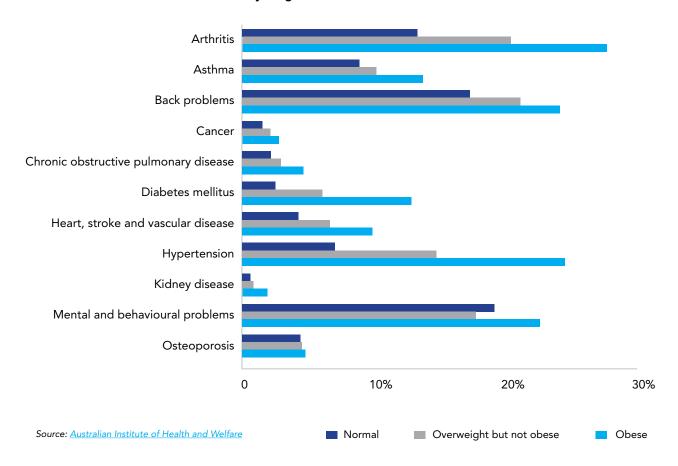
### Teaching your Registrar How to Engage and Manage Obese and Overweight Patients

### **Context**

### The Facts in Australia

- 8th highest proportion of overweight or obese adults >15yrs
- 2 in 3 adults were overweight or obese (2017)
- >60% of men and women have a waist circumference indicating high risk of metabolic complications
- 38% of adults in lowest SE areas were obese vs 24% in the highest SE
- Total direct cost of overweight and obesity in Australia is \$21 billion a year

### Prevalence of chronic conditions in adults by weight status 2014-15



### What needs to be addressed in the consultation?

- Talking too much <u>AT</u> the patient
- Talking about very basic lifestyle interventions
- No assessment for complications of obesity
- A reluctance to prescribe weight loss medications
- Making the patient feel guilty
- No plan for follow up

### How to initiate and communicate specific advice related to diet and exercise for weight loss?

### Use of non-stigmatising language is important

- Underweight = "Below a healthy weight"
- Normal = "Healthy weight range for height"
- Overweight = "Above a healthy weight"
- Obese = "Well above a healthy weight"

### Assessment at Baseline

- Resting HR
- BP
- Waist circumference
- Height/ weight/ BMI
- Baseline ECG?
- Ask about potential complications: joints, FHx, sleep apnoea, mental health etc
- Baseline bloods
  - Be rational referrers for pathology
  - Consider any genuine risk factors that need testing based on age, gender & family history

### Assessment at Baseline

Waist Circumference	Increased Risk	Substantially increased risk
Men	94 cm	102 cm
Women	80 cm	88 cm

### **Body Mass Index (BMI)**

Body Mass Index (kg/m²) [NB1]	Risk of obesity-related comorbidities
Less than 18.5	low (but the risk of other clinical problems is increased
18.5 to 24.9	average
25 to 29.9	increased
30 or more	greatly increased, particularly in association with central fat deposition
30 to 34.9	high
35 to 39.9	very high
40 or more	extremely high

NB1: These figures have been determined from population studies. They are based on mortality data for Caucasians and may not be appropriate for other population groups. Lower BMI cut-offs may be considered in Asian populations, including South Asian, Chinese and Japanese people (who may have a higher proportion of body fat), and Aboriginal Australians (who have a high limb-to-trunk ratio). Higher BMI cut-offs may be considered in Pacific Islanders including Maori and Torres Strait Islander people (who generally have a higher proportion of lean body mass).

### The Patient

- The body <u>aggressively defends</u> any attempt to reduce body weight
- But victim blaming common i.e. just lazy, not committed enough etc
- Treat it as a chronic disease and work with and support the patient regularly

