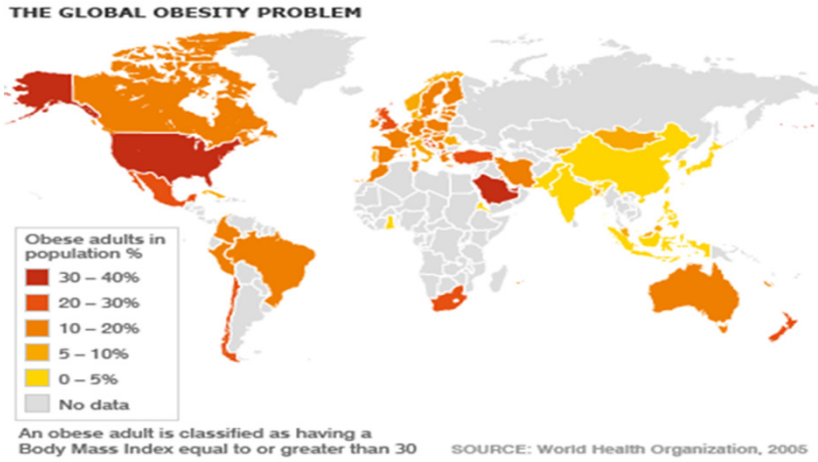
Ashford and St. Peter's Hospitals NHS
NHS Foundation Trust

Weight Loss Surgery

Mr Shashi Irukulla – Consultant Bariatric Surgeon

Natasha Smith - Bariatric Specialist Nurse

Epidemiology



- In 2005, 1.6 billion adults were overweight and 400 million were obese

- In 2015, there will be 2.3 billion overweight adults in the world, 700 million of them will be obese (WHO)

Magnitude of the problem

In England

- 42% of adult males are overweight of which 26% are obese
- 32% of women are overweight of which 21.9% are obese
- 1.1 million population in surrey
- ASPH provide service for more than 220,000 obese adult in Surrey

(Information centre 2012)

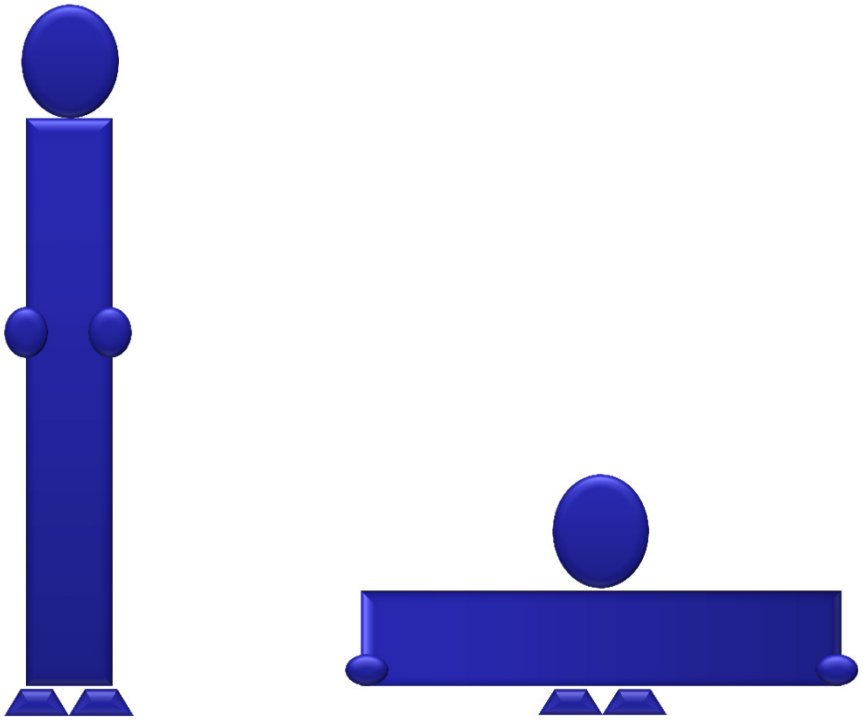
Obesity definition

Obesity is an excess of body fat that results in a significant impairment of health

