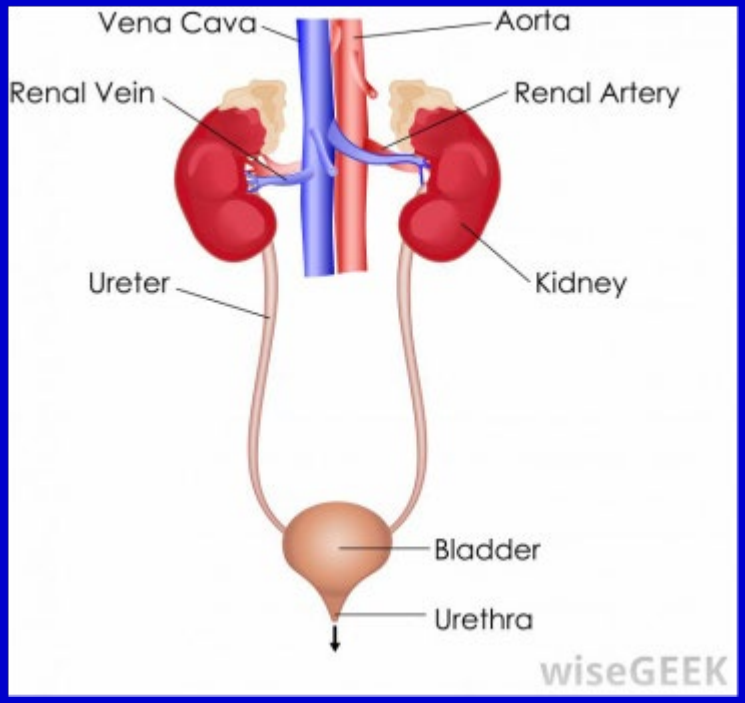
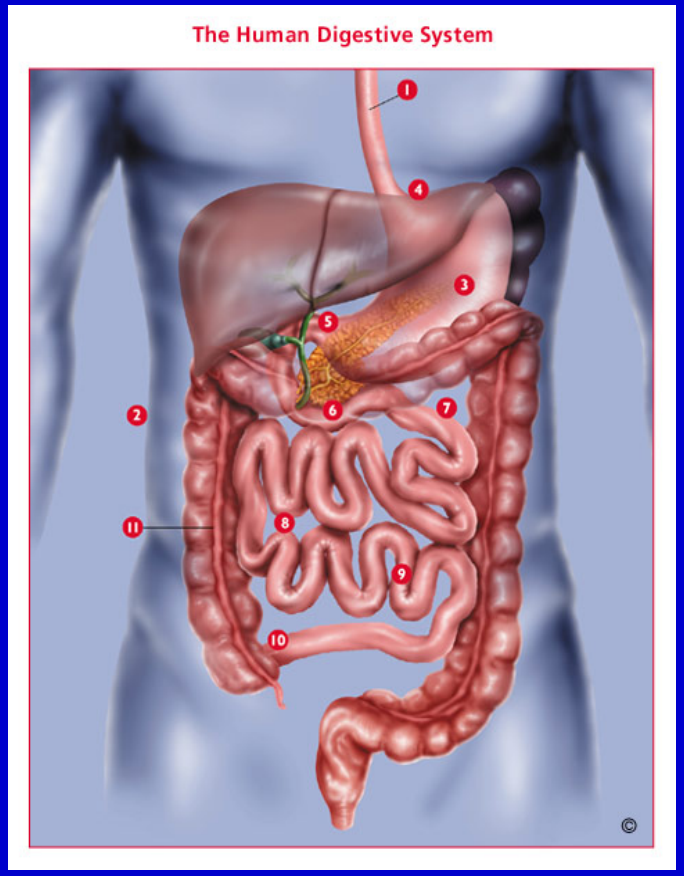
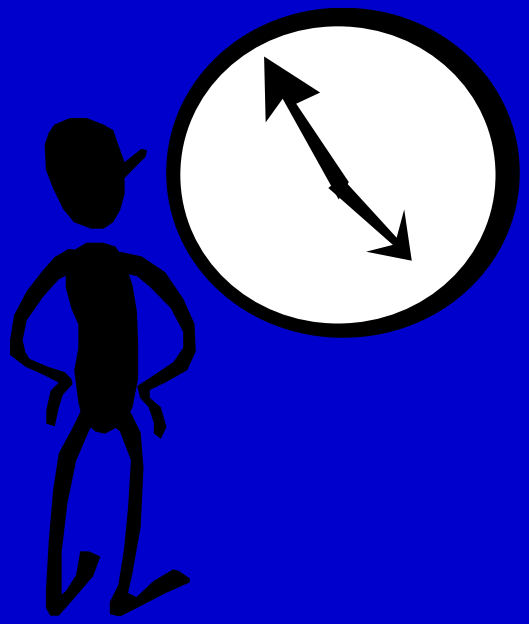
SESSION 3: NUTRITION AND ELIMINATION



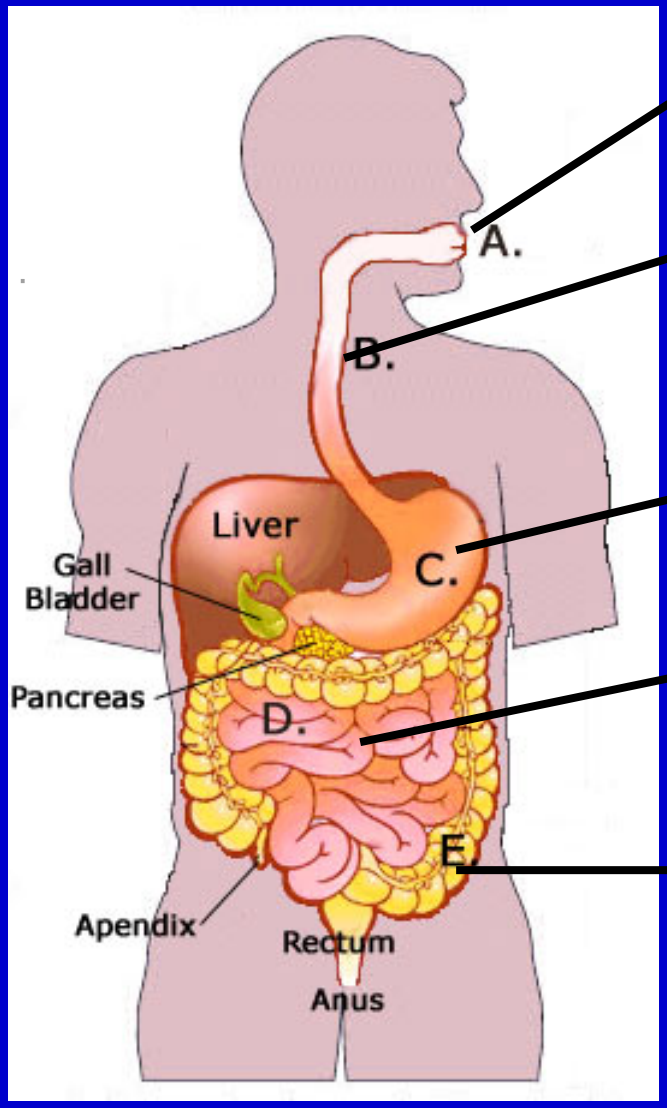


NUTRITION - Introduction

- How digestive system works
- Balance of Good Health
  - Fibre
  - Salt
  - Alcohol
  - Omega-3 fatty acids
  - Labelling
- Nutritional targets
- Assessment
- Feeding a patient orally - exercise