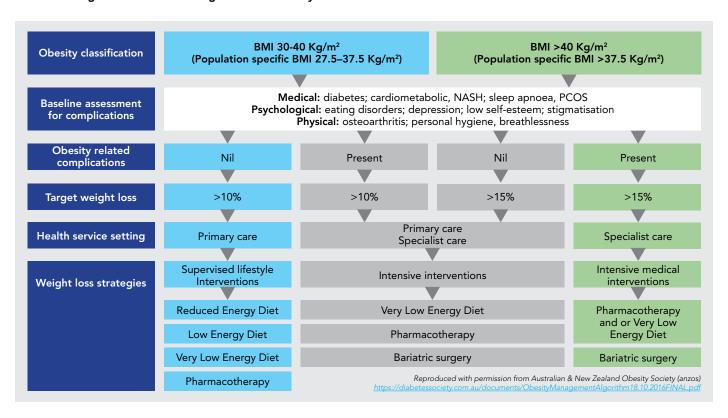
### NHMRC Framework

Ask	<ul> <li>Engage the patient</li> <li>What is their readiness to change? What are they doing now?</li> <li>Weight history, loss attempts etc</li> </ul>			
Assess	<ul> <li>Height, weight, BMI – use the correct charts for kids!</li> <li>Waist circumference &amp; waist-to-hip ratio</li> <li>Use opportunistic opportunities to discuss i.e. scripts + health checks</li> <li>Are there any associated health problems?</li> </ul>			
Advise	<ul><li>Use <u>non-judgmental</u> language</li><li>Discuss options for management</li></ul>			
Assist	Provide resources			
Arrange	Refer if needed			

### Other Info You Need to Know

- Why (or why not) does the patient want to improve their diet/ lose weight?
- What is the patient's goal?
- Fitness/ weight loss/ healthy eating/ disease prevention?
- Weight loss: Aim for a 10% long term reduction
- Long term goal is to maintain 5% weight loss
- What is their baseline knowledge?
- What have they tried in the past?
- What do they want?
- How adherent are they likely to be?
- What tools do they have? And what do they need?
- What are the changes they can make now?

### Australian Algorithm for the Management of Obesity





### Follow Up

- Frequent review every 2 weeks initially
- Consider early referral to other health care providers
  - Dietitian
  - Psychologist
- Suggest resources to promote patient self management
  - Food diary & exercise tracker
  - Online programs
  - Fitbits
  - Bluetooth scales
- Use of motivational interviewing important
- Ensure long term follow up treat as for chronic condition

### Prevention of Obesity: Level 1 – Health Promotion

### Focus on Diet Quality

- Diet quality is more important than overall weight!
- Improving diet quality significantly improves overall health and decreases risk of disease
- Effect on internal health seen long before weight may change

### What are the Dietary Guidelines?

There are five principal recommendations featured in the Australian Dietary Guidelines. Each Guideline is considered to be equally important in terms of public health outcomes.

### **GUIDELINE 1**

To achieve and maintain a healthy weight, be physically active and choose amounts of nutritious food and drinks to meet your energy needs

- Children and adolescents should eat sufficient nutritious foods to grow and develop normally. They should be physically active every day and their growth should be checked regularly.
- Older people should eat nutritious foods and keep physically active to help maintain muscle strength and a healthy weight.

### **GUIDELINE 2**

Enjoy a wide variety of nutritious foods from these five groups every day:

- Plenty of vegetables, including different types and colours, and legumes/beans
- Fruit
- Grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties, such as breads, cereals, rice, pasta, noodles, polenta, couscous, oats, quinoa and barley
- Lean meats and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans
- Milk, yoghurt, cheese and/or their alternatives, mostly reduced fat (reduced fat milks are not suitable for children under the age of 2 years)

And drink plenty of water.

### **GUIDELINE 3**

Limit intake of foods containing saturated fat, added salt, added sugars and alcohol

- A Limit intake of foods high in saturated fat such as many biscuits, cakes, pastries, pies, processed meats, commercial burgers, pizza, fried foods, potato chips, crisps and other savoury snacks.
  - Replace high fat foods which contain predominantly saturated fats such as butter, cream, cooking margarine, coconut and palm oil with foods which contain predominantly polyunsaturated and monounsaturated fats such as oils, spreads, nut butters/pastes and avocado.
  - Low fat diets are not suitable for children under the age of 2 years.
- B Limit intake of foods and drinks containing added salt.
  - Read labels to choose lower sodium options among similar foods.
  - Do not add salt to foods in cooking or at the table.
- C Limit intake of foods and drinks containing added sugars such as confectionary, sugar-sweetened soft drinks and cordials, fruit drinks, vitamin waters, energy and sports drinks.
- D If you choose to drink alcohol, limit intake. For women who are pregnant, planning a pregnancy or breastfeeding, not drinking alcohol is the safest option.