BMI – Body Mass Index

A standardized estimate of an individual's relative body fat calculated from his or her height and weight

- **BMI = $\frac{\text{weight (kg)}}{\text{height}^2 \text{ (m2)}}$**



BMI Classification

classification	BMI
Underweight	<18.5
Normal	18.5-25
Overweight	25-30
Obesity	30-35
Severe Obesity	35-40
Morbid Obesity	>40
Super Obesity	>50
Mega Obesity	>70

classification	BMI
Overweight	>25.0
Obese (Class I)	30.0-34.0
Obese (Class II)	35.0-39.0
Clinically Severe Obesity (Class III)	>40.0

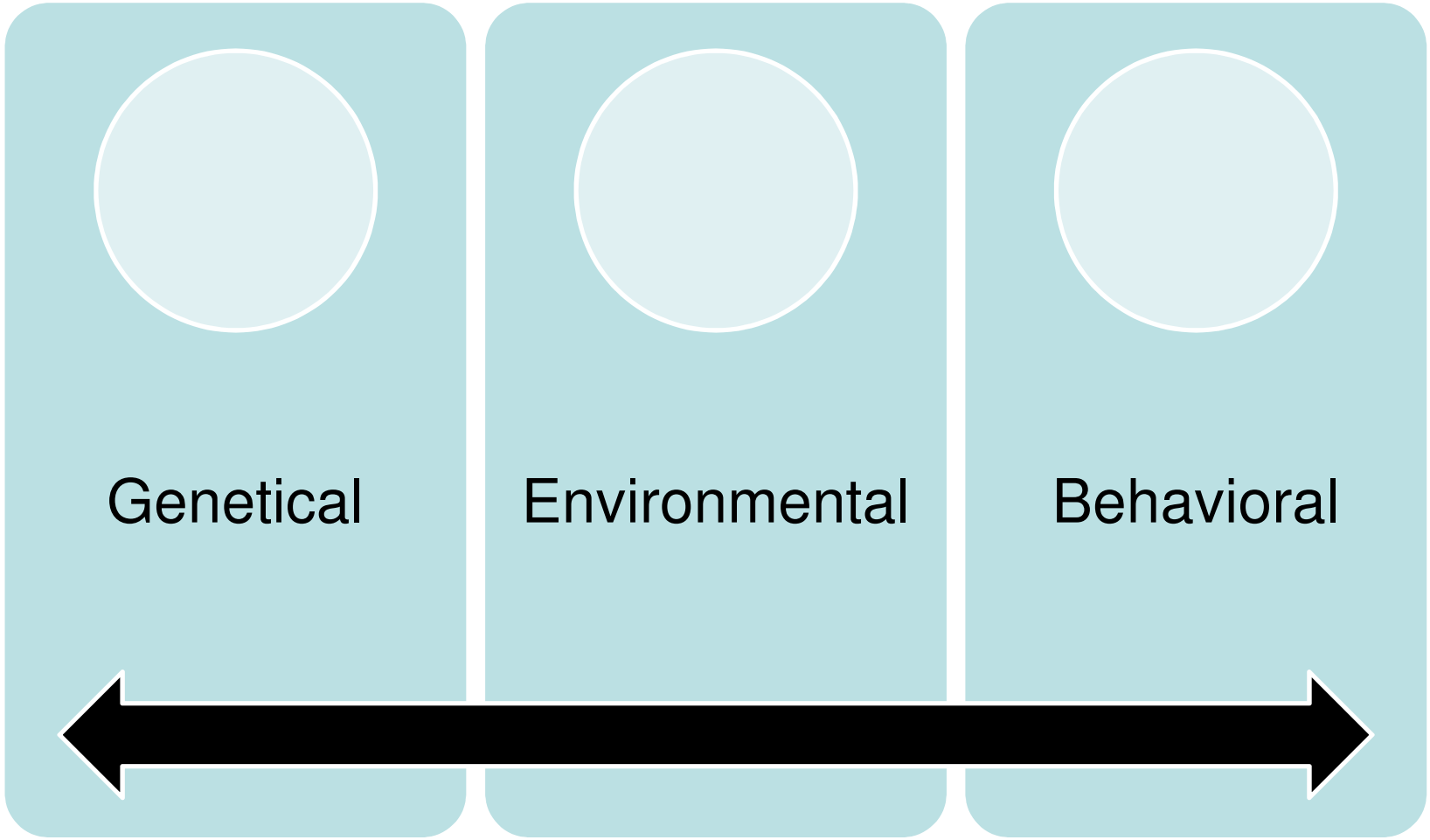
Causes

- Morbid obesity is NOT
  - choice
  - weakness
  - Lack of character – self control
  - Mental disease
  - laziness
  - gluttony