DIGESTIVE SYSTEM



Mouth

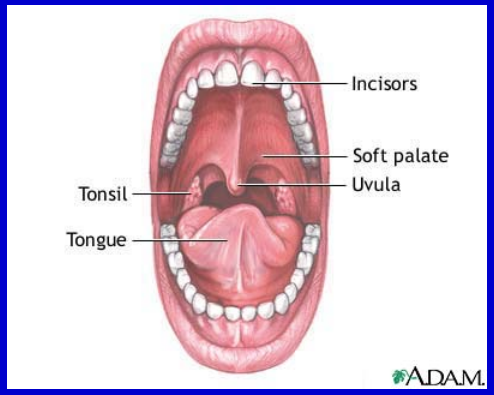
Oesophagus

Stomach

Small intestine

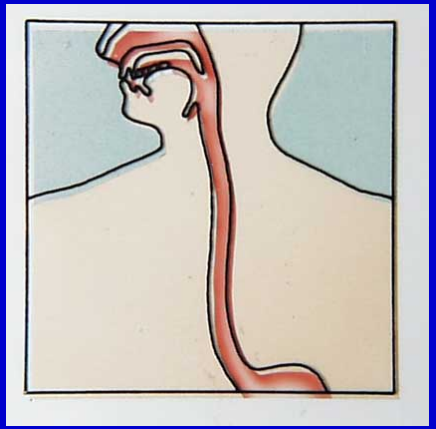
Large intestine

MOUTH



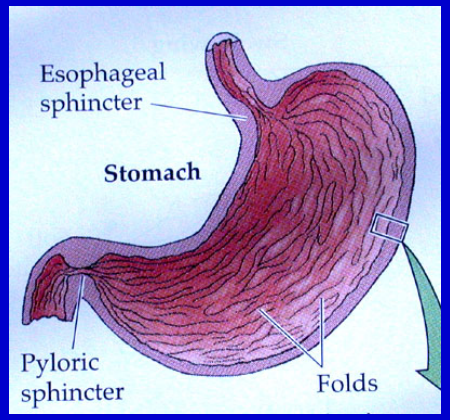
- Digestion begins in mouth with chewing and action of saliva
- Saliva lubricates food making it easier to swallow and contains ptyalin – a digestive enzyme which begins process of breaking down starches
- Food is broken into small pieces with teeth and tongue then swallowed

OESOPHAGUS



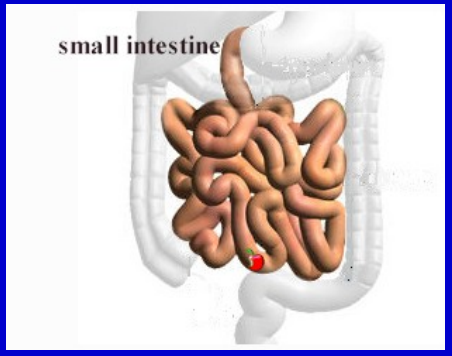
- Narrow muscular tube
- About 10 inches long
- Food is moved down oesophagus by wavelike muscular contractions (peristalsis)
- Sphincter muscle (cardiac or lower oesophageal sphincter) at bottom opens when food is swallowed to allow it to pass into stomach

STOMACH



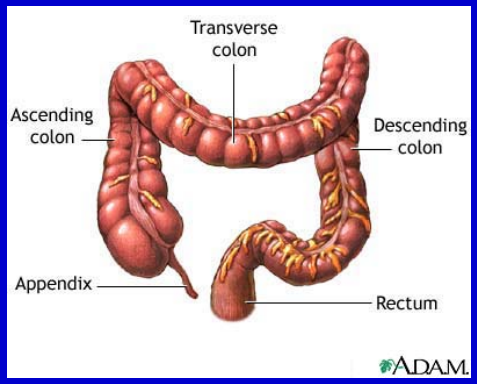
- Flexible muscular bag
- Food is mixed with acid and enzymes to break it down
- Acid also destroys any bacteria
- Food gradually turns into a liquid which is released into small intestine in small amounts through pyloric sphincter

SMALL INTESTINE



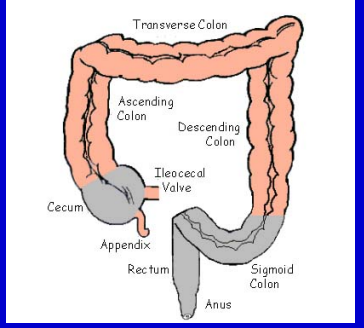
- Long thin tube – about 6 metres
- Consists of 3 parts:
  - Duodenum
  - Jejunum
  - Ileum
- Surface covered with lots of finger-like process – villi which absorb nutrients
- Digestive juices continue process of digestion

LARGE INTESTINE



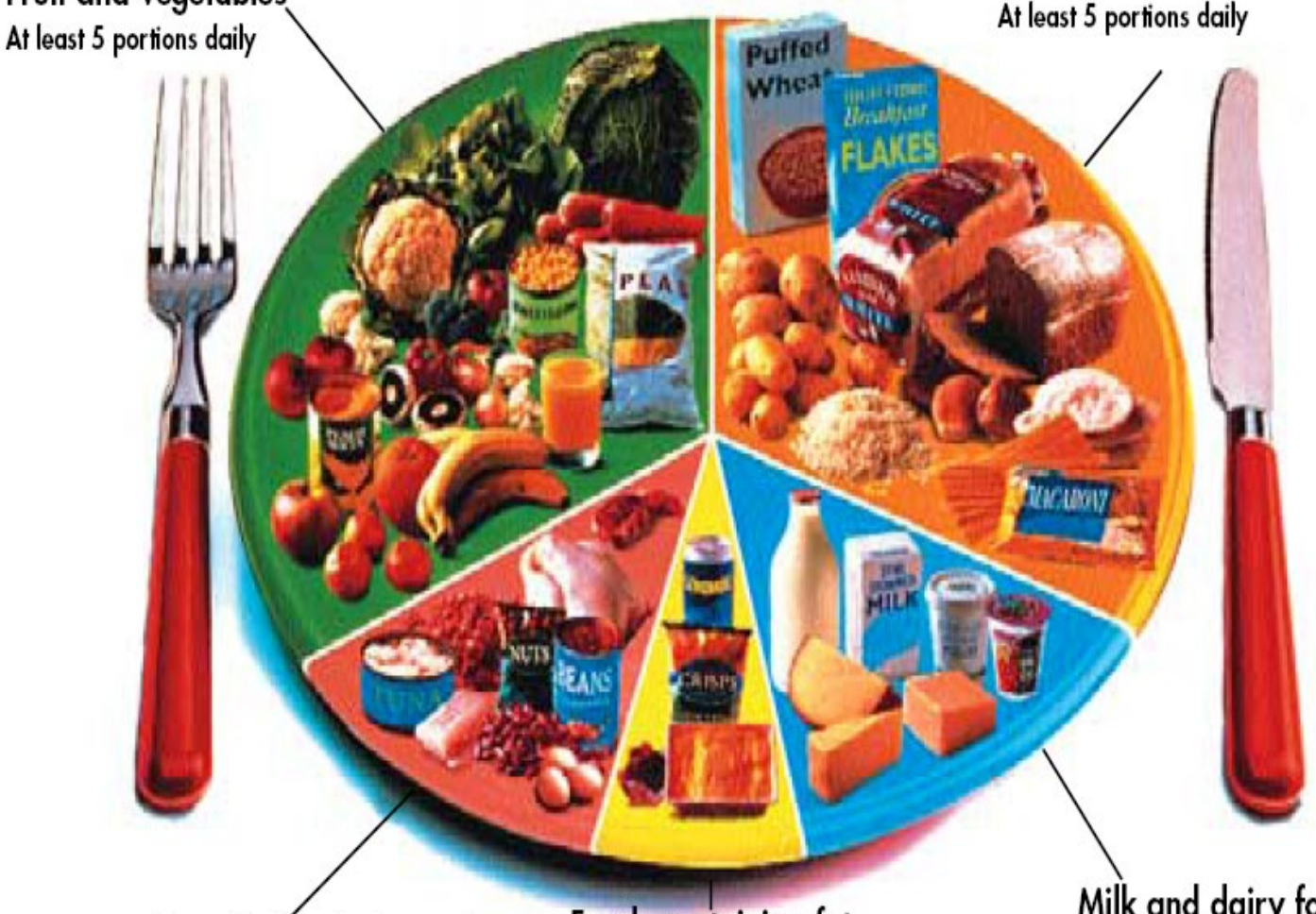
- About 1.5 metres long
- Consists of:
  - Caecum
  - Colon – Ascending, transverse, descending and sigmoid
  - Rectum
  - Anal canal
- About 500mls water is passed into large intestine from small intestine of which 400mls is re absorbed along with small amounts of glucose and salts