### **GUIDELINE 4**

Encourage, support and promote breastfeeding

### **GUIDELINE 5**

Care for your food; prepare and store it safely



### Use small amounts



### Only sometimes and in small amounts



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### Life goal #1: 2.5 - 5hrs moderate exercise/ wk

- 30 100 mins/ day x 5 days a week
- Patients should increase their activity or intensity by <u>maximum of 10%</u> per week to avoid injury
- Moderate intensity = 55 70% max HR
- Still able to maintain a conversation
- Max HR = 220 patient age
- Include muscle strengthening activity x 2 days per week

### Life goal #2: Do what you love

Patient needs to find the exercise that is right for them – but accountability is key!

### LOW COST OPTIONS

- Heart Moves & Active Over 50s
- Online workout subscriptions
- Renting a stationary bike or foot pedal
- Gym classes bulk buy

### FREE OPTIONS

- parkrun there are 390 across Australia
- Heart Foundation Walking Groups
- Private free walking groups
- YouTube videos great for yoga, dance etc

What can YOU recommend in your local area?

### Life goal #3: Eat more vegetables

- 1. Reduce portion sizes (& size of your plate!)
- 2. Vegetables and salad should be the focus of meals
- 3. Drink water
- 4. Reduce EtOH intake
- 5. Switch to reduced fat dairy
- 6. Stop eating carbs at dinner
- 7. Eat more protein & fibre foods
- 8. Max. 2 pieces of fruit/day
- 9. Schedule high quality small treats occasionally
- 10. Avoid fads!



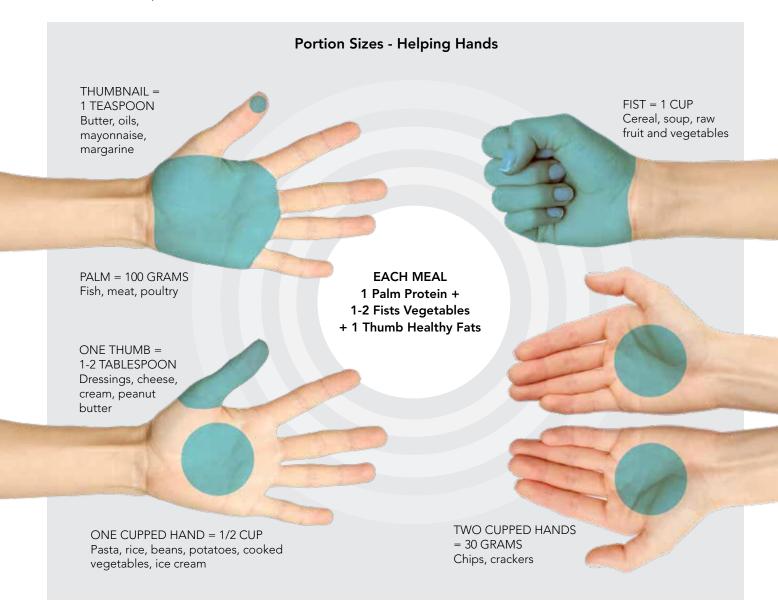


### Management of Obesity: Level 2 - Reduced Energy Diets

Aim for a reduction OF 2000-4000kJ/ day

- 1. Keep a food diary
- 2. Use resources to plan meals:
  - Live Lighter Program: Free online meal plans
  - CSIRO: Books are free at the library (paid program
     \$150 for 12 weeks.)
  - Weight watchers: Need to count points, meetings can be helpful (\$78/ month)

- 3. Target high risk foods
  - EtOH Alcohol
  - Sweet drinks and coffees
  - Cakes & Iollies
  - Takeaways





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For more healthy tips and recipes see www.healthyfood.com



Source: <u>Health Life Media Limited</u>



### Management of Obesity: Level 3 – Low Energy Diets

### Targets = 4200 - 5000kJ

### **Pros:**

- Don't need to think about meals
- Can be quite successful for some people
- Clear guidelines and rigid plan
- Can also include intermittent fasting

### Cons:

- Expensive
- Requires more strict control over diet and energy intake
- What happens when you stop the program?
- Often not sustainable
- Designed to sell you stuff
- Other ingredients?

