



Why can't my patient lose weight?

And what can I do about it?







"It's just a matter of calories in and calories out....."

"Just eat less and do regular aerobic exercise"

"A calorie is a calorie....."





"It's just a matter of calories in and calories out....."











- Weight regulation in individual people
- The impact of the modern food environment
- How bariatric/metabolic surgery works



 How we as health professionals can make a difference in the lives of our patients and populations suffering with obesity



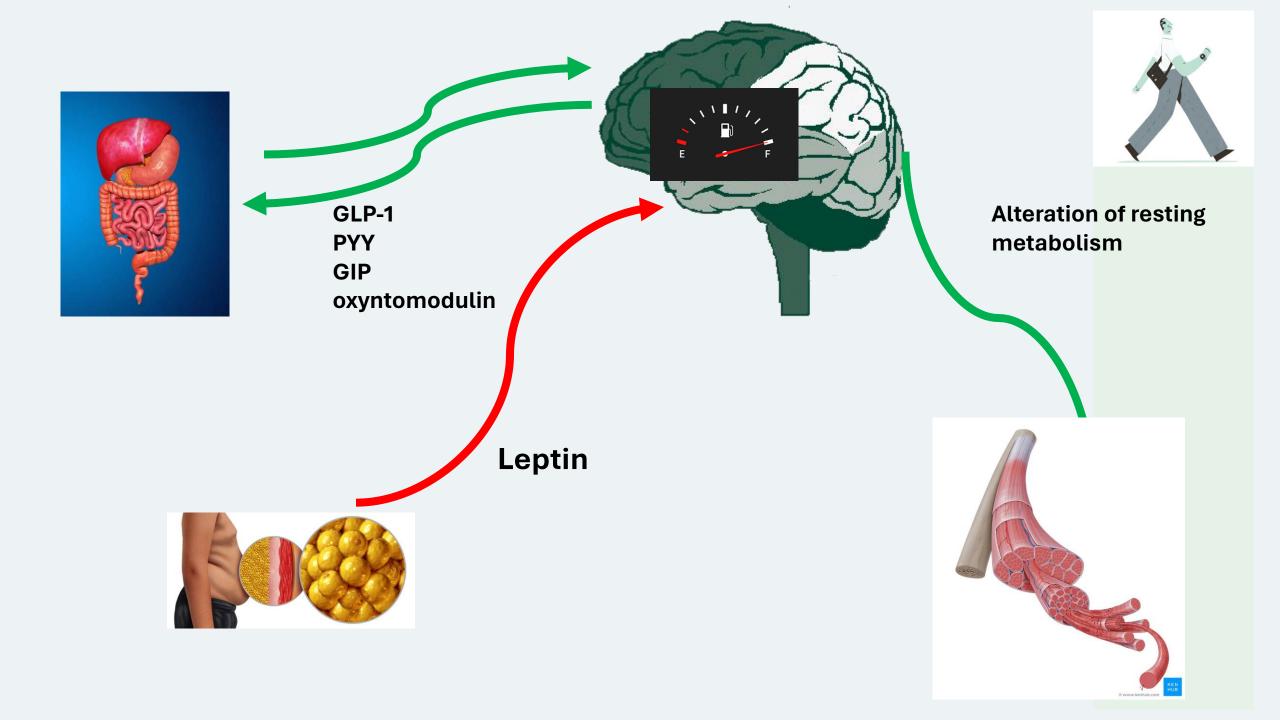


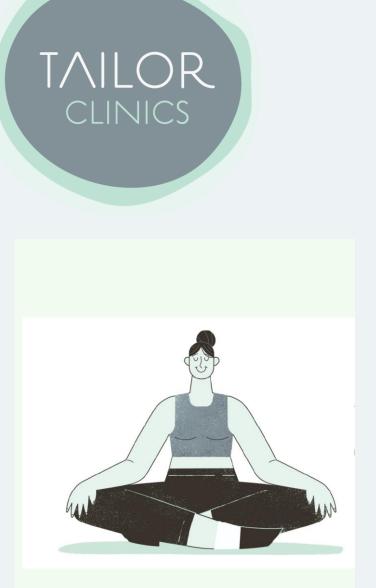




Energy Balance Regulation ie Weight Regulation









Minnesota Starvation Experiment October 1944 – November 1945

What exactly is "Energy Out"??



