Case studies
Diabetes up-to-date management
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Pearl, 32

- BMI 38 kg/m2, weight 128Kg, height 183cm, **EOSS 2**, Class 2
- Onset of weight gain around menarche (age 10), significant increase during adolescence, managed to lose with exercise (netball)
- Family history for obesity - several siblings and mother
- Complications: DM 2 with early onset, menorrhagia and mild Fe deficiency, otherwise well, no PCOS
- Examination: acanthosis+++, no striae, equal distribution of weight
- Lab's – normal, except HbA1c 104mmol/mol, ACR 12.5mg/mmol
- Eating: 'what everyone else has', can eat large amounts without feeling full, no night-time eating, mild degree of emotional eating and cravings for sweets
- Exercise: has personal trainer and engaged
- Behavioral: no depression / anxiety

- *Keen to make changes, want to get pregnant*

Image: Pacifica.org.nz, Published 07/05/2017

Pearl, 32

- Key aspects:
  - Degree of genetic predisposition
  - Cultural component
  - Can lose weight
  - Main problem DM2 and not weight
  - (DM2 < 3years – responsive to 5-10% weight loss)
- Other complications from weight - menstrual problems and microalbuminuria (FSGS?)
- Eating:
  - no significant emotional or abnormal eating component
  - Possible rapid gastric transit (no constant cravings)
- Exercise: able and engaged
- Behavioral: motivated, no depression

<u>Questions</u>

- What can & should we do?

Pearl, 32

What did we do?

- Started on MF and Vildagliptin
  - (ideal medication would be a GLP1 agonist – slows gastric transit and helps with weight loss)
- Diet plan in the Gym (LCH) – encouraged to continue
- What happened?
  - Big smile
  - Hba1c 53mmol/mol
  - Weight down by 6kg
- Why did it work?

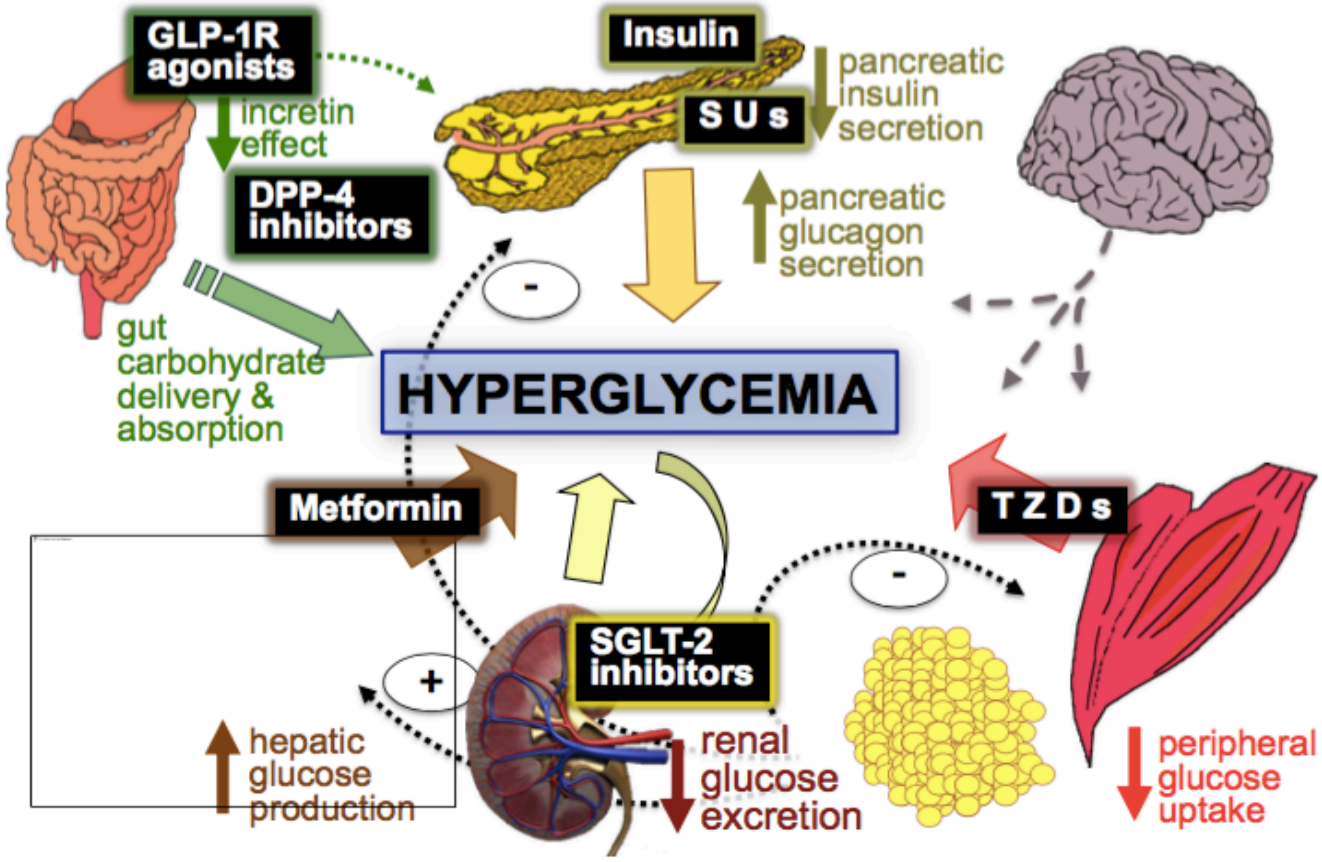
Alan, 58 male

- Weight 123kg, height 171cm, BMI 42kg/m2, **EOSS 3**, class 3
- PMHx:
  - IHD with NSTEMI and PCI, angiogram confirming diffuse LAD disease
  - Type 2 diabetes
  - Dyslipidemia, problems to statins
  - Gout, NAFLD
  - OSA on CPAP
  - Joint pain in knees, ankle and spine
- Weight Hx:
  - Fit and lean as teenager, rugby player, when stopped sport gained weight up to 110kg, managed to lose 20kg with heavy exercise and LCH diet, several subsequent attempts
- Family Hx for DM2, obesity and renal cancer
- Eating: constant craver, habits and entertaining
- HbA1c 65mmol/mol, ALT 65, FBC and U/E normal, testosterone 4.1pmol/l (low calculated free T)

Alan, 58 male

- Key aspects:
  - Late onset weight gain, several aspects of the metabolic syndrome and medical complications
  - Multiple medications
- Focus:
  - **Improve medical problems and aim for 5-10% weight loss**
- Use medications that are safe and help both obesity and the associated complications
  - Metformin 1g bd, Dapagliflozin 10mg bd, Vildagliptin 50mg, Exenatide LAR 2mg/w
  - Low dose Testosterone
  - Improve OSA treatment
  - Continue with CV medication (LDL 1.9)
  - Intermittent fasting with meal replacements (3days/ week)

Major Pathophysiologically-Based Therapies for T2DM



Adapted from: Inzucchi SE, Sherwin RS in: *Cecil Medicine* 2011