### Management of Obesity: Level 3 – Very Low Calorie Diets (VLCDs)

### Very low energy diets (VLEDs) - i.e. Opti-fast

- Designed to induce rapid weight loss
- Maximum of 3300kJ/day (or 800kcal/day)
- Cost = \$315 \$560 per month
- Sold as high protein-low carb meal replacements
- Induces mild ketosis through energy restriction
- Not suitable or tolerated by everybody

https://www.optifast.com/products/optifastr-shake-mix

### How to use VLCDs

- Start with approx. 3-4 shakes or bars/ day with additional low starch vegetables
- Later can add small amount of fruit + dairy
- Needs review weekly until stable
- Usually used for 8-12 weeks (up to 12 months is possible if tolerated)
- Only to be used with close medical & nutritional support





### How to initiate and monitor weight loss medications

### When to Consider Medications

- BMI >30
- BMI 27-30 + obesity related complications
- BMI 25-30 in Aboriginal, Torres Strait Islander and Asian populations

### The various weight loss specific medications available

Orlistat – Xenical	<ul><li>Weight los</li><li>Can impro</li><li>Can poter</li></ul>	<ul> <li>Weight loss of approx. 3.5% over 12 months</li> <li>Can improve HbA1c by 0.4%</li> <li>Can potentially reduce the incidence of T2DM by 37% in obese people</li> </ul>					
	Side effects:	<ul> <li>Steatorrhoea, oily spotting, faecal incontinence</li> <li>Fat soluble vitamin deficiencies</li> <li>Calcium oxalate stones</li> </ul>					
	Use:	<ul> <li>Initial counselling for diet and lifestyle</li> <li>Prescribe 120mg TDS with meals</li> <li>30% of fat eaten is then excreted!</li> <li>Need to maintain a low fat &amp; high fibre diet to avoid SEs</li> <li>Review_every 1-3 months and check Wt, BP, HR, lifestyle changes, and SEs</li> </ul>					

### Phentermine (Duromine)

- Sympathomimetic agent that suppresses appetite
- Available in 15mg, 30mg & 40mg

<ul> <li>Studies show approx. 3.5 - 4.5kg weight loss over 6 months</li> <li>Cost = \$80 - 100 per month</li> </ul>						
Criteria for prescription:	<ul> <li>Low-intermediate cardiovascular risk, and no evidence of cardiovascular disease</li> <li>No serious psychiatric history or substance abuse</li> <li>No clinically significant increase in pulse or BP when taking Duromine</li> <li>Compliance with follow up!</li> </ul>					
Side effects:	Dry mouth, insomnia, agitation, constipation and tachycardia					
Contra- indications:	<ul> <li>Hyperthyroidism</li> <li>History of drug, EtOH or severe psychiatric illness incl. anxiety</li> <li>Pregnancy or breastfeeding</li> <li>Use of monoxidase inhibitors (MAOIs)</li> <li>Caution in history of seizures, cardiac arrhythmias and hypertension</li> </ul>					
How to use:	<ol> <li>Counsel re: lifestyle and set specific goals with the patient</li> <li>Start with 15mg</li> <li>Review after 2 - 4 weeks: check weight, BP, HR &amp; assess lifestyle/ SEs</li> <li>Gradually increase the dose each month only if required</li> <li>Once stable, review every 3 months</li> <li>If there is insufficient weight loss at 4 months (&lt;5%) – cease</li> <li>Some evidence to suggest long term use can be appropriate for up to 2 years</li> </ol>					



Liraglutide -	
Savanda	

- Glucagon-like peptide-1 agonist
- Used to treat T2DM Victoza
- Approx. 5.6kg weight loss over 1 year
- Improvements in cardiovascular markers noted
- Cost = \$380/ month (6mg/mL 5 x 3mL prefilled pens)

- Decreased appetite, reduced energy intake & weight loss
- Nausea, vomiting, diarrhea, constipation & dyspepsia
- Increased risk of gallstones & pancreatitis

### How to use:

- 1. Counsel re: lifestyle goals and follow up with GP required
- 2. Educate re: giving SC injections
- 3. Start with 0.6mg daily SC injection
- 4. Increase by 0.6mg weekly to max 3mg daily dose
- 5. Can use lower doses if effective & limits side-effects
- 6. Weight loss continues for 9 -12 months
- 7. Cease if 5% weight loss not achieved in 3 months

NB: Many patients will regain the weight when ceased

### Naltrexone/ Bupropion – Contrave

Acts on the hypothalamus and mesolimbic dopaminergic reward systems to reduce hunger and cravings.