Resting metabolism-70%



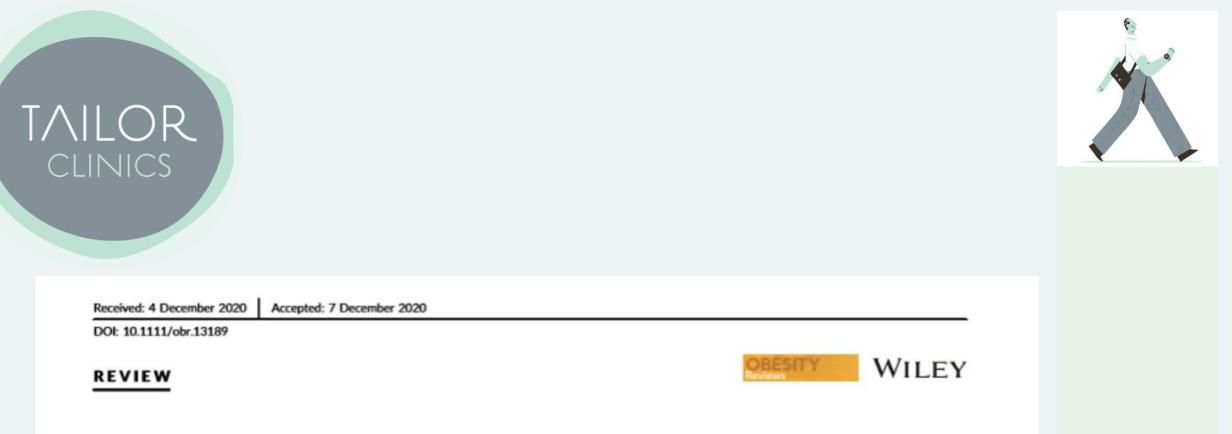


Active daily expenditure- 20%

Physical exercise-10%







Physiology of weight regain: Lessons from the classic Minnesota Starvation Experiment on human body composition regulation



Abdul G. Dulloo

- Mean reduction in basal metabolic rate was 25% by 24 weeks
- Mostly through reduction in adaptive thermogenesis in lean tissue. Patients felt cold (not a "less insulation" issue)
- Excessive hunger persisted throughout refeeding and well beyond the point at which original weight had been obtained, leading to 3.5kg mean weight "overshoot"



 Fat mass recovered faster than lean mass (muscle), but excessive hunger and food drive continued until lean mass had recovered, leading to an overshoot of fat mass deposition





Experimental Obesity in Man: Cellular Character of the Adipose Tissue

LESTER B. SALANS, EDWARD S. HORTON, and ETHAN A. H. SIMS

From the Department of Medicine, Dartmouth Hitchcock Medical Center, Hanover, New Hampshire 03755, and the University of Vermont Medical School, Burlington, Vermont 05041

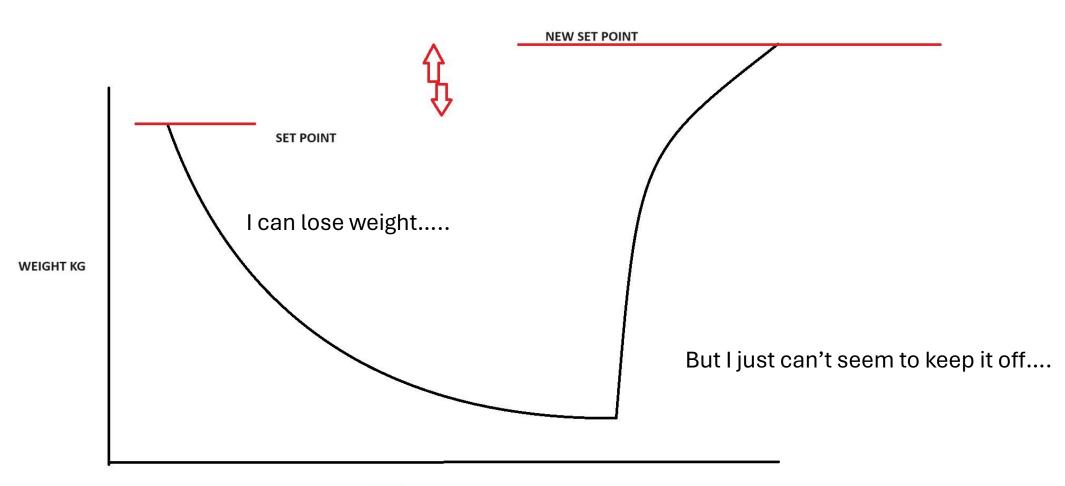




Our bodies have a "set point" of energy and weight regulation that is maintained by our primitive (subconscious) brain

This set point is strongly defended through adaptions in non-exercise active thermogenesis (basal metabolism) and hunger/hyperphagia/satiety signalling





TIME







> Obesity (Silver Spring). 2016 Aug;24(8):1612-9. doi: 10.1002/oby.21538. Epub 2016 May 2.

Persistent metabolic adaptation 6 years after "The Biggest Loser" competition

Erin Fothergill ¹, Juen Guo ¹, Lilian Howard ¹, Jennifer C Kerns ², Nicolas D Knuth ³, Robert Brychta ¹, Kong Y Chen ¹, Monica C Skarulis ¹, Mary Walter ¹, Peter J Walter ¹, Kevin D Hall ¹

Affiliations + expand PMID: 27136388 PMCID: PMC4989512 DOI: 10.1002/oby.21538





What else determines our individual Set Point?

