Tuesday 14 April

Hello Gr 12's!

Let me start by saying I miss you all soooo much!!!

With the extended lock-down, I have decided to send you summaries of our next theory section: "Nutrition Related Health Conditions" (Ch 1: Unit 1: page 77 in your textbooks.)

- If your work book and textbook are in your locker, don't panic!! ☺ (the summaries cover everything)
- I am going to form a Whatsapp group for the gr 12 Consumer Studies learners. NOTE: this group is not a social platform - it will be for me to send voice-messages to explain content and for subject-related questions only. Please check with your parents before sending me your number - they must give their approval.

Please load this number : Mrs Thorne 082 558 7404 and send me your contact details. I will form the group ASAP.

- Here is a time-line that I suggest you follow (I do not want to overwhelm you as I know you are working in all your subjects.) This time-line will help you structure your days to fit everything in.

Wed 15 April: copy summary pages 1 and 2 into your books (paper if your book is at school, but keep it safe so you can stick it in when we return)

Thurs 16 April: copy summary pages 3 and 4 into your books/onto paper.

Fri 17 April: copy pages 5 and 6 of the summary into your books / onto paper.

Mon 20 April: copy page 7 of the summary into your books / onto paper.

Please don't be lazy - write out the summaries - this will help you learn the work AND then when we return, you will not need to summarise the work yourself.

Tues 21 April
Wed 22 April
Thurs 23 April
Friday 24 April

A series of voice notes will be sent with explanations of each condition. I will do these ONE at a time so it is not overwhelming. I will teach from the summaries, so have them infront of you when you listen to the info.

I imagine that you may be feeling stressed and worried about your Gr 12 year - for now, let's not worry about the unknown - let's rather focus on what we CAN do.
You are not alone! We will get through this together!! (The summaries follow after this letter.)

Much love,
Mrs Thorne

GLYCAEMIC INDEX

carbohydrate
Broken down
hormone: insulin (pancreas)
glucose (e⁺: cells)

NB: rate → digestion → absorption

*GI Index: 1-100:

70⁺: sudden rapid rise

55-69: medium rate

0-54: slow steady release

HYPOGLYCAEMIA

1

blood glucose = abnormally low

↘ most common: "Reactive"

Causes:

→ Eating high G.I.

blood sugar ↑

pancreas: lots insulin

blood sugar: too ↓

- shaky
- dizzy
- pale
- sweaty
- headache
- irritable

→ Skipping meals

→ Exercising hard ≠ extra food

Do:

✓ eat low GI < steady glucose ≠ over-produce insulin

✓ eat regularly: steady glucose

✓ exercise often: insulin sensitivity

HYPERGLYCAEMIA

- blood glucose = abnormally high
- pancreas — no insulin
  — not enough insulin

DIABETES

glucose ≠ moved from blood

cells (e⁺)

excess = urine

Effect on ♡: harden
- artery walls < narrow
- ↑ triglycerides + ↓ HDL
- high blood p□
- ♡ pump less effectively

Prevention & Management:

DIETARY
- ≠ skip meals: constant blood glucose
- ↓ fat diet: ♡ disease
- ↑ fibre (soluble): stabilise blood sugar
- low GI diet: stable blood sugar
- 5x fruit & veg / day: ↓ chance CVD
- ↓ salt diet: ↓ blood p□
- ↓ sugar (hidden!!!): spike blood glucose

LIFESTYLE
- exercise (↑ insulin effect.)
- good wound care

Type 1:
- Insulin dependant
- Childhood onset
- 10%
- Inject insulin
- Genetic

Type 2:
- Non-insulin dependant
- Adult onset
- 90%
- Tablets
- Lifestyle + diet

Consequences:
- blindness
- kidney disease
- nerve damage
- coronary disease
- stroke
- loss: limbs

CORONARY HEART DISEASE

oxygen ← brain

- coronary arteries = damaged → plaque (narrow, thicken, harden) → atherosclerosis / arteriosclerosis → partial / complete blockage ∴ ≠ blood flow → brain → stroke; heart → heart attack; limbs → gangrene

causes:

- ↑ smoking
- ↑ cholesterol levels*
- ↑ blood p
- diabetes
- ↑ saturated fats
- obesity
- ↓ exercise
- ↑ alcohol intake
- stress
- heredity
- age