### Cost = \$240/month

### Side effects:

- Nausea, headache, vomiting, diarrhoea
- Dizziness, dry mouth, insomnia
- Lowering of BGL

### Contraindications:

- Uncontrolled hypertension
- Bipolar disorder manic episodes listed as a potential SE
- Pregnancy
- Chronic opioid treatment

### Risks:

- For GFR 15-60 use max 1 tablet BD
- Diabetics on insulin or sulphonylureas

### How to use:

- 1. Counsel re: lifestyle goals and follow up with GP required
- 2. Educate on initiation;
  - a 1 tablet daily in the morning for 1 week then
  - b 1 tablet BD for 1 week, then
  - c 2 tablets in AM and 1 in PM for 1 week
  - d 2 tablets BD
- 3. Cease if 5% weight loss not achieved after 4 months



Topiramate – Topamax (off label)	An anticonvuls: Approx. 3.4 – 5 Cost: \$15 for 60				
	Side-effects:	<ul> <li>Paraesthesia, dizziness, dry mouth, altered taste,</li> <li>Constipation</li> <li>Risk of acute closed angle glaucoma</li> <li>Reduced concentration, memory impairment, insomnia</li> <li>Increased suicidal thoughts</li> <li>SEs are dose related</li> </ul>			
н	How to use	<ul> <li>Effective dose 25mg – 100mg</li> <li>Can be combined with Duramine ++ effective (15mg +25mg)</li> </ul>			
	NB: Most people cannot tolerate the Topiramate SEs				

### Diabetic drugs & Weight Changes

Weight loss (mean weight loss)	Weight neutral	Weight gain (mean weight gain)
Metformin (0.6-1.2kg)	Acarbose	Insulin (1.5 - 3kg)
Exenatide, Liraglutide* Dulaglutide (1.8 - 2.5 kg)	Sitagliptin, Linagliptin, Vidagliptin	Sulfonylureas (2kg)
Canagliflozin, Dapagliflozin, Empagliflozin* (1.8 - 2.7 kg)		Pioglitazone (2.6kg)

<sup>\*</sup> Liraglutide and Empagliflozin have been shown to significantly reduce cardiovascular events in diabetics – options for those with at cardiovascular risk.



Table 1. Pharmacotherapy for the treatment of obesity

Drug	Phentermine Duromine® Metermine®	Orlistat Xenical®	Liraglutide Saxenda®	Naltrexone/bupropio n Contrave®	Topiramate	Phentermine- Topiramate
TGA status	Approved	Approved*	Approved	Approved	Not Approved	Not Approved
Available doses	15 – 30 – 40 mg	120 mg	0.6 - 3 mg	Nal. 8 mg/Bup. 9 0mg	25 – 50 – 100 mg	Phe. 15 mg Top. 12.5 – 25 – 50 – 100 mg
Starting dose	15-30 mg mane	120 mg tds	0.6 mg daily	Nal 8 mg/Bup. 9 0mg mane	12.5 mg mane	Phe 15 mg mane Top. 12.5 mg mane
Dosage form	Tablet	Tablet	Injection	Tablet	Tablet	Tablet
Maximal dose	40 mg mane	120 mg tds	3.0 mg daily	Nal. 16 mg/Bup. 180 mg bd	50 mg bd	Phe. 15 mg mane Top. 50 mg bd
Contraindications	Uncontrolled hypertension Cardiac disease Glaucoma Pregnancy History of drug abuse MAO inhibitors SSRI use	Anorexia Pregnancy Fat soluble vitamin deficiency Chronic malabsor- ption syndrome Cholestasis	History of pancreatitis or medullary cell thyroid cancer	Hypersensitivity to naltrexone, bupropion or any of the excipients Uncontrolled hypertension Seizure disorder or history of seizures Known CNS tumour Acute alcohol or benzodiazepine withdrawal Anorexia nervosa or bulimia (current or past) Pregnancy Severe hepatic impairment End stage renal	Glaucoma Renal Stones Pregnancy (if used for weight loss)	Uncontrolled hypertension Cardiac disease Glaucoma History of drug abuse MAO inhibitors or SSRI use Glaucoma Renal stones