Genetics

Epigenetics



The Famine Ended 70 Years Ago, but Dutch Genes Still Bear Scars











What else determines our individual Set Point?

Genetics

Epigenetics

Environment

Cylclical dieting





Our patients suffering from obesity cannot lose and maintain a healthier weight long term without a fall in their metabolic set point





TIP TOP Bakery

SUPERSOFT

WHITE



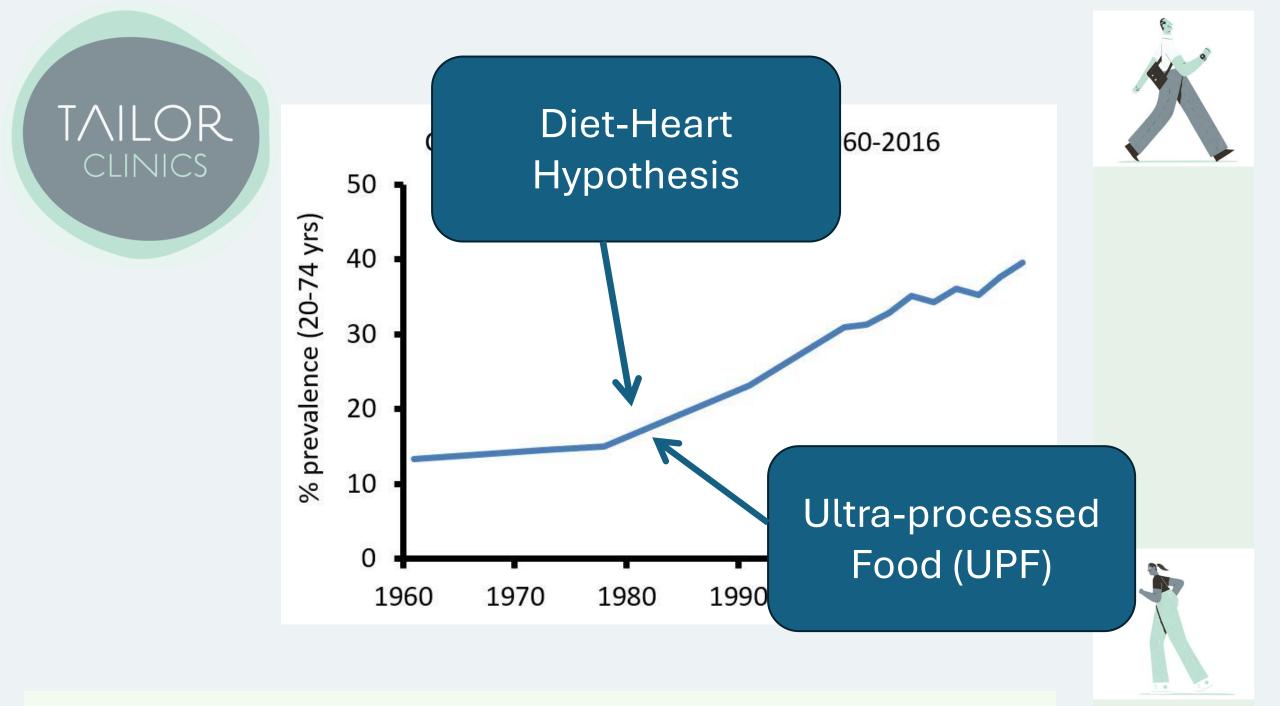






Our Food Environment





CLINICS

Ultra-Processed Food (UPF)

- Industrially produced edible substances substituting in for real ingredients
- Improve shelf life, facilitate central distribution, reduce cost of production and encourage over-consumption
- Most of these chemicals never before encountered during human evolution
- Stripped of fibre, micronutrients and omega 3 FA
- High in sugar, salt and fat, and energy dense



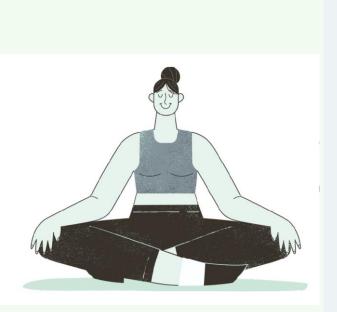












What's so bad about UPF?

-industrially and chemically designed with optimal combinations of sugar, salt, fat to optimise taste, mouth feel and hedonic response

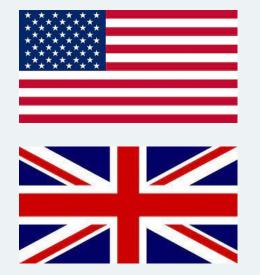
- soft, crumbly, minimal chewing so facilitate fast and often subconscious consumption

- UPF hacks our normal satiety mechanisms so we eat more

- High glycaemic response because there is no "food matrix"



The extent of UPF consumption??