RECTUM AND ANUS



- Rectum is continuation of sigmoid colon
- Consists of vertical folds each containing an artery and a vein
- Veins often become varicosed forming haemorrhoids
- Terminal end of system is anal canal which opens outside the body at the anus
- Opening between rectum and anal canal is controlled by internal anal sphincter
- Anus is controlled external anal sphincter which is under voluntary control after infancy

BALANCE OF GOOD HEALTH



FRUIT & VEGETABLES

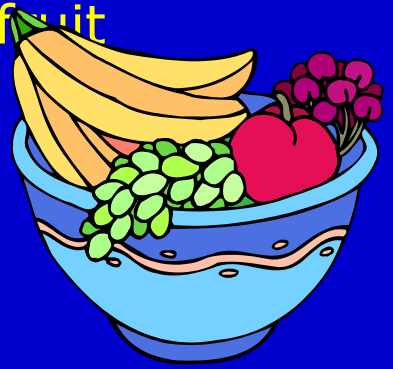
- **Why should we eat fruits & vegetables?**
  - They contain anti-oxidants to help protect your arteries and your heart
  - They contain fibre which helps to fill you up and keep your bowels in good working order

FRUIT & VEGETABLES

- How many portions a day? 5-7

Fresh
Frozen
Tinned
Dried

- What is a portion?
  - One medium fruit e.g. apple, orange, banana, pear
  - Two small fruits e.g. plum, satsuma, kiwi fruit
  - 1 handful of grapes, cherries, strawberries, dried fruit
  - 1 small glass of unsweetened fruit juice (only)
  - 2-3 tbsp vegetables, stewed or tinned fruit
  - 1 small mixed bowl of salad
  - 1 small bowl of tinned soup



FRUIT & VEGETABLES

- **Ideas on how to increase intake:**
  - Small glass of pure fruit juice with breakfast
  - Cut up fruit and add it to breakfast cereal
  - Choose a piece of fruit as a snack mid-morning or mid-afternoon e.g. apple or an orange
  - Have a bowl of soup
  - Add salad to sandwiches

DRUG-NUTRIENT INTERACTIONS

- WARFARIN – used to thin the blood after a blood clot
  - Avoid **CRANBERRY JUICE**
- SIMVASTATIN – Statin to reduce cholesterol

  -Avoid **GRAPEFRUITS** and **GRAPEFRUIT JUICE**

FIBRE

- **What is fibre?**
  - Fibre is found in **CEREALS**, **FRUITS** and **VEGETABLES** and is the part that cannot be digested in your body
  - It travels through your digestive system and absorbs water, making your stools softer and more bulky
- **Why do we need fibre?**
  - Eating foods high in fibre can help to reduce your cholesterol levels, and
  - Can help to keep your bowels in good working order

FIBRE

- Foods high in fibre include:

Wholemeal bread, scones, muffins, pita, naan bread and cakes made with wholemeal flour

Granary bread

Brown rice and wholegrain pasta

Chapatti made with medium or brown flour

Nuts

Digestives, Flapjacks, Hob Nobs, oatcakes

Wholegrain breakfast cereals e.g. Weetabix, Bran Flakes, Porridge oats

Cereal and muesli bars

FIBRE

- **Medium fibre foods include:**

High fibre white bread

Dried fruit

Jacket potato with the skin

Vegetables

Fruit with skin on e.g. apple, pear, plum, grapes

Pulses e.g. lentils, chickpeas, dhal, red kidney beans

SALT

- A high salt diet is related to **high blood pressure**, which is a risk factors for arterial disease and may lead to strokes or heart attack
- On average we eat about 10 grams (equal to just over 2 teaspoons) of salt every day in the food we eat
- It is recommended we have less than **6 grams** of salt every day

FOODS HIGH IN SALT

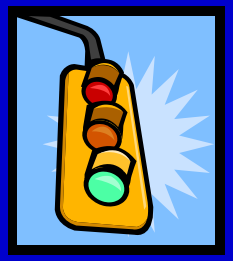
One average portion	Amount of salt
Instant packet soup	2.2g
200ml tinned soup	2.2g
100g cook-in sauce	2.4g
2 grilled pork sausages	2.4g
300g vegetable lasagne	2.9g
225g baked beans	3.0g
340g Shepherd's pie	3.4g
225g deep and crispy pizza	4.1g
Pot noodle	~ 4.5g

SALT

- **How salt intake be reduced?**
  - Avoid adding salt during cooking or at the table
  - Avoid salty snacks e.g. crisps, salted peanuts
  - Cut down on pickles, sauces, and processed foods
  - Use herbs, spices, lemon and lime juice instead of salt, stock cubes or soy sauce
  - Use fresh rather than canned, cured or processed meat, fish or poultry wherever possible
  - Choose 'no added salt' versions

FAT

- Types of fat
  - Saturated
  - Polyunsaturated
  - Monounsaturated
- Where are they found?



Saturated	Polyunsaturated	Monounsaturated
Animal products e.g. lard, butter, cream, processed meat, cheese, palm/coconut oil	Nuts, seeds, oily fish, vegetable oils (inc. corn and sunflower)	Olive, rapeseed, walnut and peanut oils, and avocados

WHAT ARE TRANS FATTY ACIDS?

- Trans fatty acids, raise bad cholesterol and can lower good cholesterol
- Formed when an oil is partially hydrogenated
- Avoid foods made with hydrogenated vegetable oils:
  - Biscuits
  - Cakes
  - Pies
  - Pastries

Other sources include:

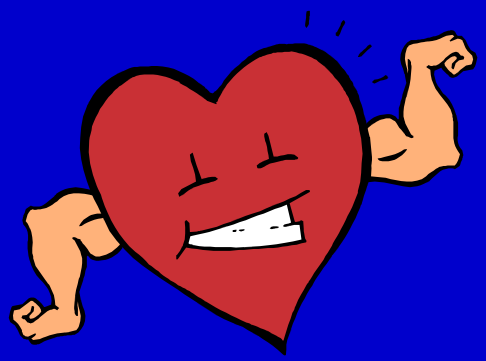
- Fried foods
- Processed foods
- Hard margarine

FAT

- How to reduce fat intake:
  - Use low fat spreads but don't use twice as much
  - Use scrape on, scrape off approach to fat spreads on bread
  - Grill, steam, poach, dry roast/fry, microwave foods instead of frying
  - Trim fat off meat and remove skin from poultry
  - Choose skimmed or semi-skimmed milk instead of full fat
  - Try low fat alternatives for cheese and yoghurt
  - Grate cheese finely to make it go further
  - Reduce intake of chocolate, biscuits, cakes, pastries and pies

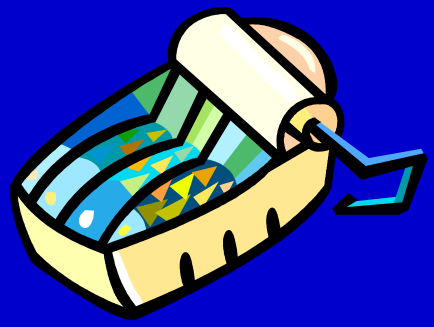
OMEGA-3'S

- **What are omega-3 polyunsaturated fatty acids?**
  - 'Healthy' fats which protect body against heart disease
- **How do they do this?**
  - Help heart beat more regularly
  - Help make blood less sticky
  - Protect arteries from damage
  - Reduce triglyceride levels



OMEGA-3'S

- **Where can they be found?**
  - *Oily fish:*
    - Mackerel
    - Kippers
    - Pilchards
    - Salmon
    - Sardines
    - Trout
    - FRESH tuna



  - *Other sources:*
    - Rapeseed (or canola) oil
    - Dark green leafy vegetables
    - Cereal products
    - Nuts: Walnuts, pecans, peanuts, almonds
    - Soya beans and tofu
    - Eggs, margarine, or drinks enriched with omega 3's

OMEGA-3'S

- How much do we need?
  - 1- 2 portions of fish per week
    - 1 of which should be oily
  - 2-4 portions of oily fish if history of heart attack

- What is a portion of oily fish?
  - 100g
  - 4 oz

Fresh, frozen or tinned (not tuna)

