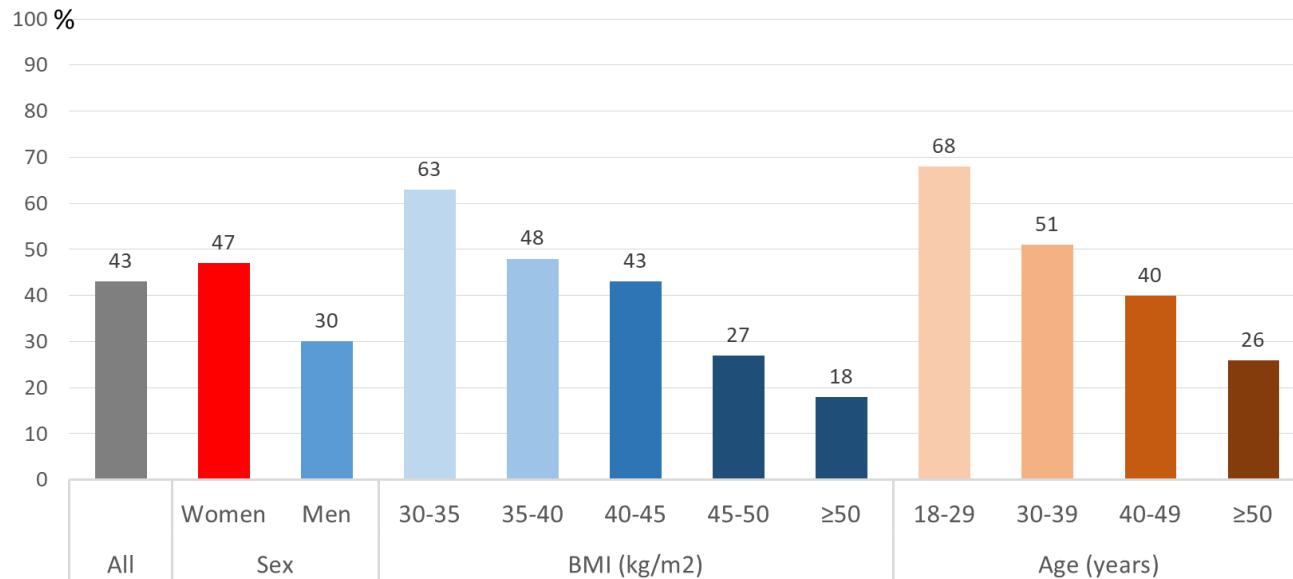
Muskel-skelet lidelser

....for tidlig død



Chan JM, Diabetes Care 1994¹ and Colditz G, Ann Intern Med 1995²

...MEN HØJT BMI ER *IKKE* LIG MED SYGDOM



*Ikke T2D, prædiabetes, øget leverstivhed eller obstruktiv søvnapnø

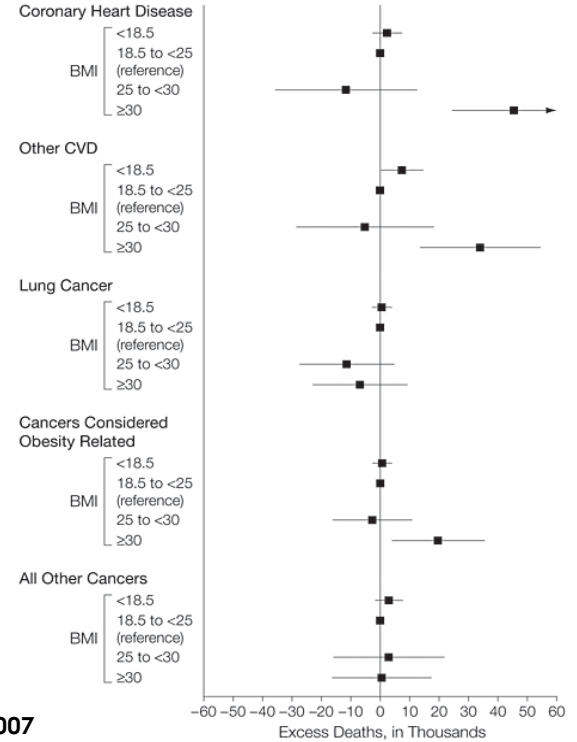


By courtesy of professor Claus Bogh Juhl

MORTALITET



Finkelstein EA, Obesity 2010



Flegal KM, JAMA 2007

KAN VI FOREBYGGE?