TAILOR

CLINICS

65% of caloric intake on average



?55% of intake

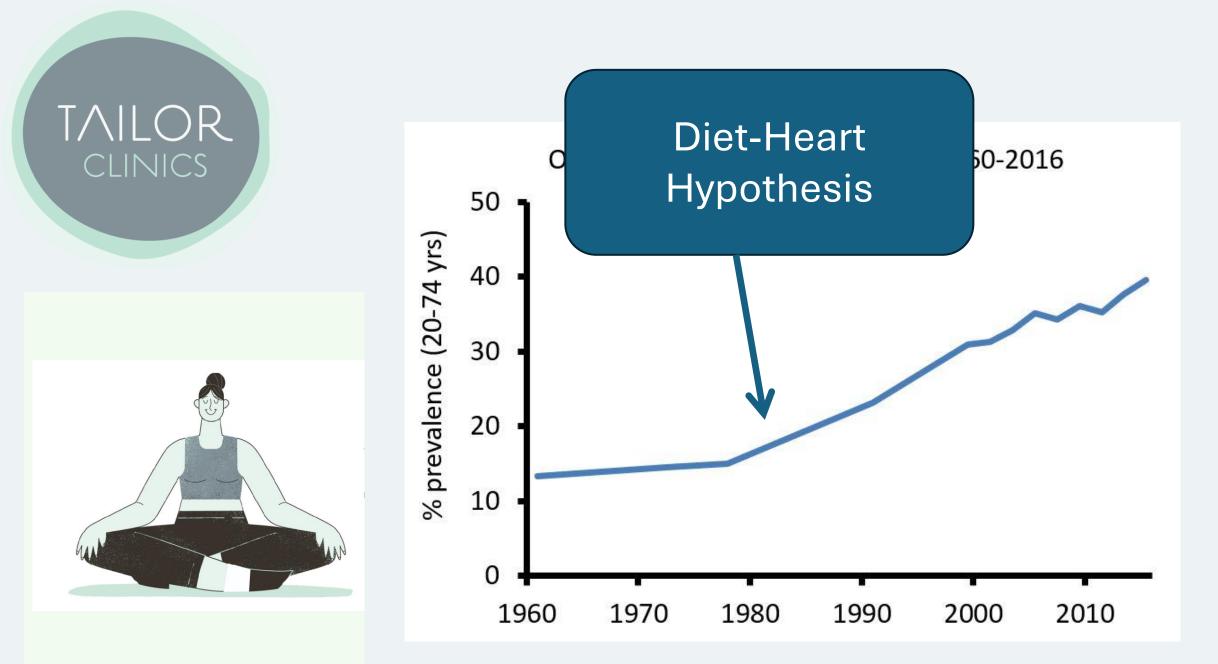


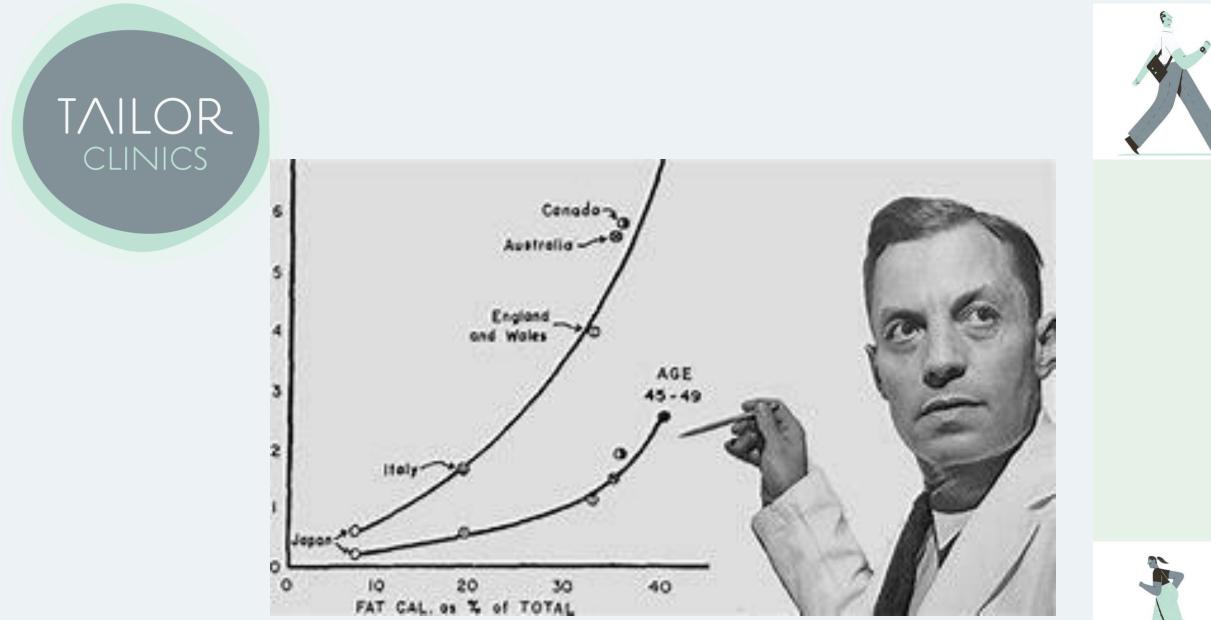


Ultra-processed food exposure and adverse health outcomes: umbrella review of epidemiological meta-analyses