OILY FISH

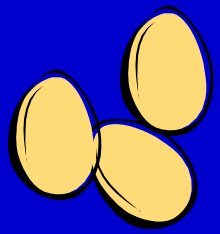
- **Snack ideas:**
  - Fillings for sandwiches, pitta bread, tortilla wraps, jacket potatoes, or even on toast e.g.
    - Tinned fish mixed with low fat salad cream or mayonnaise
    - Try flaked mackerel with chopped cucumber, lemon/lime juice
    - Sardines or pilchards tinned in tomato sauce
    - Mackerel, salmon or tuna paté
    - For tinned fish, avoid in brine and oil, preferably choosing spring water or tomato sauce

OILY FISH

- **Main meal ideas:**
  - Steamed fish with potatoes, vegetables or salad
  - Grilled fish with seasonings of pepper, lemon juice
  - Stir-fry: toss noodles with salmon, tuna or tofu
  - Fish pie or pasta
  - Risotto with mackerel
  - Fish chowder (soup)
  - Kedgeree (smoked haddock, rice, hard boiled eggs)
  - BBQ fish

FOODS AND CHOLESTEROL

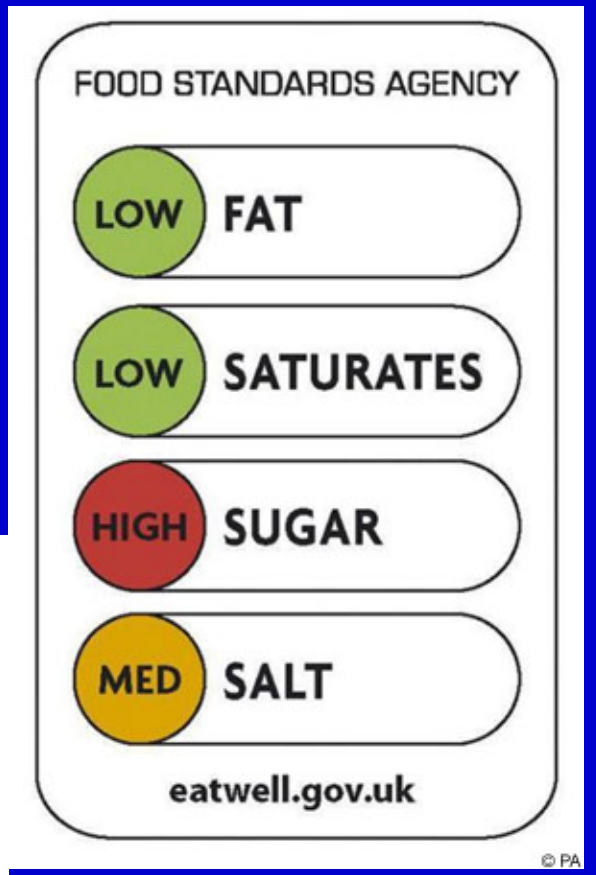
- Foods naturally high in cholesterol that need to be limited include:
  - **Shellfish:** Prawns, mussels, crab, squid, lobster, scallops
  - **Liver**
  - **Eggs:** Keep to 3-4 per week



A REMINDER ABOUT FOOD LABELS

	What is a lot?	What is a little?
Added sugars	10g	2g
Fat Saturated fat	20g 5g	3g 1g
Fibre	3g	0.5g
Salt Sodium	1.25g 0.5g	0.25g 0.1g

NEW TRAFFIC LIGHT SYSTEM FOR LABELS



NUTRITIONAL CARE

- Integral to all patient interventions
- Imperative all patient's nutritional, personal and clinical dietary requirement are met including help with feeding
- Where patients are unable to swallow - enteral feeding
- Assessment – Weight, BMI
- Dietitian – part of clinical team, provides advice

EXERCISE

Calculate patient's Body Mass Index (BMI) using MUS tool

	HEIGHT	WEIGHT(KG)	BMI
1	1.9 metres	81.70	
2	5 ft. 4 ins	51.95	
3	1.8 metres	76.60	
4	5 ft. 9 ins	84	
5	6 ft.	78.80	
6	5 ft. 11 ins	100	
7	5 ft. 7 ins	59	
8	1.76 metres	78.80	

	HEIGHT	WEIGHT(KG)	BMI
1	1.9 metres	81.70	23
2	5 ft. 4 ins	51.95	20
3	1.8 metres	76.60	24
4	5 ft. 9 ins	84	27
5	6 ft.	78.80	23
6	5 ft. 11 ins	100	31
7	5 ft. 7 ins	59	20
8	1.76 metres	78.80	26

HOLY CROSS HOSPITAL
CARE PLAN

Room No:

Name:	DOB:
Risk no: 4 Nutrition	Height

Assessment of risk using MUST

STEP 1

BMI Score

BMI	Score
>20	0
18.5-20	1
<18.5	2

+

STEP 2

Unplanned weight loss in past 3-6 months

%	Score
<5	0
5-10	1
>10	2

+

STEP 3

Acute disease effect

If patient has been acutely ill and there has been or is likely to be no nutritional intake for >5 days

Score 2

STEP 4 Overall risk of malnutrition

Add scores together to calculate overall risk

Score 0 = Low risk Score 1 = Medium risk Score 2 or more = High risk

Date	Weight	BMI	Overall risk score	Date	Weight	BMI	Overall risk score

Nutritional requirements per 24 hours:

Date	Calories	Protein	Fluid	Fibre

Comments

NUTRITIONAL TARGETS

- Hospital menu should provide:
  - 1200-2500 Kcal range per day
  - Minimum of 300 Kcal per meal (500 for an energy dense meal)
  - 55-60g protein per day
  - At least 3 calcium sources per day

MAIN MEALS = entrée + starch + vegetable + sauce/gravy

- Meat/fish entrée – approx 12-14g protein, accompaniments to provide remainder to make up to18 grams protein
- Vegetarian entrees - approx 9-10 g protein made up to 12g by accompaniments
- Starches – at least 115g
- Vegetables – minimum serving 80g preferably provided by 2 to enable patients to take 5 portions per day
- Vegetable rich in protein include, peas and sweetcorn

DESSERTS

- Pleasure and nutritional value of deserts should not be underestimated
- Deserts may offer over 5g protein and 300Kcals when served with custard or ice cream

FEEDING A PATIENT

EXERCISE – this afternoon

Work in pairs:

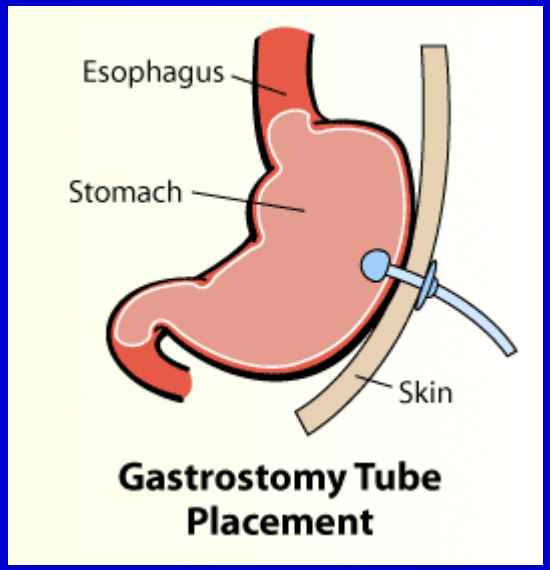
Write a set of guidelines for feeding a patient

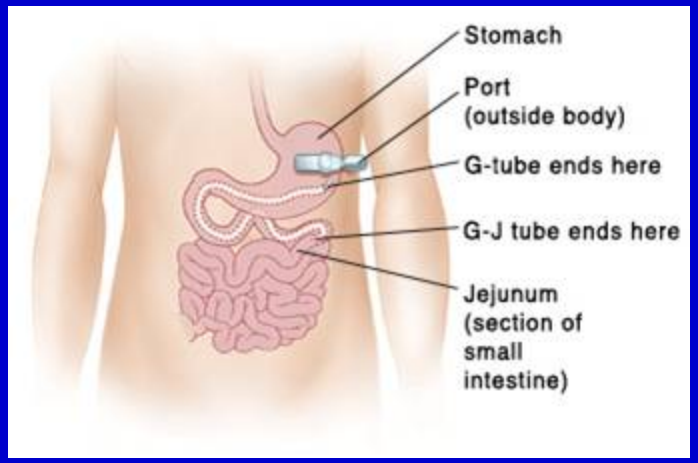
The nutritional content of uneaten food is **NIL**