 $\underline{https://diabetessociety.com.au/documents/ObesityManagementAlgorithm18.10.2016FINAL.pdf}$ 



### The non-compliant patient

Your duty of care:

- The provision of advice and counselling in 'unequivocal terms' that weight loss is necessary in the interest of health
- This may extend to discussion of treatment options and offer of referrals to appropriate allied health/ specialists regarding achieving weight loss

What if they don't follow through with your advice:

- Record your advice in the patient medical record
- Remind patients of your previous advice and your ongoing concerns to their health
- If +++ concern you can speak to your MDO and they can help you draft a letter to the patient outlining your concern

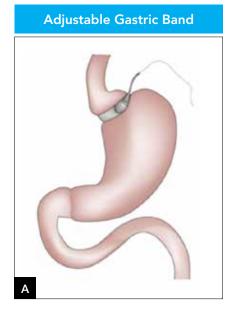
### When to refer for surgical weight loss intervention

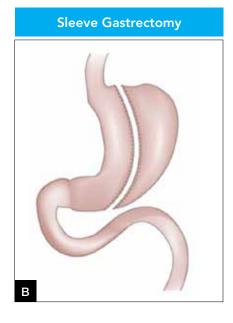
BMI > 40 kg/m2. **OR** 

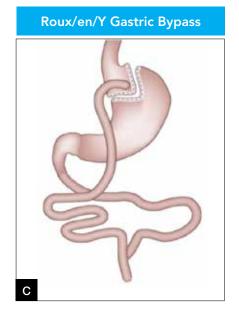
BMI >35 with obesity related complications

- Age 18 55yrs
- Less invasive methods of weight loss have failed
- The patient is at high risk of obesity associated morbidity or mortality
- No treatable causes for the obesity
- Patient understands the surgery and the long-term dietary requirements
- There is no history of severe psychiatric disorders
- Patient is prepared to invest their time in the ongoing follow up and lifestyle changes
- The patient is financially able to afford the surgery

### **Obesity Surgery Types**









### **Comparisons**

	Adjustable gastric band	Sleeve gastrectomy	Roux-en-Y gastric bypass	
Description	Adjustable silicone band placed just below the gastroesophageal junction, applying gentle pressure that suppresses hunger. Level of restriction can be adjusted by varying the amount of fluid placed in the band	Greater portion of the fundus and body of the stomach is removed. Gastric volume is reduced by about 80%	Combination procedure:  1. Small stomach pouch created, thereby reducing gastric volume  2. The pouch is joined to the jejunum, hence, diverting nutrients from lower stomach, duodenum and proximal jejunum	
Mean total body weight loss	17–20%	20–30%	25–35%	
Mortality rate (at 30 days) <sup>20,21</sup>	0.03-0.1%	0.3–0.5%	0.1–0.4%	
Morbidity at one year	4.6%	10.8%	14.9%	
Nutritional concerns	Low (deficiencies in iron, vitamin B12, folate, thiamine)	Moderate (deficiencies in iron, vitamin B12, folate, calcium, vitamin D, thiamine, copper, zinc)	Moderate (deficiencies in iron, vitamin B12, folate, calcium, vitamin D, thiamine, copper, zinc)	
Advantages  Effective, with good long-term weight maintenance  Degree of restriction adjustable  Reversible  Lowest morbidity and mortality rate		Very effective with good mid-term weight maintenance	Largest amount of weight loss with good long-term weight maintenance Highest rate of diabetes remission (for patients with pre-existing type 2 diabetes mellitus)	
Disadvantages and key complications	Highest long-term re-operation rate Gastric pouch dilatation, erosion of band into the stomach, leaks to the adjustable gastric band system, weight regain	Staple line leak, gastroesophageal reflux disease, dilatation of the gastric remnant, weight regain Limited long-term data	Staple line leak, dumping, stomal ulcer, intestinal obstruction, gallstones, nutritional deficiency, altered alcohol metabolism, weight regain	

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### Referral for obesity surgery locally

- Mostly private referrals only: Some health districts do public surgery
- Some surgeons require patients attend a seminar first:
  - Individual websites for surgeon's list requirements pre-first appointment
- Some surgeons will have their own dietitian for ongoing follow up as well, but you might need to consider an
  additional referral
- Surgeries may have limited follow up so ensuring they have nutritional support & monitoring is VERY important!