Received: 26 October 2022 | Revised: 18 August 2023 | Accepted: 9 September 2023



DOI: 10.1111/obr.13641

OBESITY
Reviews | WILEY

REVIEW

Paediatric Body weight - Policy

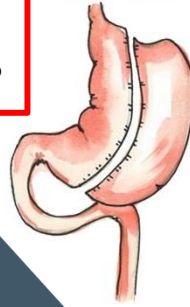
A literature review of evidence for primary prevention of overweight and obesity in healthy weight children and adolescents: A report produced by a working group of the Danish Council on Health and Disease Prevention

Nanna J. Olsen¹  | Jane N. Østergaard² | Lise G. Bjerregaard³ | Teresa V. Høy⁴ |
Lene Kierkegaard⁴ | Kim F. Michaelsen⁵ | Thorkild I. A. Sørensen⁶ |
Morten K. Grønæk⁴ | Jens M. Bruun^{2,7,8}  | Berit L. Heitmann^{1,9,10}

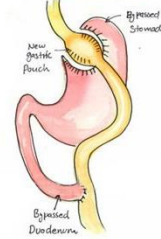
BEHANDLING

Weight loss ~30%

Gastric Sleeve



Gastric Bypass



Weight loss ~5%

Weight loss 10-20%

Kirurgi

Medicin

Livsstil

(Diæt, fysisk aktivitet, adfærdspåvirkning)

Mysimba[®] 8 mg/90 mg
prolonged-release tablets

naltrexone hydrochloride / bupropion hydrochloride
112 prolonged-release tablets



Xenical[®] 120 mg
hard capsules
Orlistat

120 mg
Oral use

64 hard capsules

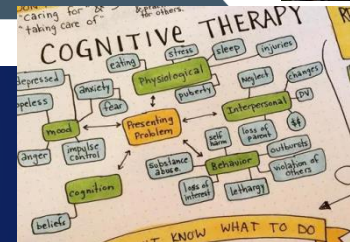


once weekly

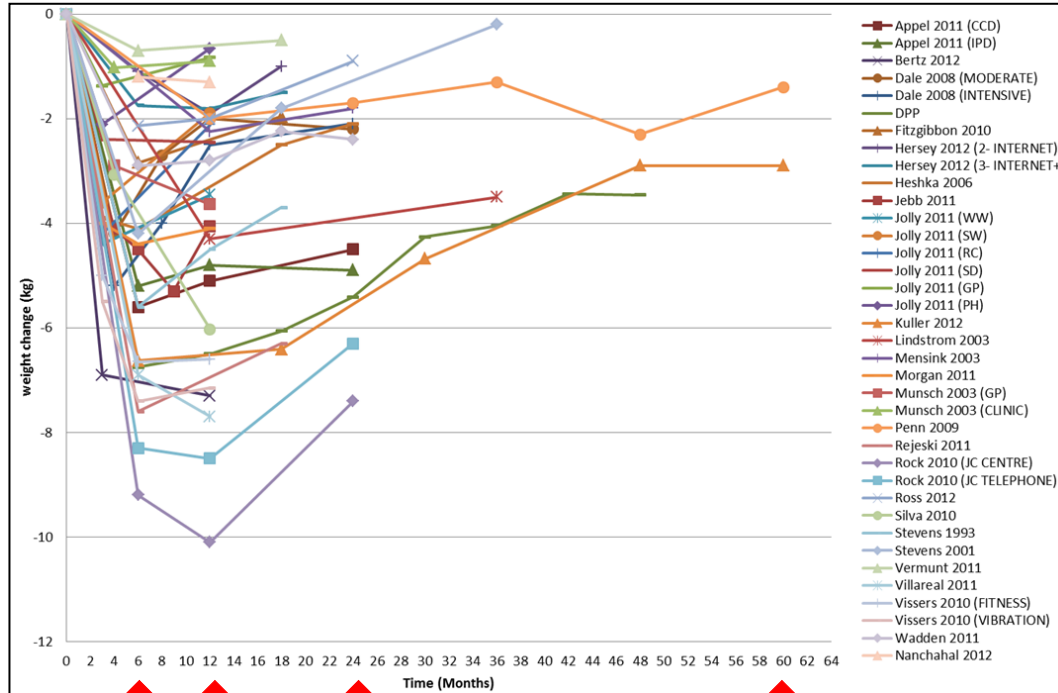
mounjaro[®]