Is a DISEASE

- The ultimate biologic basis is unknown
  Specific therapy is not available

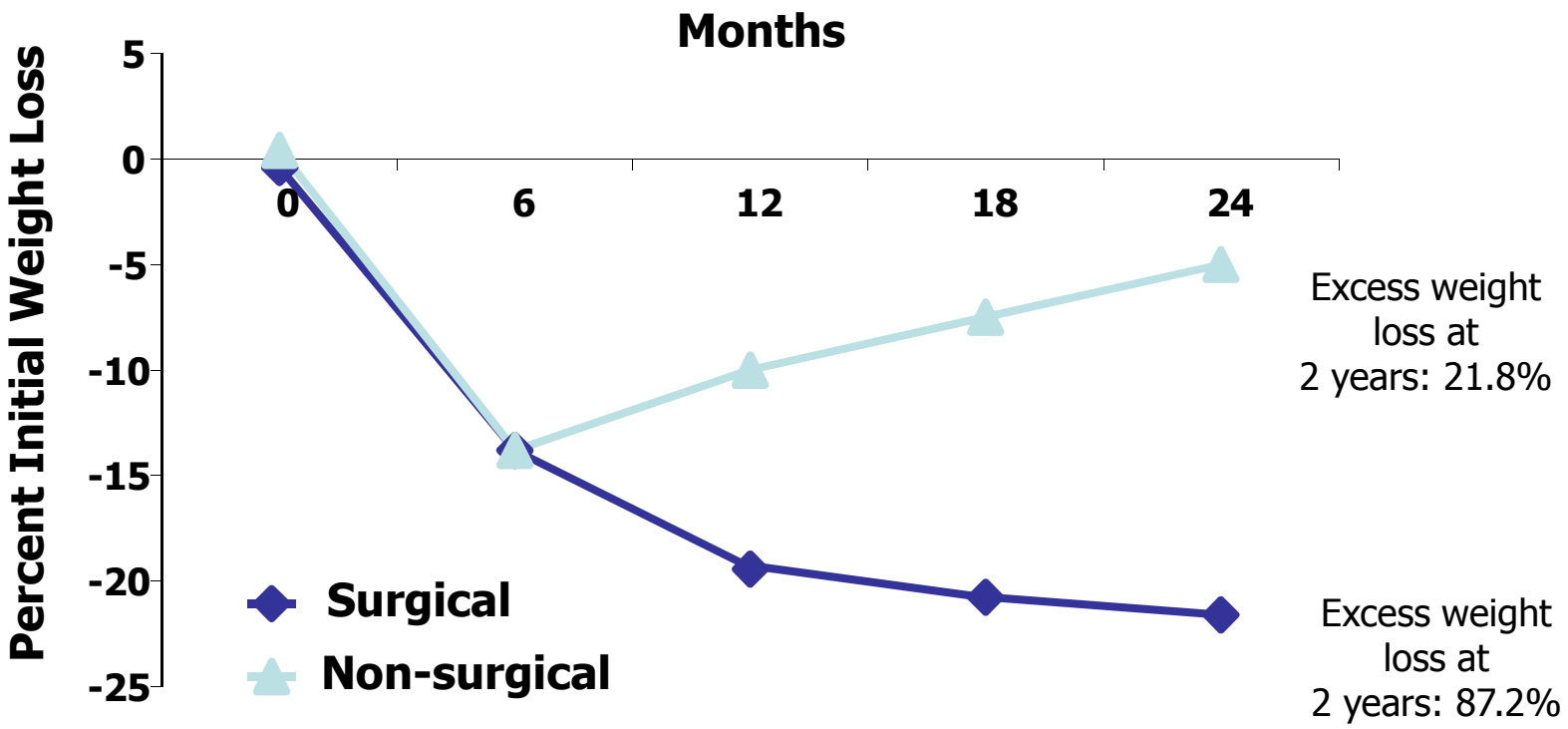
Etiology: Multifactorial Disease



Complications of Obesity

- Type II diabetes
- High Blood Pressure
- Obstructive Sleep apnoea
- PCOS
- Increase risk of certain cancers
- Poor mobility
- Arthritis
- Decreased life expectancy

Non-surgical versus surgical therapy for obesity



Int J Obes (Lond). 2008 Dec;32 Suppl 7:S93-7.

The solution: bariatric surgery

- The aim:
  - Weight loss
  - resolution / improvement of co-morbidities
  - Quality of life

!! Bariatric surgery is NOT cosmetic surgery

Who qualifies for surgery

Nice Guidelines

- BMI≥ 40 kg/m2 or BMI ≥35 kg/m2 with associated co-morbidities e.g. Type 2 diabetes, HTN
- aged 18 years or over
- received treatment in a specialist obesity clinic
- tried all other appropriate non-surgical treatments to lose weight but have not been able to maintain weight loss
- no specific medical or psychological reasons why they should not have this type of surgery