BMJ 2024 ; 384 doi: https://doi.org/10.1136/bmj-2023-077310 (Published 28 February 2024) Cite this as: *BMJ* 2024;384:e077310







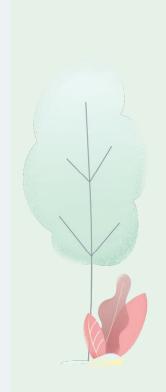


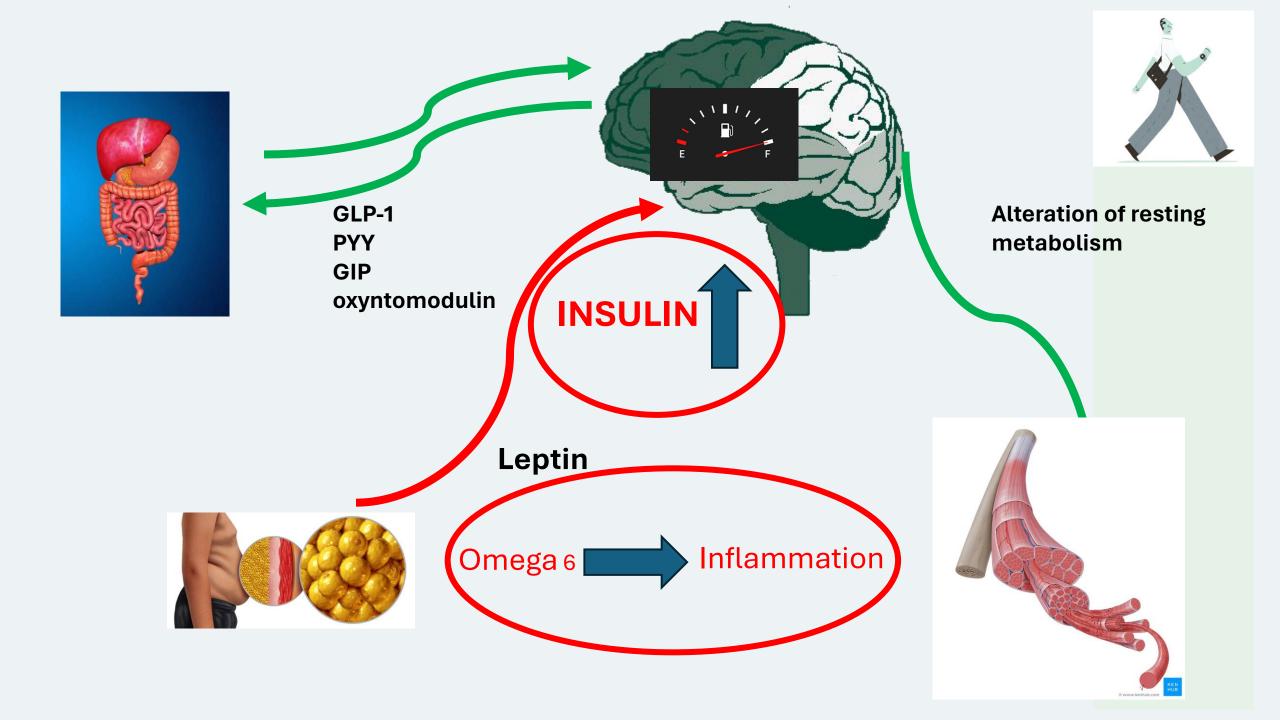


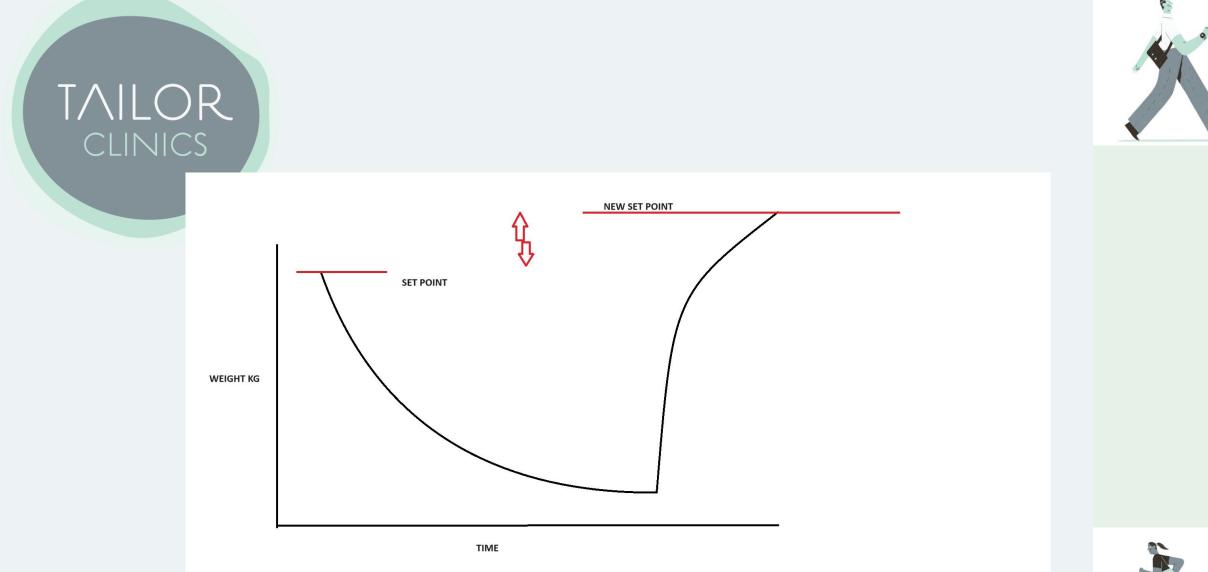
So what's the big deal with a change to cereals for breakfast, and using vegetable/seed oils instead of animal/dairy fats?

- Increased glycaemic loads and reduced satiety leading to development of "snacking culture" and the birth of "Big Snack"

 Reduction of dietary omega 3 in exchange for omega 6 leading to alterations in cell walls, leading to reduced insulin sensitivity, chronic inflammatory change and leptin resistance at the hypothalamus