(tirzepatide) injection 0.5 mL

2.5 mg | 5 mg | 7.5 mg | 10 mg | 12.5 mg | 15 mg

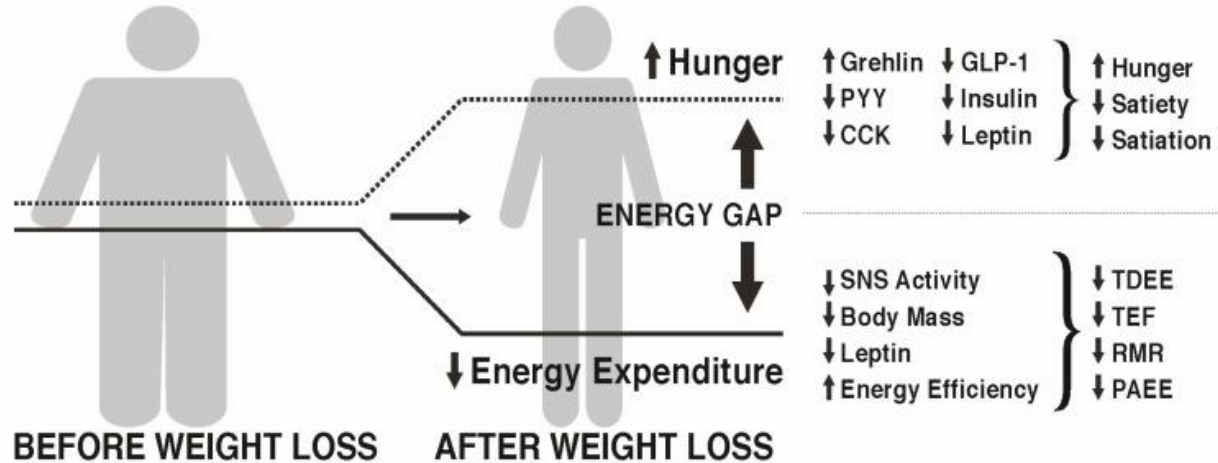


LIVSSTILS INTERVENTIONER



By courtesy of professor Jebb

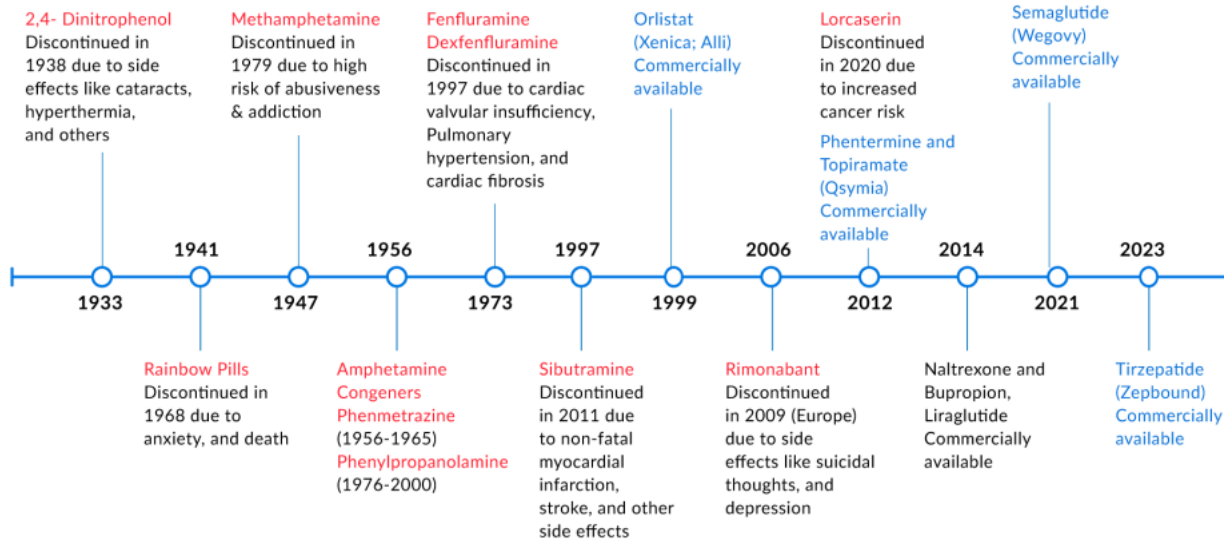