- generally fit enough to have an anesthetic and surgery
- they should understand that they will need to be followed-up by a doctor and other healthcare professionals such as dieticians or psychologists over the long-term.

In addition every patient must demonstrate attendance to a weight management programme for a 12-24 month period

Referral and pathway

- GP to send referral letter to Bariatric Consultant at St Peters Hospital
- Appointment with specialist nurse to assess if patient meets criteria for bariatric surgery
- Group Forum- Start of your journey
- Assessments from:
  - Dietitian
  - Psychologists
  - Consultant Metabolic Physician
  - Surgeon

  Respiratory Physician

  Anaesthetist
- Decision on Surgery- MDT
- Pre-op Assessment
- Liver Shrinkage Diet
- Operation
- Follow-up

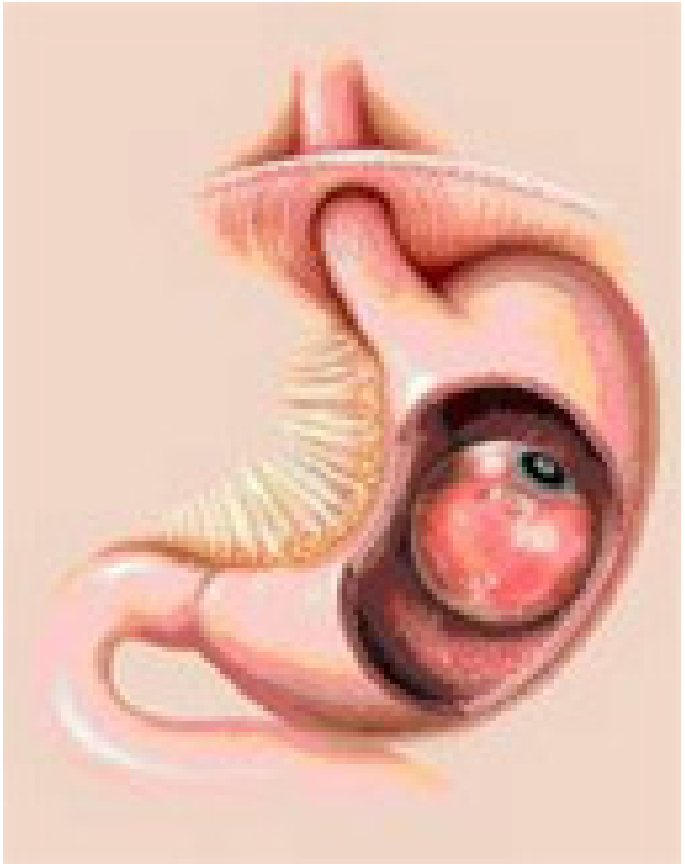
Types of Surgery

- Intra gastric Balloon
- Gastric Band (LAGB)
- Sleeve Gastrectomy (LSG)
- Roux-en-y Gastric Bypass (LRYGB)