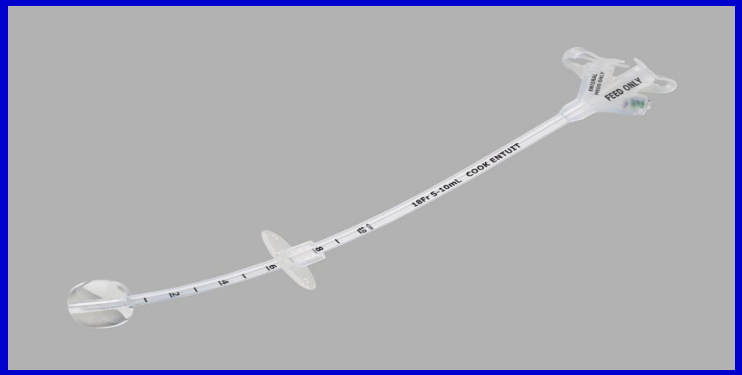
ENTERAL FEEDING

- Patients with swallowing problems may not be able to maintain adequate nutrition or hydration by oral feeding
- In such cases enteral feeding may be recommended
- If long term enteral feeding is anticipated a Percutaneous Endoscopically guided Gastrostomy (PEG) may be needed
- Initial procedure undertaken in an Endoscopy Unit

What are the different types of enteral feeding tubes?



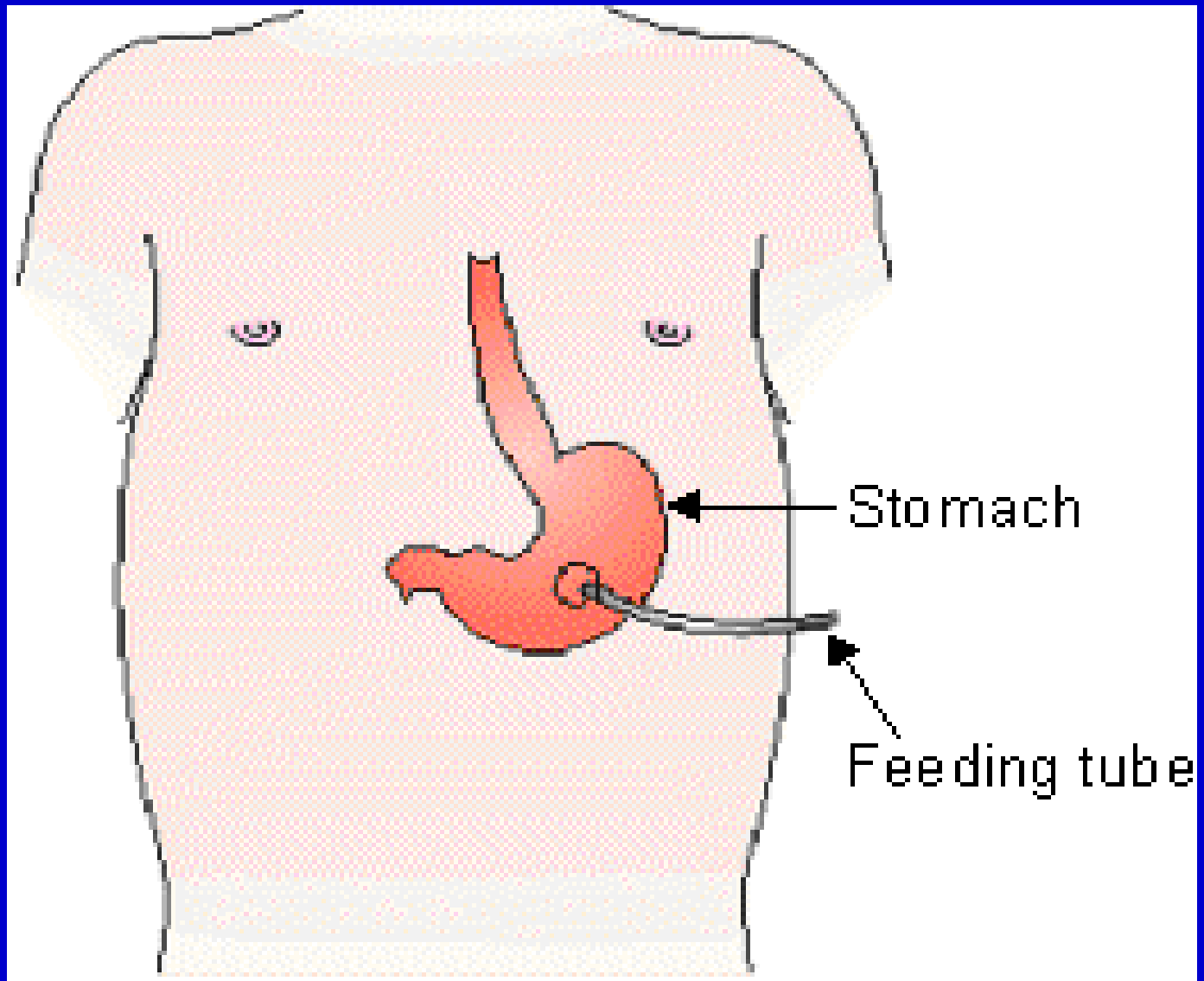




Types of Enteral Feeding tubes:

- 1. PEG – Percutaneous Endoscopy Gastrostomy tube
- 2. RIG – Radiologically Inserted Gastrostomy tube
- 3. Jejunostomy Tube
- 4. NGT – Nasogastric tube

PEG - Tube inserted directly into stomach using endoscope



TYPES OF TUBES

- Several types of tubes in common usage including polyurethane or silicone tubes with a device (flange, flexible dome or inflated balloon) to hold the tube in place
- Once pathway is established a Balloon Gastrostomy enteral tube may be used
- Advantage is, this tube can be changed here at Holy Cross Hospital
- Balloon Gastrostomy tubes are changed every month a by a competent RN

CARING FOR TUBE

- Flush with freshly drawn tap water:
  - before/after each feed
  - before/after medication
- Clean stoma daily with water, make sure it is dried thoroughly
- Dressings are not necessary providing stoma site is clean
- If stoma site has a discharge, a swab should be sent for culture and a sterile dressing applied
- A balloon inflated with sterile water secures Corpak tubes
- Check weekly to ensure correct amount is in place minimising the risk of displacement

HOLY CROSS HOSPITAL
CARE PLAN

Room:

Name:	DOB:
Risk no: 4 Gastrostomy tube care	

Description of risks:

1. Risk of buried bumper due to gastrostomy tube not having weekly advancing and 360˚
2. Risk of overgranulation due to friction between the feeding tube and the skin around it

Please rate risk if no action taken

Review date	Risk no	High	Medium	Low	Signature
19/11/17	1	yes			
19/11/17	2	yes			

Management/care plan

Gastrostomy tubes need to have weekly care by a Competent person to reduce the risk of buried b syndrome (partial or complete growth of gastric mucosa over the internal bumper. The bumper ma migrate through the gastric wall and may lodge anywhere along the gastrostomy tract. It usually oc months after the PEG replacement. Some cases as early as 6 days post insertion.)