VÆGTTAB OG VÆGTVEDLIGEHOEDSE



Melby CL, Nutrients 2017

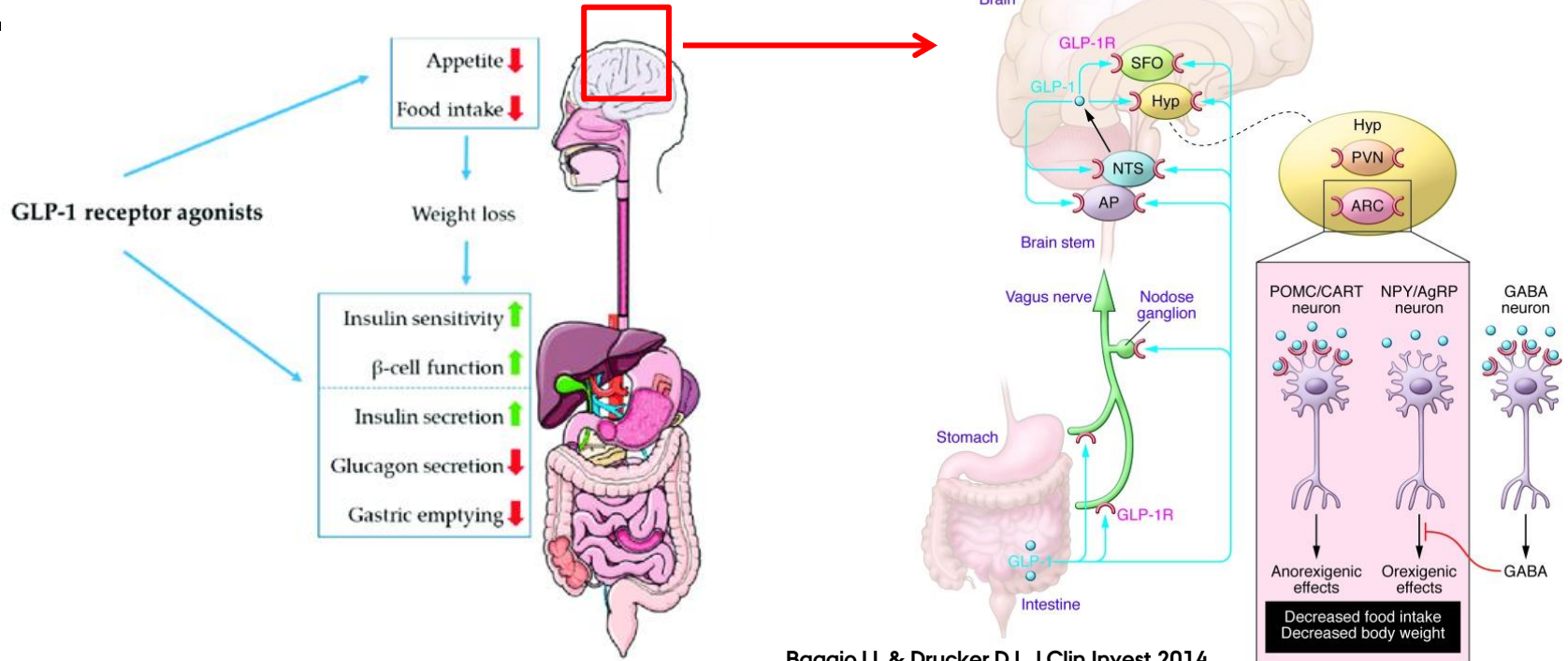
FARMAKOLOGI

Obesity Drugs Timeline



● Red color indicates discontinued drugs ● Blue color indicates commercially available drugs