Intra gastric Balloon

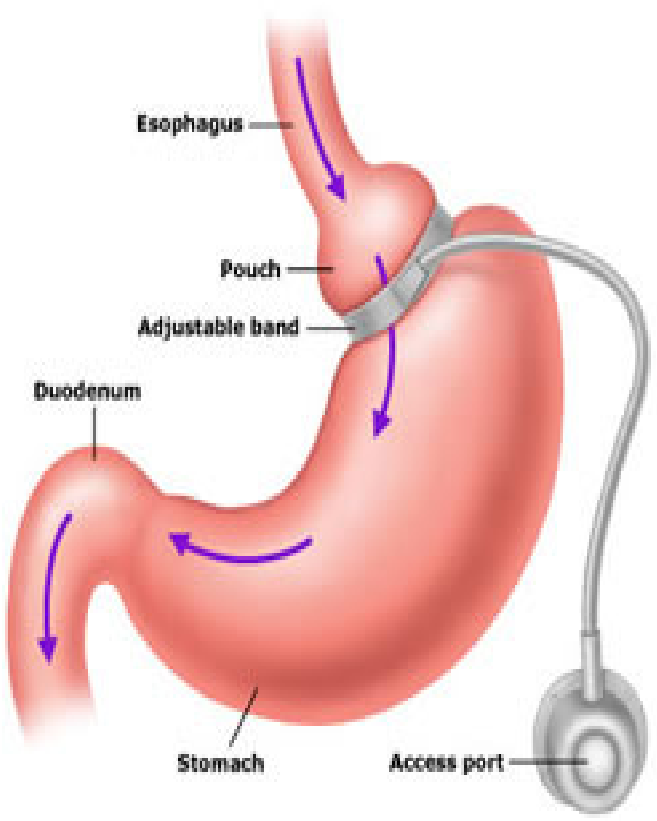
- Restrictive
- Temporary- 6 months
- Normally the 1st stage of a 2 part surgery
- Placed under sedation or GA by endoscopy
- Day Surgery

- **20-30% of Excess Body Weight**



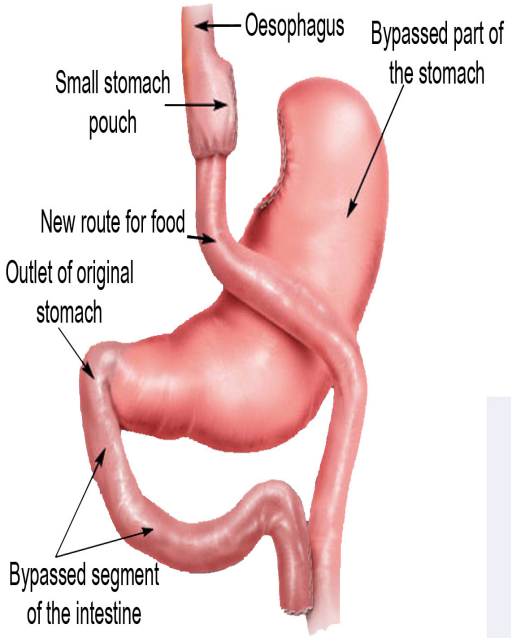
Gastric Band

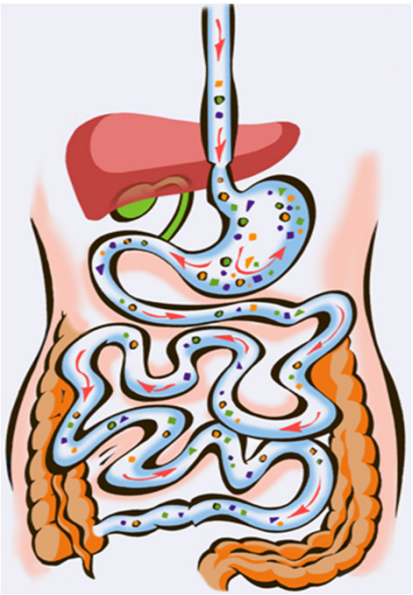
- Restrictive
- Digestion and absorption remain normal
- Band placed around upper part of the stomach creating a small pouch
- Speed at which food passes through is determined by how tight the band is
- Band requires tightening
- Reversible
- Day surgery- General anaesthetic
- **50-60%** excess weight loss over 2-5 years