### Post-op follow-up (with you)

### **GENERAL:**

- Monitor weight loss and complications
- Monitor adherence to diet and activity changes

### **MEDICATIONS**

- Avoid NSAIDs
- Adjust or cease medications as required i.e. BP, statins, diabetes

### **NUTRITIONAL SUPPLEMENTS**

- Daily adult multivitamins incl: iron, folic acid, thiamine, B12
- Vitamin D usual dose approx. 3000IU daily
- Extra iron + B12 supplements as needed

### **INVESTIGATIONS:**

- FBC, UEC, LFTs, Uric acid, fasting glucose, lipids 6-12 monthly
- Vit D, PTH, calcium, albumin, phosphate, B12, folate, iron studies 12 monthly as a minimum

### Key teaching points

- Listen first, don't just tell!
- Patients need to be positively engaged and followed up in the long term
- Tailor and combine your interventions depending on:
  - Previous attempts at weight loss
  - Current health status
  - Likely adherence/ motivation
  - Have a plan for following up and supporting the patient post initiation of any medications
  - Long term goal is maintenance of 5% weight loss

### Patient self-management tools

- Live Lighter: <u>www.livelighter.com.au</u>
- Eat For Health NHMRC: https://www.eatforhealth.gov.au/
- Go 4 Fun: <a href="https://go4fun.com.au/">https://go4fun.com.au/</a>
  - For kids 7-13yrs and their families
  - Can self refer or GP can refer
  - Ring to check if there is a program near you
- Get Healthy Service Programs: https://www.gethealthynsw.com.au/
  - Get Healthy (Standard Coaching)
  - Brief Intervention (Information Only)
  - Type 2 Diabetes Prevention
  - Aboriginal Program
  - Alcohol Reduction
  - Chinese coaching
  - Get Healthy in Pregnancy
- Local Referral Programs
  - Stepping On Falls Prevention
  - Cardiac and pulmonary rehabilitation
  - Local PHN or university/ research programs
  - GP and PHN led programs
  - Find out what is close to you!
- Apps and Social Media
  - Easy Diet Diary Food and exercise diary
  - Food Switch Choose healthier snacks
  - Parkrun Find your local parkrun
  - Zombies, Run! Running/ walking with a story
  - Good way for people to connect with others
  - Overload of information can be common on social media-based apps

### Resources

- Obesity Pharmacotherapy:
  - https://www.racgp.org.au/download/Documents/ AFP/2017/July/AFP-Focus-Pharmacotherapy-2017. pdf
  - Future of Pharmacotherapy presentation <u>www1.health.gov.au/internet/main/publishing.nsf/</u> <u>Content/Overweight-and-Obesity</u>
- Causes of Obesity
  - Genetics: <a href="https://www.racgp.org.au/afp/2017/july/genetics-of-obesity/">https://www.racgp.org.au/afp/2017/july/genetics-of-obesity/</a>
  - Genetics, Epigenetics & Obesity Presentation:
     https://www.health.gov.au/resources/publications/national-obesity-summit-presentation-dr-peter-molloy-genetics-epigenetics-and-obesity
- Obesity Surgery
  - https://www.racgp.org.au/afp/2017/july/ bariatric%E2%80%93metabolic-surgery-a-guidefor-the-primary-care-physician/
- Childhood Obesity Resources:
  - Healthy Kids NSW: www.healthykids.nsw.gov.au/default.aspx
  - Healthy Kids for Professionals:
     <a href="https://pro.healthykids.nsw.gov.au/">https://pro.healthykids.nsw.gov.au/</a>
  - Obesity & First 2000 Days: https://www.health.gov.au/sites/default/files/ documents/2021/03/national-obesity-summitpresentation-professor-louise-baur-obesity-andthe-first-2-000-days.pdf
- Resources for patients:
  - Get Healthy NSW including Get Health in Pregnancy service: <a href="http://www.gethealthynsw.com.au/healthier-you/">http://www.gethealthynsw.com.au/healthier-you/</a>
  - Go4Fun: https://go4fun.com.au/
  - Find your Ideal Weight: <a href="https://www.healthyliving.nsw.gov.au/">https://www.healthyliving.nsw.gov.au/</a>