GLP1-RA



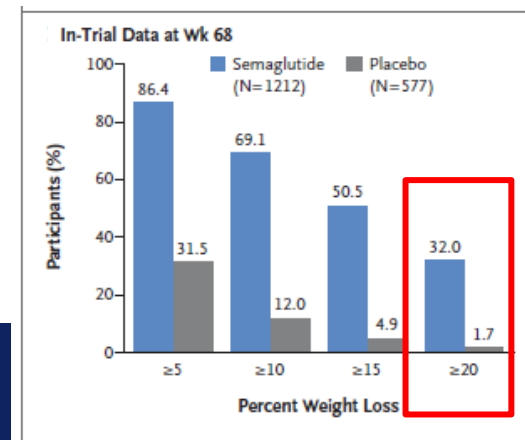
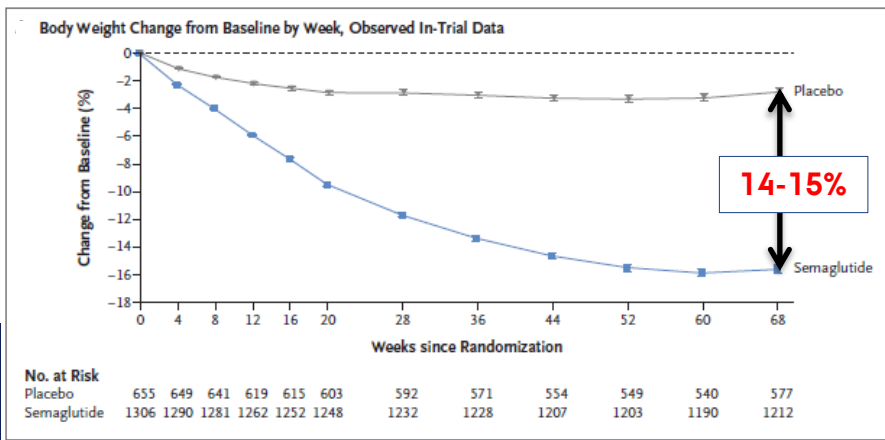
Baggio LL & Drucker DJ, J Clin Invest 2014

WEGOVY (SEMAGLUTID)

ORIGINAL ARTICLE

Once-Weekly Semaglutide in Adults with Overweight or Obesity

John P.H. Wilding, D.M., Rachel L. Batterham, M.B., B.S., Ph.D., Salvatore Calanna, Ph.D., Melanie Davies, M.D., Luc F. Van Gaal, M.D., Ph.D., Ildiko Lingvay, M.D., M.P.H., M.S.C.S., Barbara M. McGowan, M.D., Ph.D., Julio Rosenstock, M.D., Marie T.D. Tran, M.D., Ph.D., Thomas A. Wadden, Ph.D., Sean Wharton, M.D., Pharm.D., Koutaro Yokote, M.D., Ph.D., Niels Zeuthen, M.Sc., and Robert F. Kushner, M.D., for the STEP 1 Study Group*



Wilding JPH, NEJM 2021

OPHØR MED WEGOVY.....?

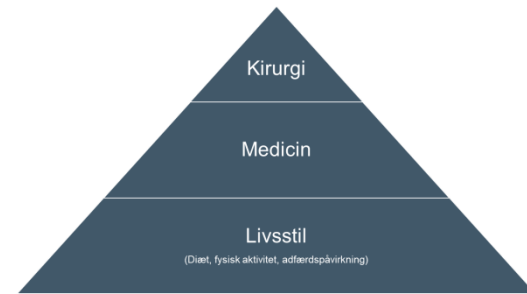
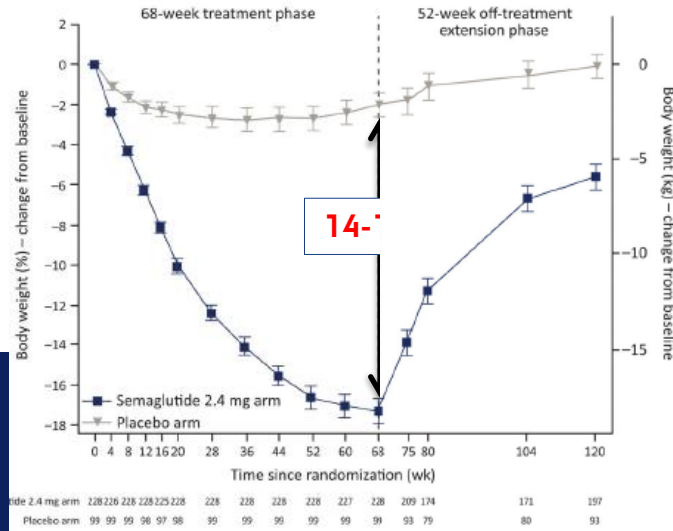
Received: 1 February 2022 | Revised: 7 April 2022 | Accepted: 18 April 2022
DOI: 10.1111/dom.14725