Roux-en-y Gastric Bypass (LRYGB)

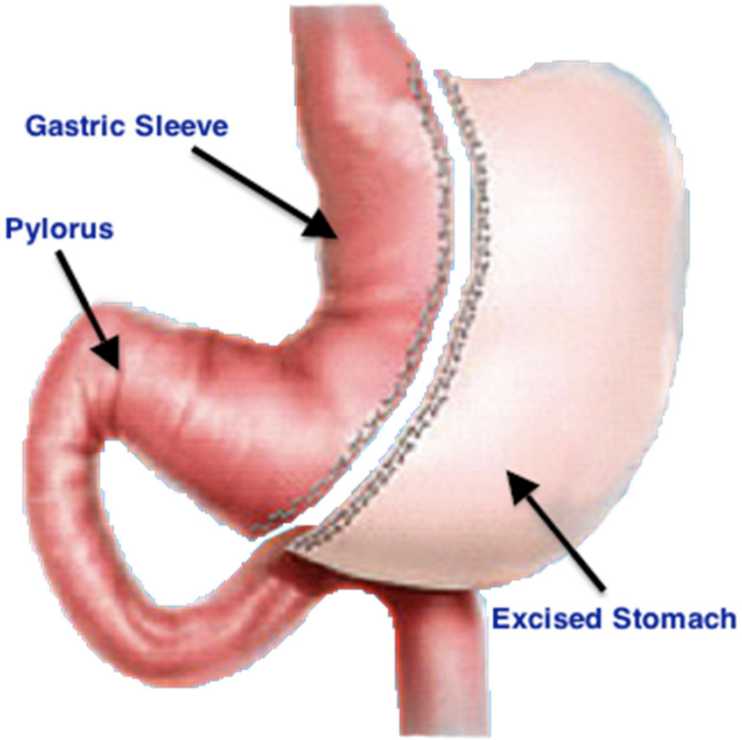
- Restrictive and decreases the absorption of food
- Small pouch created. Small bowel cut and joined to new pouch. Remaining small bowel attached further down
- Benefits start from day of surgery
- Unusual for patients not to lose expected amount of weight
- 2 night hospital stay
- High resolution rate of diabetes (75%)
- It is effectively irreversible
- **60-70% excess weight loss**