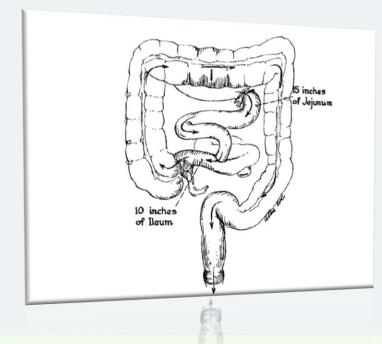


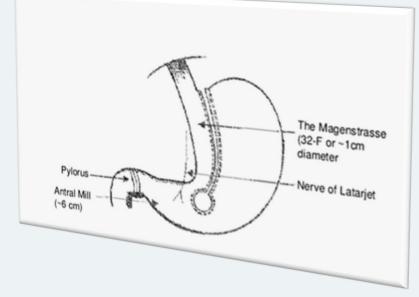






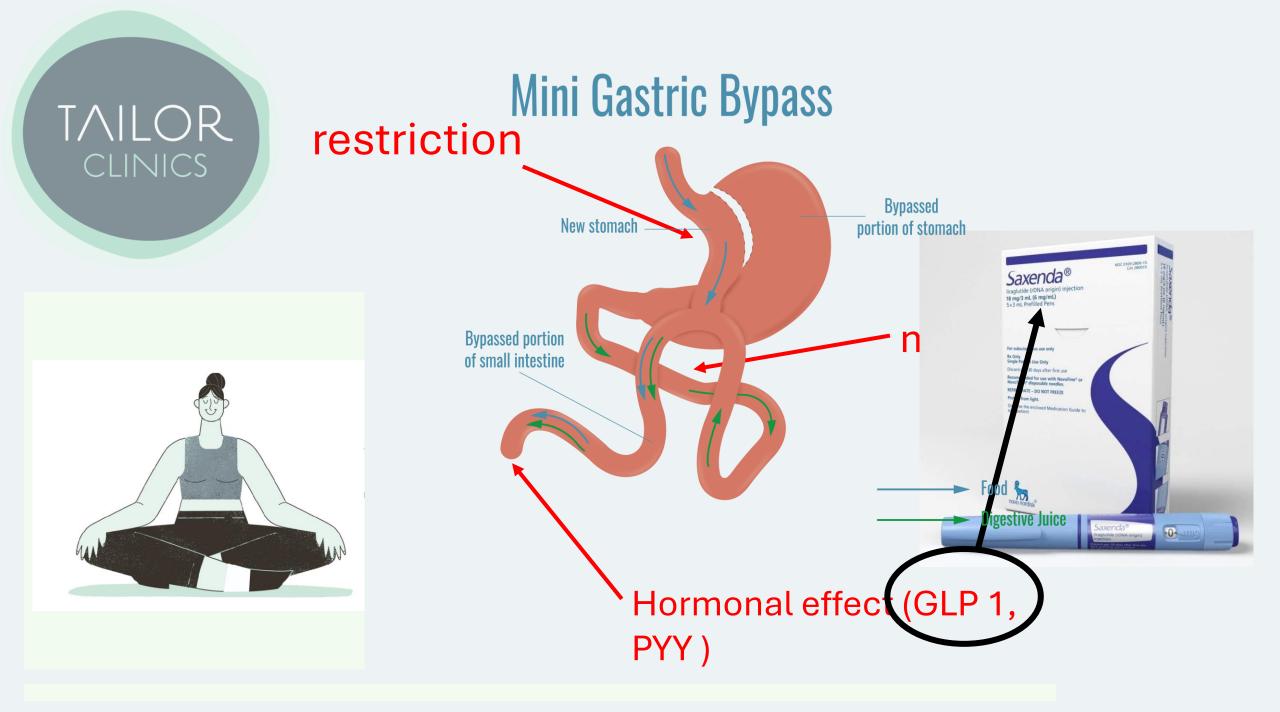
Metabolic/Bariatric Surgery