ORIGINAL ARTICLE

WILEY

Weight regain and cardiometabolic effects after withdrawal of semaglutide: The STEP 1 trial extension

John P. H. Wilding D.M.¹ | Rachel L. Batterham MBBS^{2,3,4} |
Melanie Davies M.D.^{5,6} | Luc F. Van Gaal M.D.⁷ | Kristian Kandler M.D.⁸ |
Katerina Konakli PhD⁸ | Ildiko Lingvay M.D.⁹ | Barbara M. McGowan M.D.¹⁰ |
Tugce Kalayci Oral MD⁸ | Julio Rosenstock M.D.¹¹ |
Thomas A. Wadden Ph.D.¹² | Sean Wharton M.D.¹³ | Koutaro Yokote M.D.¹⁴ |
Robert F. Kushner M.D.¹⁵ | STEP 1 Study Group



Wilding JPH, DOM 2022

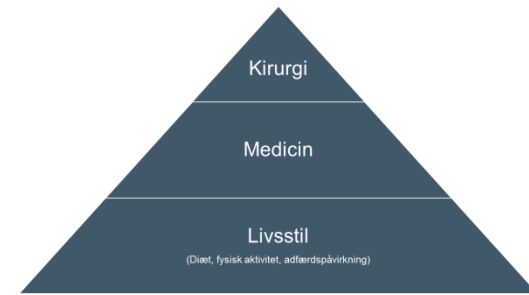
MOUNJARO (TIRZEPATID)

The NEW ENGLAND JOURNAL of MEDICINE

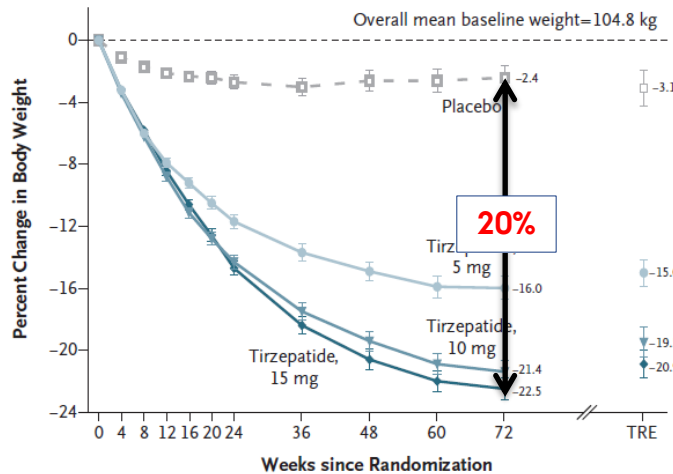
ORIGINAL ARTICLE

Tirzepatide Once Weekly for the Treatment of Obesity

Ania M. Jastreboff, M.D., Ph.D., Louis J. Aronne, M.D.,
 Nadia N. Ahmad, M.D., M.P.H., Sean Wharton, M.D., Pharm.D.,
 Lisa Connery, M.D., Breno Alves, M.D., Arihiro Kiyosue, M.D., Ph.D.,
 Shuyu Zhang, M.S., Bing Liu, Ph.D., Mathijs C. Bunck, M.D., Ph.D.,
 and Adam Stefanski, M.D., Ph.D., for the SURMOUNT-1 Investigators*



Percent Change in Body Weight by Week (efficacy estimand)



Participants Who Met Weight-Reduction Targets (efficacy estimand)