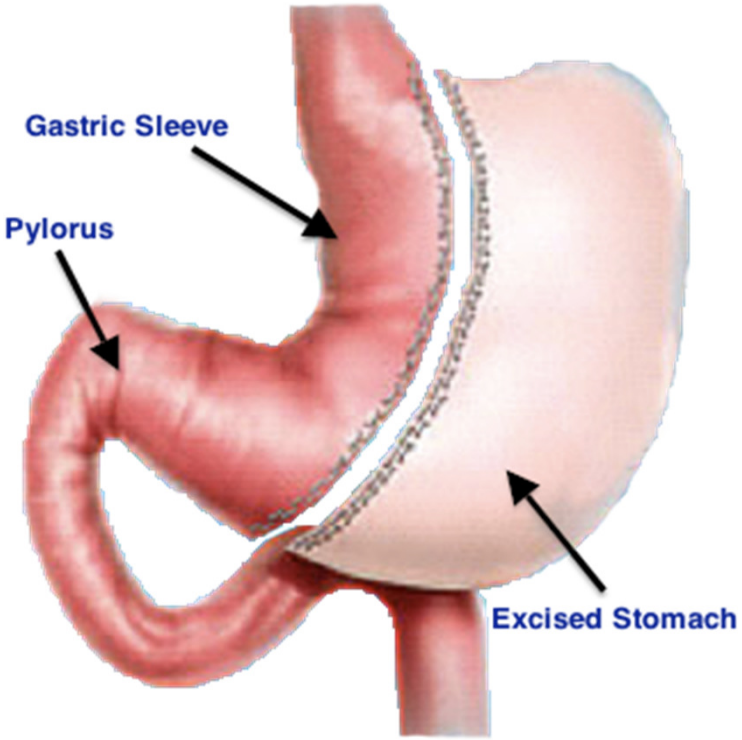
Sleeve Gastrectomy

- Restrictive
- ¾ of the stomach is removed leaving a small narrow tube
- Removes the part of the stomach that produces the appetite producing hormone Ghrelin, making you feel less hungry
- Unlikely to suffer nutritional deficiencies or ‘Dumping Syndrome’
- 2 night hospital stay
- Non-reversible
- **50-60%** excess weight loss



Sleeve Gastrectomy

- Restrictive
- ¾ of the stomach is removed leaving a small narrow tube
- Removes the part of the stomach that produces the appetite producing hormone Ghrelin, making you feel less hungry
- Unlikely to suffer nutritional deficiencies or ‘Dumping Syndrome’
- 3 night hospital stay
- Non-reversible
- **50-60%** excess weight loss



Follow up

- ***Phone call by Specialist Nurse within 4 days of discharge***
- 2 weekly telephone call from Dietitian
- **Intra gastric Balloon**
  - 8 weekly by Dietitian
- **Gastric Bypass**
  - Surgeon – 8 weeks
  - Dietitian at 8 weeks and 3 monthly 1st year
  - Metabolic physician -4 months post op then 6 monthly
- **Sleeve Gastrectomy**
  - Surgeon – 8 weeks
  - Dietitian at 8 weeks and 3 monthly 1st year
  - Metabolic physician -4 months post op then 6 monthly
- **Gastric band**
  - Surgeon 6-8 weeks
  - Specialist nurse there after as required

Support

- Support Group- face to face
  - Last Monday of every month at Ashford Hospital
- Bariatric Buddies- online via facebook

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Bariatric Dietetics

Deborah Moyse
Specialist Dietitian For Obesity

Dietary Input

- Assessment and preparation for surgery
- Pre operative diet
- Post operative diet
  - The first 6 -8 weeks
  - Life long changes

- What if I decide surgery is not for me?

Dietetics preparation for surgery

- All patients have to attend ‘Group forum’
- All patients are later assessed on individual basis
  - Pre operative assessment +/- reviews
  - Post operative reviews
    - 8 weeks and then every 3 months until 12 months
    - After 12 months, reviewed every 6 months

Dietetic Pre operative Assessment

- 1hr long
- Eating patterns and influences
  - Snacker/grazer OR Volume eater
  - Source of calories
  - Balance of diet
  - Attitudes
  - Expectations & knowledge
- Discuss pre & post operative diets
- Potential difficult foods
- Potential disordered eating

During Assessment….

- Start to address any potential issues
  - Eating patterns
  - Emotional eating
  - Issues likely to affect compliance
- Practice chewing
- Slow eating down
- Maintain or try to lose weight

The Liver Shrinkage Diet (Pre –Op)

- Reduce the size and weight of the liver
- Purely for surgical reasons
- Lots of different ones available but follow our advice
- Only for 2 weeks immediately before bariatric surgery
- Nutritionally incomplete

The Liver Shrinkage Diet (Pre - op)

- Essential to follow as surgery may be cancelled
- Options
  - Soup, yoghurt & milk
  - Milk
  - Milk and Yoghurt
  - Food based
- Everyone undergoing bariatric surgery has to do this except gastric balloon patients

After Surgery….