- Australian Healthy Food Guide: www.healthyfoodguide.com.au/
- Health Direct
   <a href="https://www.healthdirect.gov.au/sugar">https://www.healthdirect.gov.au/sugar</a>
- Exercises is Medicine: http://exerciseismedicine.com.au/
- Exercise:
  - Parkrun: www.parkrun.com.au/
  - Staying Active on Your Feet
     <a href="https://www.activeandhealthy.nsw.gov.au/">https://www.activeandhealthy.nsw.gov.au/</a>
     <a href="preventing-falls/staying-active-and-on-your-feet/">preventing-falls/staying-active-and-on-your-feet/</a>
  - Stepping On Falls Prevention:
     www.steppingon.com/program/
  - Cardiac & Pulmonary Rehab: Check Health Pathways
- Diets:
  - Weight Watchers: <u>www.weightwatchers.com/au/</u>
  - CSIRO:
    - Books <a href="https://www.csiro.au/en/Research/">https://www.csiro.au/en/Research/</a>
       Health/CSIRO-diets
    - Online <u>www.totalwellbeingdiet.com/</u>
  - Australian Guide to Healthy Eating:
     <a href="https://www.eatforhealth.gov.au/resources-suitable-printing">https://www.eatforhealth.gov.au/resources-suitable-printing</a>
- Health Pathways Obesity Guide:
  - https://hne.healthpathways.org.au/36555.htm
  - https://centralcoast.healthpathways.org.au/36555.
     htm
  - Australasian Society of Lifestyle Medicine
  - www.lifestylemedicine.org.au/
- VLEDs
  - Optifast Use Guidelines: <a href="www.optifast.com.au/resources/protocols-and-guidelines">www.optifast.com.au/resources/protocols-and-guidelines</a>

- Obesity Statistics:
  - Obesity & Chronic Conditions presentation: https://www.health.gov.au/resources/publications/ national-obesity-summit-presentation-professor-andrew-wilson-obesity-and-chronic-conditions
  - AIHW Overweight & Obesity review:
     <a href="https://www.aihw.gov.au/reports-data/behaviours-risk-factors/overweight-obesity/overview">https://www.aihw.gov.au/reports-data/behaviours-risk-factors/overweight-obesity/overview</a>
- Obesity Guidelines
  - https://www.nhmrc.gov.au/about-us/publications/ clinical-practice-guidelines-managementoverweight-and-obesity
  - www1.health.gov.au/internet/main/publishing.nsf/ Content/Overweight-and-Obesity

- Duty of Care
  - GPs Duty of care: <u>www.avant.org.au/news/20160422-a-sensitive-subject-managing-patients-who-are-obese/</u>
  - Consent and Obesity
     www.avant.org.au/news/surgery-for-obese-patients/
- GPSA Teaching Plan on Obesity
  - https://gpsupervisorsaustralia.org.au/ download/9992/
- AFP Focus: Pharmacotherapy for Obesity
   https://www.racgp.org.au/download/Documents/
   AFP/2017/July/AFP-Focus-Pharmacotherapy-2017.pdf

### **Additional Topics for Investigation**

- 1. The various causes of obesity
- 2. In depth information about the types of obesity surgery
  - Please see article "Bariatric-metabolic surgery: A guide for the primary care physician." <a href="https://www.racgp.org.au/afp/2017/july/bariatric%E2%80%93metabolic-surgery-a-guide-for-the-primary-care-physician/">https://www.racgp.org.au/afp/2017/july/bariatric%E2%80%93metabolic-surgery-a-guide-for-the-primary-care-physician/</a>
- 3. Specifics on management of obesity in children
  - Recommend you complete the Weight4KIDs Modules at: <a href="http://pro.healthykids.nsw.gov.au/online-learning/">http://pro.healthykids.nsw.gov.au/online-learning/</a>
- 4. Specifics about your local resources or referral pathways