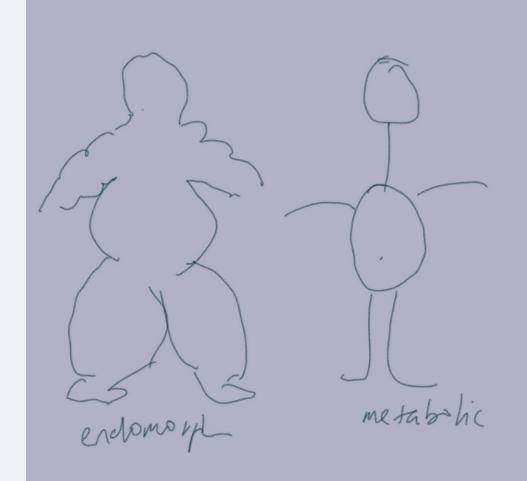












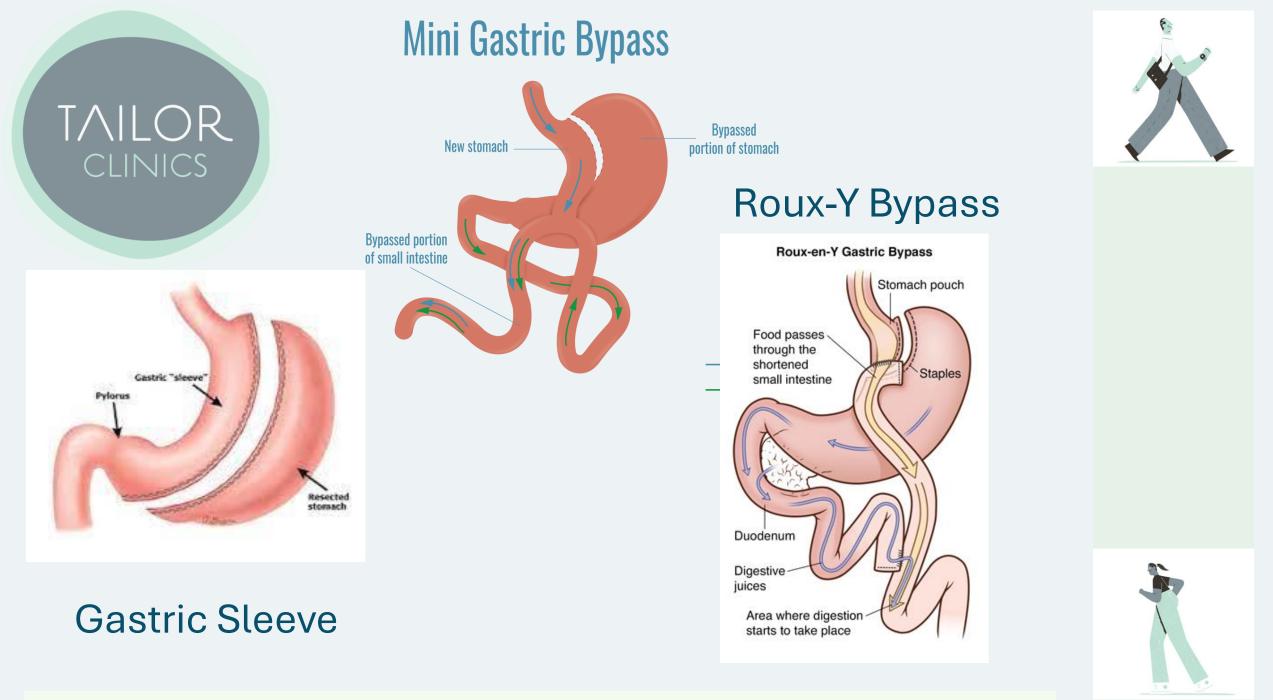




Rowan's rolls

Thin "normal" legs





TAILOR clinics



The keys to long term success.....