Risk 1

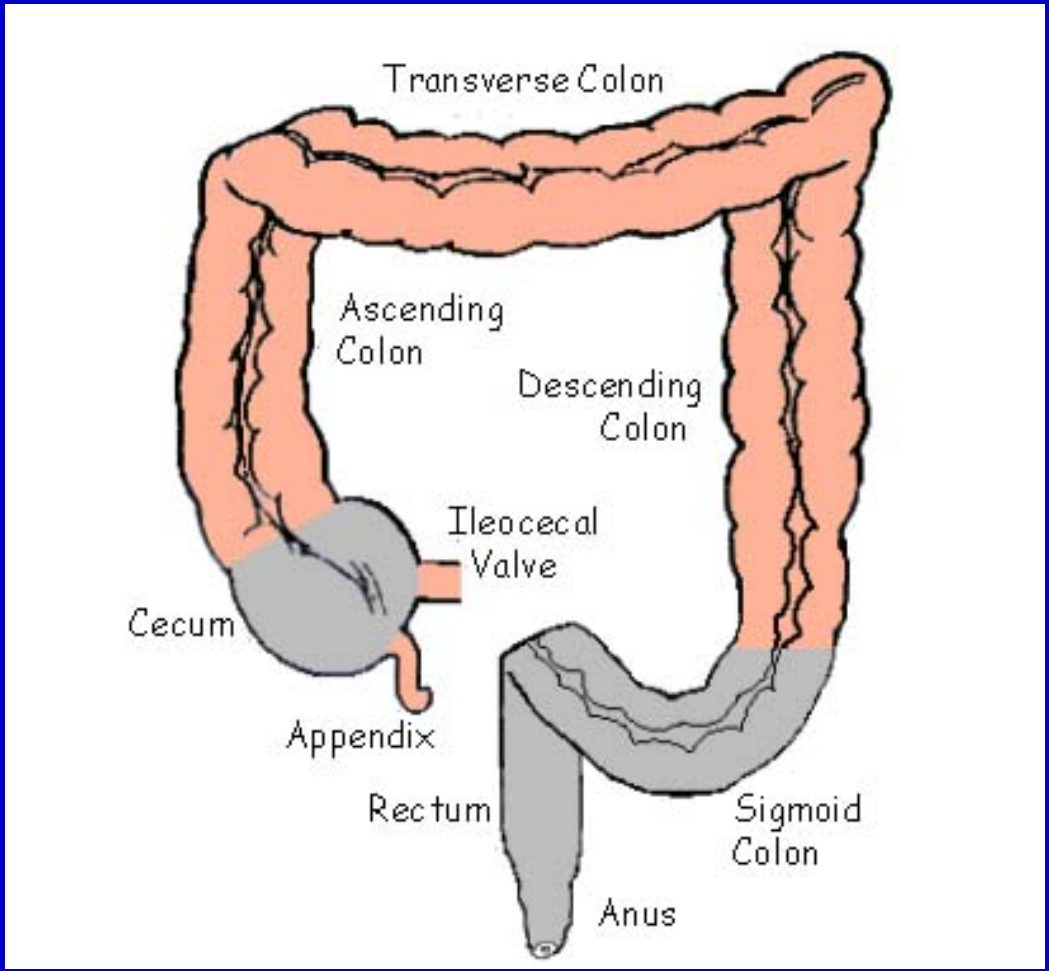
- Wash hands and wear surgical clean gloves when performing this procedure
- Open the clamp of the fixation plate. Lift the tube free of the channel in the fixation plate ar move the plate away from the skin. Clean the stoma, surrounding skin and fixation plate wi sterile gauze and saline if necessary. Ensure the skin is dry.
- Rotate the gastrostomy tube 360^{o} and then **a**dvance the tube (push the tube into stomach **1** and gently pull it back until the resistance is felt. Replace the fixation plate back above the st about **2- 3 mm** away from the skin. Re-insert the tube into the channel of the fixation plate a close the clamp)
- Check that the tube is not too tight or too loose by maintaining **2- 3mm** between the skin an external fixator at all times
- Ensure the tube is secured at all times after rotation and advancing of the tube.
- Document in the chart according to the type of gastrostomy tube and MDT notes
- If the gastrostomy tube cannot be rotated and advanced within the stoma tract a buried bur should be suspected- if it is office hours inform Nurse in charge who will call the Nutrition Nu for advice at the Royal Surrey County Hospital(RSCH)- 01483572211 ext 2568. If it not office inform Doctor on- call who will make arrangement with the RSCH Gastro team for planned admission for further management.

NB: the above procedure is not to be done for any Jejunal tubes (PEG/J or PEJ).

Risk 2

- Ensure the gastrostomy tube is secured daily with a tape either side of the abdomen to avoi frequent rubbing of the tube against the stoma area.
- Ensure you check that the patient has no tape allergies prior to using any tape to avoid skin irritation.
- Change the side where the tube is taped at least daily or when necessary.
- Document in the care plan.

BOWEL MANAGEMENT



BOWEL MANAGEMENT - Introduction

- How the bowel works
- Constipation
- Flaccid and reflex bowels
- Assessment
- Management of incontinence

HOW DOES THE BOWEL WORK

- Food is mashed up and partially digested in stomach
- Passes into small intestine where it is fully digested and useful nutrients, vitamins and minerals are absorbed into the body
- Remainder passes into large intestine where water and salts are absorbed
- Stool (faeces) is formed and stored in rectum until a bowel movement occurs
- Stools are mainly undigested food, fibre, dead bacteria, mucous cells and cholesterol
- Even if you eat nothing you still produce stools due to constant turnover of body cells

HOW DOES THE BOWEL WORK?

- At each stage contents of digestive system are moved along by peristalsis
- When food or a hot drink enters your stomach the gastro-colic reflex sends stronger waves of peristalsis through large intestine causing rectum to fill with stool
- When stools pass into rectum, internal anal sphincter relaxes automatically (not under voluntary control)

HOW DOES THE BOWEL WORK?

- Nerve endings can tell between wind, looses stools that need urgent attention and a 'normal' stool
- You can then decide when to use your external anal sphincter to open your bowel (under voluntary control) and relax muscle
- OR if inconvenient squeezing external sphincter pushes stool back into rectum

CONSTIPATION

- Big range of what is considered a normal routine
- Some people go every day but for others every other day may be normal
- An interval of more then 3 days will cause most people discomfort
- People mean different things when talking about constipation

CONSTIPATION

- Consistency of stools depend on how long they have been in colon
- The longer the time the more water will be absorbed and stools will be hard
- Symptoms of constipation include:
  - Infrequent bowel actions
  - Hard stools
  - Straining
  - Feeling of being bloated
  - Abdominal pain
  - Excessive wind

MANAGING CONSTIPATION

- Good fluid intake – 1500-2000 mls per day
- Healthy diet
- Activity and exercise – can stimulate colon
- Regular routine – regular time to go to loo and make use of gastro colic reflex
- Medication review – some drugs can cause constipation e.g. anti spasticity drugs, anti depressants

TREATMENT FOR SEVERE CHRONIC CONSTIPATION

- Bulking agents – increase mass of stools to help stimulate peristalsis e.g. Fybogel
- Stool softeners – help stools retain moisture and stay soft and bulky e.g. Dioctyl
- Osmotic laxatives – stop colon drawing out fluid so stools stay soft and bulky e.g. Movicol, Lactulose. Too much will cause liquid stools
- Stimulants – stimulate peristalsis, can cause stomach cramps if a build up of hard stools present e.g. Senna, bisacodyl

SUPPOSITORIES AND ENEMAS

- Stimulate wall of rectum to push stools out
- Some are medication free e.g. glycerine supps
- Others contain a stimulant medication e.g. Bisacodyl supps

FLACCID AND REFLEX BOWELS

- Control over bowels is dependent on nerves at base of spine
- Reflex (problem with storage)– reflexes which partly control bowel actions intact so muscles in lower bowel and anal sphincter are active and a bowel action may occur when rectum becomes dilated by stools
- Flaccid (problem with emptying)– nerves between bowel and spinal cord damaged so no reflex activity. Bowel will continue to fill and will leak when full

ASSESSMENT

- Information on patient's usual bowel habits
- Look at diet
- Check medication
- Keep a diary over about 1 week to determine:
  - Frequency and time of bowel movements
  - Volume, consistency and colour of stools

MANAGEMENT OF INCONTINENCE

- Rule out constipation or faecal impaction
- When cause is neurological management aims to prevent reflex emptying in response to rectal dilation
- Establish a regular routine
- Make sure patient has access to toilet/commode once predictable pattern is established
- Give warm liquid about ½ hour before usual time for bowel movement
- Maintain privacy