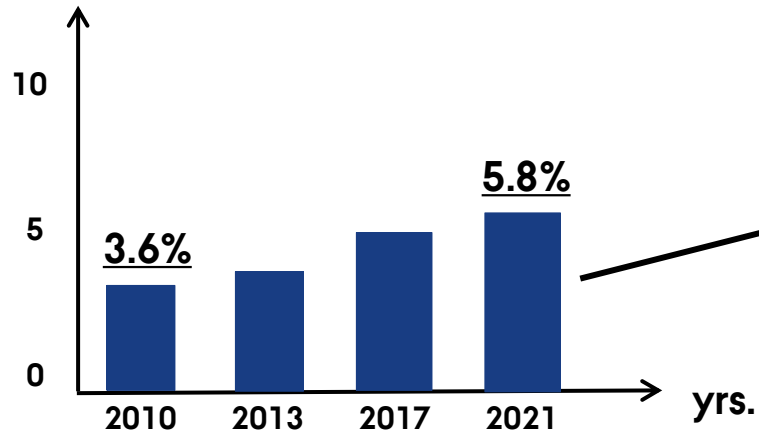
Jastreboff AM, NEJM 2022



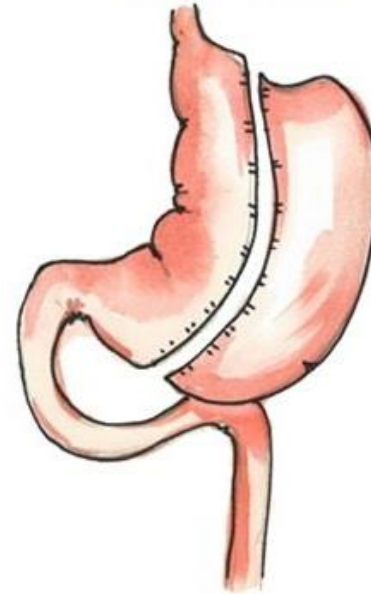
SVÆR OVERVÆGT KLASSE II+III (BMI>35)

~1400-1600/år i Danmark

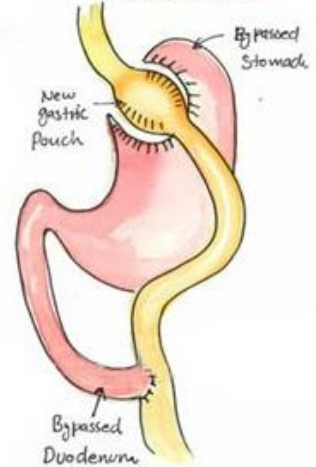
Obesity (%)



Gastric Sleeve

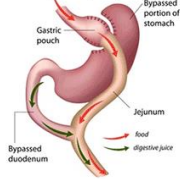


Gastric Bypass

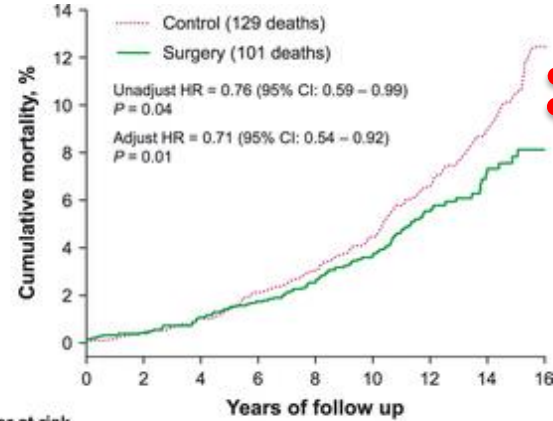
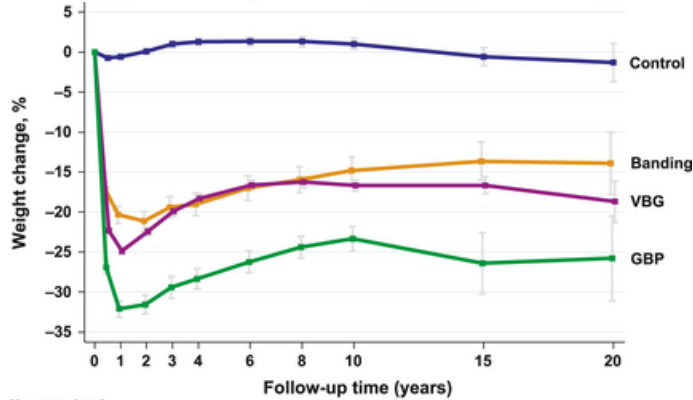
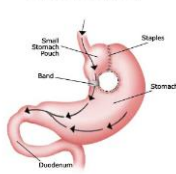


SOS

Roux-en-Y Gastric Bypass (RNY)



Vertical Banded Gastroplasty



Number at risk

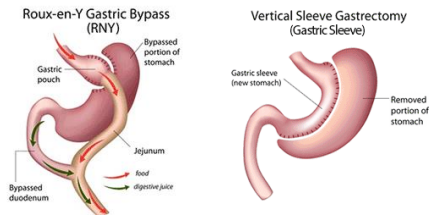
	2010	2001	1987	1821	1590	1260	760	422	169
Surgery	2037	2027	2016	1842	1455	1174	749	422	156
Control	2037	2027	2016	1842	1455	1174	749	422	156