- Patients follow a special diet for six to eight weeks
- This diet consists of four stages:
  - Fluids (liquids)
  - Pureed food
  - Soft moist foods
  - Normal solid diet
- Each of the first 3 stages lasts two weeks
- Immediately after the operation there is a gradual introduction of water

After Surgery…

- **STAGE ONE: Fluids (liquids) (Weeks 0 – 2)**
  - Time to heal
  - Settle the gastric band into position
  - Minimise risk of vomiting
  - Suitable liquids include:
    - Milk (skimmed, semi-skimmed or 1%) – Ensure 1pt per day
    - Soup with added protein (all blended until smooth)
    - Build-up or Complan soup and drinks
    - Ovaltine, Horlicks made with milk
    - Thin yoghurt or custard with no bits (Low fat or diet varieties only)

After Surgery…

- **STAGE TWO: Pureed Food (Weeks 3 – 4)**
  - Continues to help with healing
  - Suitable Foods include:
    - Foods of a thick porridge consistency but without lumps
    - Baby food is not advocated
    - Try to puree different foods separately to increase appeal
- **STAGE THREE: Soft, Moist Food (Weeks 5 – 6)**
  - Suitable foods include:
    - Weetabix, porridge or Ready Brek
    - Scrambled egg or soft omelette
    - Meals such as cottage or fish pie
    - Soft fruit or tinned fruit in natural juice or yoghurt
    - One to two breadsticks, crisp breads, crackers or dry toast.
- **Foods to avoid**
    - Foods with a tough skin such as sausages, tomato, apple, or bacon. sweet corn etc.

After Surgery…

- **STAGE FOUR: Healthy lifestyle**
- Trying to Maximise surgery success
  - Encouraged healthy eating
  - Increasing activity
  - Continue not to smoke
- What are the consequences of an unhealthy diet after surgery?
    - Short-term effects: dry or cracked skin/nails or hair loss
    - Long -term, other more serious health conditions such as:
      - Anaemia
      - Osteoporosis
      - Weight Gain

After Surgery….

- Once on solid foods, a daily A-Z multi vitamin and mineral supplement is encouraged

- With the bypass, it is <u>essential</u> to take this daily but others may be needed depending upon blood results:
  - Vitamin D and Calcium
  - Folic Acid
  - Iron
  - B_{12} injections
  - Other potential problems: Zinc and Selenium

Potentially difficult foods

- Most commonly reported problem foods:
  - Soft bread
  - Rice or pasta
  - Fizzy drinks
  - Fibrous fruit and vegetables
  - Tough meat
- All foods need to be chewed well to a paste like consistency
- All drinks need to be sipped
- Food likely to be limited to a tea plate sized meal
- Cooking methods and food preparation will change

After Surgery Dietary reviews

- Balance of diet
- Vitamin and mineral compliance
- Protein quantities and quality
- Fluids
- Activity
- Any difficulties

- Foundation of any weight loss is a healthy eating dietary pattern and healthy lifestyle even for surgery

I don’t want surgery - What else is there?

- Practice Nurse & Medication
- G.P. advice
- Community schemes
  - Weight Management & Exercise on Referral
  - Walking Schemes
  - Commercial Weight Loss Programmes
- Referral to Eating Disorders team if indicated
- Referral to dietitian

Dietetic Referral for General Weight Loss

- Criteria for obesity referral
  - BMI >25 with co-morbidities
  - BMI>30 without co-morbidities
- Currently individual consultations are provided
- At ASPH collaboration with other weight loss providers are encouraged as long term regular follow ups are not possible
- Other hospitals may provide group settings

Dietitian Consultations

- Encourage long term sustainable changes (SMART) individualised for patients
- Healthy Eating Principles
- Appropriate energy reduction
- No easy quick fix
- Foundation of any weight loss is a healthy eating dietary pattern and healthy lifestyle even for surgery

I don’t want surgery - What else is there?

- Specialist Obesity Service
  - Recommended by NICE to complete before surgery
  - Service providing 6 – 12 months of intensive input involving:
    - Endocrinologist
    - Psychologist
    - Dietitian
    - Others may include a fitness instructor

The future of Weight Management..

- Increasing demand on the NHS with finite resources
- Potential pharmaceutical developments
- Potential surgical development
- Government /manufacturing intervention re: reducing fat and sugary foods

Questions?