BLADDER MANAGEMENT

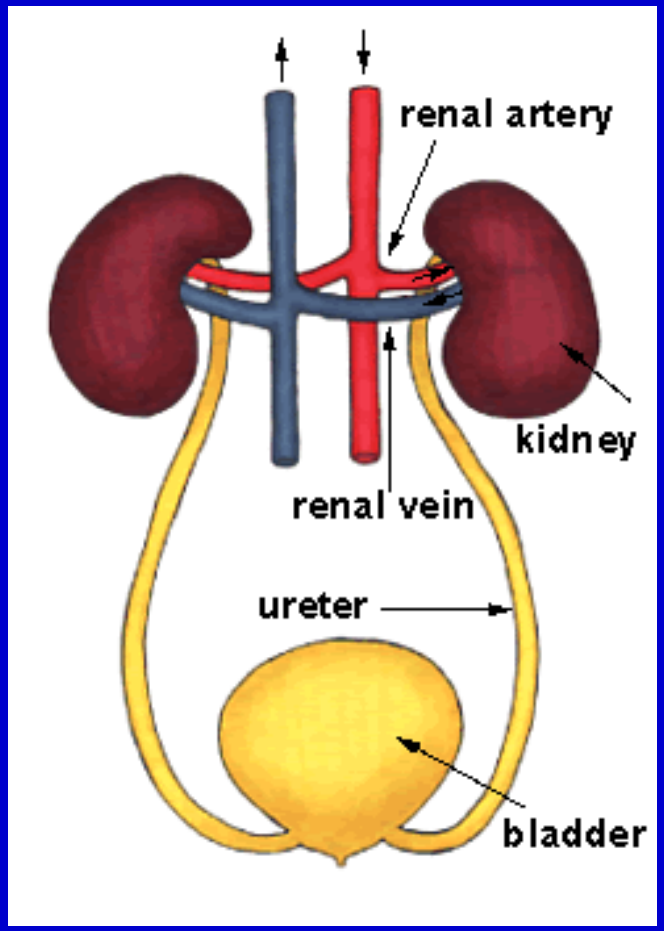
OR NOT!!!

BLADDER MANAGEMENT - Introduction

- Urinary system
- How the bladder works
- Types and causes of incontinence
- Neurogenic bladder
- Assessment
- Clinical diagnostic tests
- Management of incontinence/bladder re-training

Where are your kidneys?

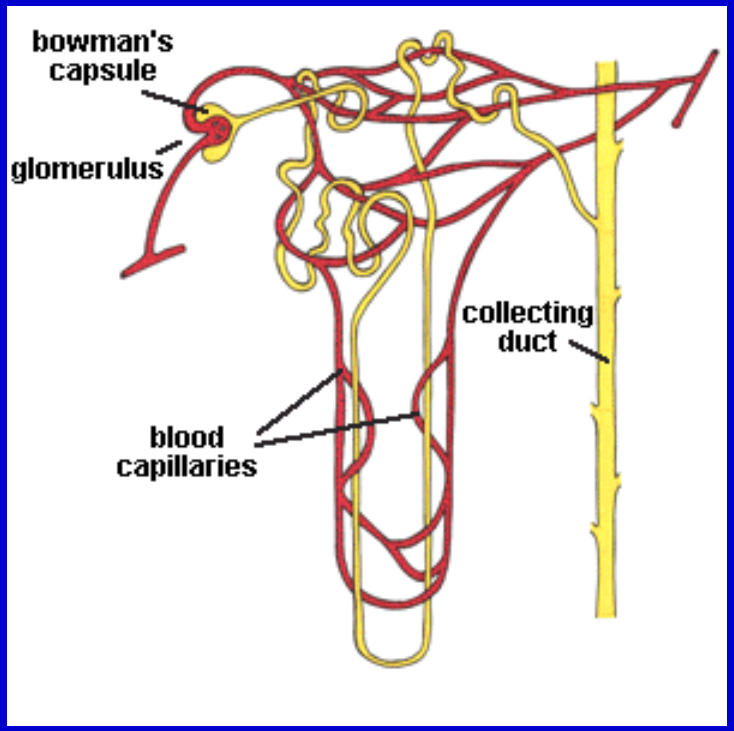
URINARY SYSTEM



- Blood is brought to kidney by renal artery
- Kidneys filter it and reabsorb useful substances e.g. glucose
- Purified blood returns to circulation via renal vein

URINARY SYSTEM

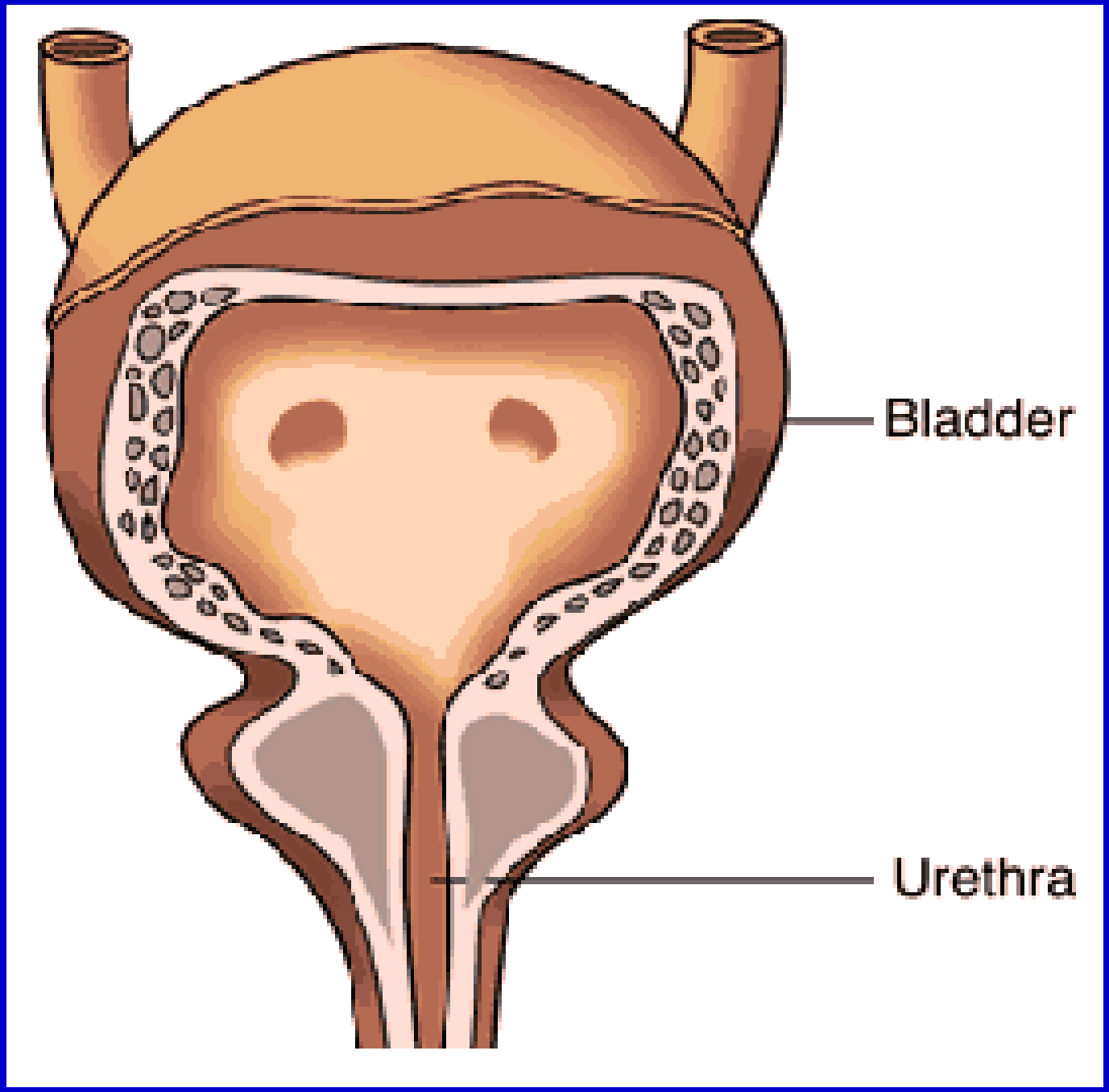
Each kidney has many millions of nephrons which produce urine



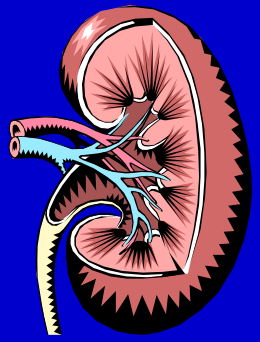
- Blood is filtered in the glomerulus
- Filtrate is collected by bowman's capsule and enters tubules
- Useful substances are reabsorbed into blood by capillaries which are closely wrapped round tubules