Table 2. Cause of Death.*

Variable	Surgery Group (N = 2010)	Control Group (N = 2037)
	no. of subjects	
Cardiovascular condition		
Any event	43	52
Cardiac	35	44
Myocardial infarction	13	25
Heart failure	2	5
Sudden death	20	14
Stroke	6	6
Intracerebral hemorrhage	2	4
Infarction	1	2
Subarachnoid bleeding	3	0
Other	2	3
Aortic aneurysm	1	2
Aortic thrombosis	0	1
Diabetic gangrene	1	0
Noncardiovascular condition		
Any event	58	76
Cancer	29	47
Meningioma	0	1
Infection	12	3
Thromboembolic disease	5	7
Pulmonary embolism	4	7
Vena caval thrombosis	1	0
Other	12	18
Total no. of deaths	101	129

Sjöström L, J Intern Med 2012 & N Eng J Med 2007

T2D (3 ÅR EFTER)

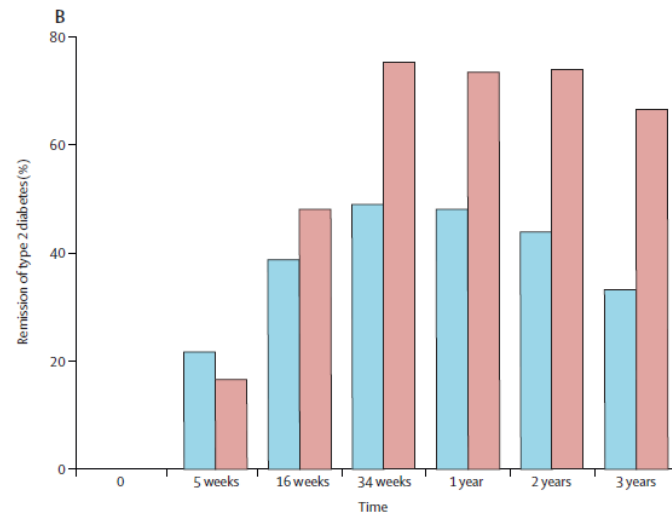
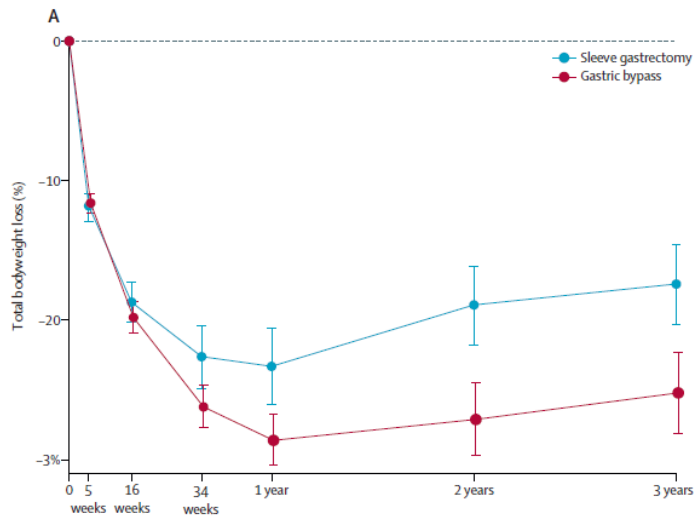


Patient-reported outcomes, weight loss, and remission of type 2 diabetes 3 years after gastric bypass and sleeve gastrectomy (Oseberg); a single-centre, randomised controlled trial



Marius Svanevik*, Jolanta Lorentzen*, Heidi Borgeraas, Rune Sandbu, Birgitte Seip, Asle W Medhus, Jens K Hertel, Ronette L Kolotkin, Milada C Småstuen, Dag Hofsoe†, Joran Hjelmæsæth†

Lancet Diabetes Endocrinol
2023; 11: 555-66



LIDT AT GÅ HJEM PÅ

- ▶ Forebyggelse er svær (kan vi overhovedet forebygge?)
- ▶ Livsstilintervention virker, så længe livsstilen er lagt om....
- ▶ Farmakologisk behandling kan reducere kropsvægten med 20%, men virker kun så længe man tager medicinen
- ▶ Bariatrisk kirurgi forbedrer metabolisme (T2D) og reducerer mortalitet
- ▶ Mere forskning....