- 1. Frame of mind- this is my intermediate term reset, in the long run its up to m
- 2. Bedding in good habits during the 18 months "honeymoon" period
- 3. Exercise to improve muscle metabolic health, reduce cortisol, maintain mental health
- 4. Eat mostly whole foods, learn to cook/prepare/store food
- 5. Find other things apart from food to give you the dopamine hit that aren't illegal or immoral

TAILOR clinics

So what can you do for your patients here and now....?

Yes! There are things we can do!





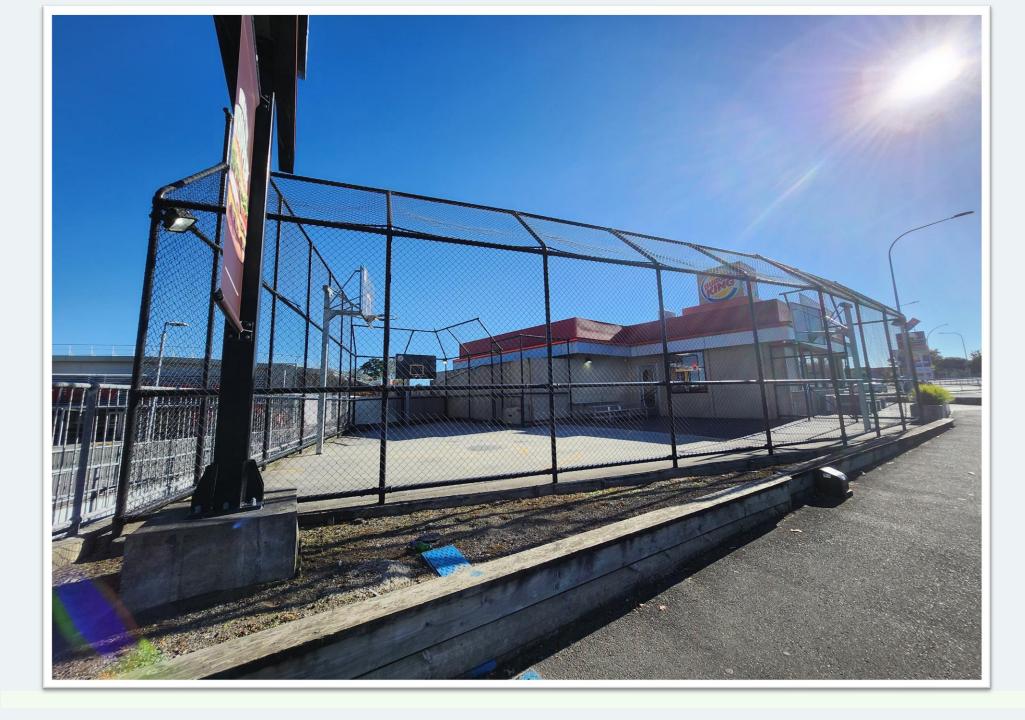


1.Call out and stand against food industry tactics to see their UPF to children







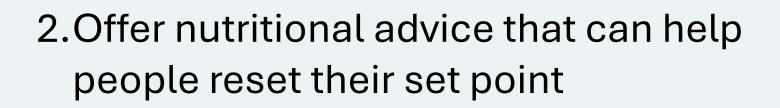








1.Call out and stand against food industry tactics to see their UPF to children









1.Remove as much UPF as possible from their diet ie eat food

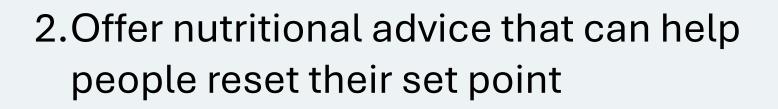
2.Learn to prepare food from scratch

3.Favour omega 3 foods ("sunshine foods") over omega 6 ("autumn") foods





1.Call out and stand against food industry tactics to see their UPF to children



3.Exercise to promote metabolic and mental health, not to burn calories









TAILOR CLINICS

Hunter-Gatherer Energetics and Human Obesity

Herman Pontzer , David A. Raichlen, Brian M. Wood, Audax Z. P. Mabulla, Susan B. Racette, Frank W. Marlowe Published: July 25, 2012 • https://doi.org/10.1371/journal.pone.0040503

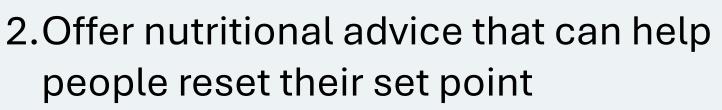








TAILOR clinics 1.Call out and stand against food industry tactics to see their UPF to children



3.Exercise to promote metabolic and mental health, not to burn calories

4. Promote sleep as important- metabolic effect of melatonin

5. Reduce cortisol by reducing stress







Be a mentor, and a role model