URINARY SYSTEM

- Urine consists of excess water, salts and urea
- From the kidneys urine is pumped down ureters to bladder
- Ureters normally allow flow in only one direction
- Ureters are connected to bladder
- Bladder is a bag which stores urine until convenient to empty it


Bladder
Urethra

URINE OUTPUT



- Normal output 0.5mls/kg/hr or about 1.5-2 litres per day
- Dependent on:
  - Drinking sufficient fluids
  - Kidneys receiving adequate blood supply
  - Normal kidney function
  - No obstruction to flow

HOW THE BLADDER WORKS

- A baby is unaware of bladder control due to immature nervous system and only wets itself when bladder is full enough to trigger reflex to empty it
- As nervous system matures conscious control is gained with ability to initiate or stop urine flow
- Expansion and contraction of bladder controlled by detrusor muscle
- Bladder normally holds 250-300mls urine

HOW THE BLADDER WORKS

- When bladder is full nerves send a message to brain via spinal cord
- When you decide to go the loo brain sends a message back down spinal cord to bladder telling detrusor muscle to contract and sphincter muscle around top of urethra to relax and open
- Urine passes down urethra and exits
- Reflex activity where messages are processed within lower part of spinal cord also controls bladder muscles

INCONTINENCE

3 types :

- Acute/transient
- Chronic/persistent
- Neurogenic

COMMON CAUSES - acute

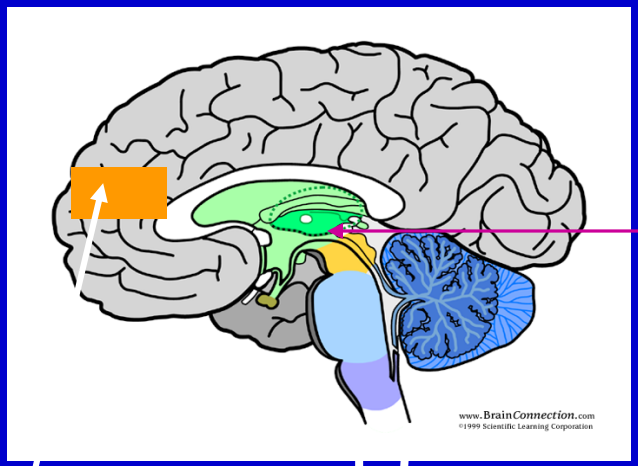
- Confusion
- Urinary tract infection
- Excessive production of urine
- Reduced mobility
- Constipation

COMMON CAUSES - chronic

- Stress incontinence – sudden loss of small amounts of urine when coughing, laughing, sneezing, lifting etc.
- Urge incontinence – involuntary loss of urine associated with strong urge to void, cannot get to loo before leakage occurs
- Overflow incontinence – constant dribbling and frequent voiding associated with obstruction or impaired contractibility of bladder
- Functional incontinence - urinary leakage associated with inability to toilet train due to impairments of cognitive or physical function, psychological unwillingness or environmental barriers to toilets

NEUROGENIC BLADDER

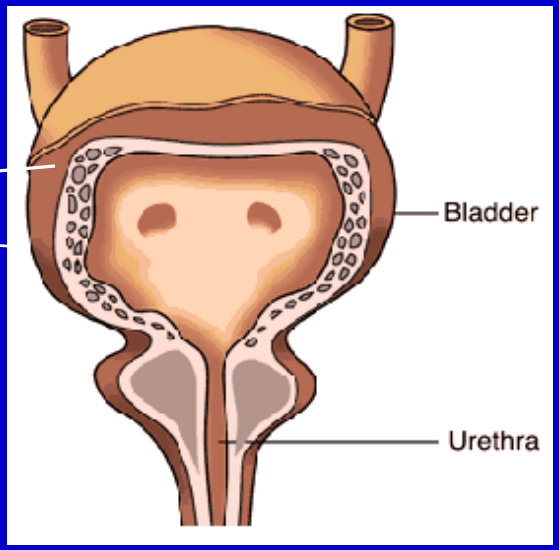
- Dysfunction of bladder due to malfunction of nerves which control bladder function
- Nerve pathways can be damaged at any point
- Problem occurring depends on location and extent of damage
- People with neurological disorders which are widespread may have a combination of difficulties



Thalamus

Micturition centre in frontal lobe

Spinal cord



NEUROGENIC BLADDER

- May be:
  - **Reflex(spastic)** – upper motor neurone damage affecting brain and spinal cord e.g. stroke, MS leads to overactivity of muscles causing spasticity
  - **Flaccid (acontractile)**- lower motor neurone damage affecting peripheral nervous system causes too little muscle activity leading to flaccidity

REFLEX BLADDER – problem with storage

- Reflexes that partly control bladder intact
- When bladder contains a certain amount of urine in it contracts
- Person needs to urinate frequently and has difficulty 'holding on'
- Rapid movement such as laughing or spasm can trigger emptying
- Patients with spinal cord injury above T12 usually have a reflex bladder

FLACCID BLADDER – problem with emptying

- Reflexes also damaged
- Bladder has no muscle tone so does not contract or empty automatically
- Person unaware of need to pass urine
- Continues to fill, eventually urine will dribble out
- Leads to incomplete emptying of bladder and recurrent infections
- Patients with spinal cord injury below T12 usually have a flaccid bladder

ASSESSMENT

- Aim is to identify type of incontinence, cause and how to manage it
- Overall approach should be used
- Look at physical, mental, social and environmental factors
- Urine test – for signs of infection
- Continence history – may be useful to keep a diary

ASSESSMENT -general

- Was patient incontinent prior to admission?
- Is he/she incontinent more often at night?
- Has patient had a urinary catheter – if yes when and for how long?
- Is there a loss of urine when coughing, laughing, sneezing or standing up?
- Males – is there enlargement of prostrate gland?
- Females – is there a prolapsed uterus?

ASSESSMENT -Awareness and medication

- Is the patient confused and/or disorientated?
- Does he/she have difficulty following directions?
- May interfere with his/her ability to respond to urge to pass urine
- Is patient taking any medications which may be contributing to problem?

ASSESSMENT – Diet, fluid intake and bowels

- Fluid intake has a direct effect on output
- Insufficient fluids (less than approx 1500 mls per day) increases risk of UTI
- Does patient have a problem with constipation
- Does he/she have a problem now?

ASSESSMENT - bladder

- Does patient empty bladder frequently – if yes how often
- Does patient get enough warning to act on it?
- Has patient history of bladder problems?
- Id there a history of recurrent UTIs? If yes when was last one?
- Has patient had tests on bladder in the past? If yes what, when and where?

ASSESSMENT - neurological

- Does patient urinate frequently?
- Is patient aware when bladder is full?
- Does patient constantly leak urine?
- Does patient have a problem starting to void?
- ? Frequent UTIs

CLINICAL DIAGNOSTIC TESTS

- Urine test
- Measurement of residual urine - amount left in bladder after passing urine
- Can be done using ultra sound scan or in/out catheterisation
- Urodynamic studies – provide information on bladder sensation, detrusor and urethral sphincter function
- Performed in urology dept of acute hospital

WARD URINE TESTING

TAKING A SPECIMEN FOR THE LAB

MANAGEMENT

- Weight reduction if patient is overweight
- Maintain fluid intake to 1500-2000mls per day
- Decrease fluids if excessive
- Review medication
- Treat underlying UTI
- Prevention and/or treatment of constipation

MANAGEMENT

- Medication – influence activity of detrusor muscle and urethral sphincter
- Protective pads and appliances
- Bladder training programmes

BLADDER TRAINING

- Use information from continence diary to identify urine frequency and volume, incidents of incontinence, fluid intake (including times) to develop a plan
- Voiding usually occurs on getting up in the morning, before or after meals and before going to bed

BLADDER TRAINING

- Fluid intake of at least 2000 mls per day during programme
- Start by toileting patient every 1-2 hours
- Gradually increase intervals until control is gained
- Avoid negative comments
- Provide positive reinforcement
- Don’t expect miracles

ANY QUESTIONS?