= soft, waxy subs: liver: carried: blood to cells ← cell membranes, hormones

↓

only dangerous → levels high

Total: 5 mmol/ℓ
LDL: < 3 mmol/ℓ
HDL: > 1,2 mmol/ℓ

2 types:
- LDL: 'Bad' (Low Density Lipoprotein)
- HDL: 'Good' (High Density Lipoprotein)

Prevention & Management:

- NB: fats: ↓ trans-fats, saturated; ↑ mono-unsaturated, poly-unsaturated
- ↑ Poultry + fish : ↓ red meat
- Poultry: no skin
- Meat: cut off visible fat
- ↓ Processed meat
- Low-fat / Fat-free ← milk, yoghurt
- Soft tub marge ≠ brick
- Fry oil ≠ butter
- ≠ Fry → grill, bake, steam
- Coconut oil & Palm kernel oil = saturated fats!
- Use: mono-unsaturated:
  - olive oil
  - canola oil
  - grape seed oil
  - olives
  - avo

  : poly-unsaturated:
  - sunflower
  - soft tub margarine
  - fatty fish — sardine, pilchard, salmon

- ≠ cholesterol foods (< 300 mg/day) ← organ meat, calamari, prawns
- ↑ fibre (soluble) ← apples, oats, legumes → ↓ cholest.
- 5 x fruit & Veg / day: ↑ fibre, ↓ cholesterol, ↓ fat
- ↓ salt (NB: hidden) (< 5 g / day)
- alcohol ↓↓

lifestyle:
- exercise 30 min, 5x weeks
- ≠ smoke
- ↓ stress

NB: =
- ↓ cholesterol
- ↓ salt
- ↓ fat
- ↓ sodium
- ↓ sugar (added)
- ↑ fibre

HIGH BLOOD PRESSURE

③

- blood p□ = p□ : blood : artery walls : circulation < ♡ : contract = systolic / ♡ : relax = diastolic } S/D
  - ↳ normal = $\frac{120}{80}$ ☺ high: ≥ $\frac{140}{90}$ ☹
  - ⇓ "silent killer"

- **Causes:**
  - family history (genetic)
  - overweight
  - unhealthy diet < ↑ satur. fat + chol. / ↑ salt / ↑ alcohol / ↓ dairy < calcium / phosphorus / magnesium } lower blood p□
  - ≠ exercise
  - ↑ stress
  - age
  - medication*

- **Prevent & Management:**
  - exercise: 30min/day: 5x
  - control weight
  - ↓ sat. fat + ↓ cholesterol
  - ↑ fruit + veg
  - ↑ whole-wheat
  - ↓ coffee / tea
  - ↓ salt: < 5g/day
    : NB hidden in foods
    - high: ≥ 600 mg/100g
    - low: < 120 mg/100g

OSTEOPOROSIS

- "Porous Bone" – loss calcium (+ phosphorus / + vitamin D) = < brittle / fragile / weak } prevent NB ≠ cure
  - ↓ from 30yrs on

- **Causes:**
  - menopause (↓ oestrogen)
  - diet: ↓ calcium / ↓ phosphorus / ↓ vit D } especially before 30yrs
  - smoking
  - excess alcohol
  - medication
  - genetic

NB:
"hunched back"
⇓
most typical symptom.

- **Prevention & Management:**
  - balanced diet: calcium
    : vitamin D
    : phosphorus
    : fluoride
    : vitamin C
  - weight-bearing exercise
  - ≠ excess protein
  - ↓ alcohol
  - ≠ smoke
  - ↓ tea/coffee

ANAEMIA

- blood = lost capacity to carry oxygen: tired, weak, lethargic, pale, short of breath
- ↓ iron = ↓ haemoglobin (oxygen carrier) = ↓ red blood cells
- ↓ folic acid + vitamin B12

- Causes:
  - blood loss < menstruation, surgery/injury
  - diet lacking < iron, vitamin B12, folic acid
  - medications
  - pregnancy
  - growth spurts

- Prevention & Management:
  - eat: iron (red meat, liver, DGLV)
    : vit B12 (animal origin food)
    : folic acid (liver, DGLV, wholegrain)
  - NB: vit C (citrus): absorption of iron
  - Avoid - tea, - coffee } tannins: hinder iron absorption

FOOD ALLERGIES

- immune system: responds: protein: harmful → antibodies
  - min/hours
  - 'allergen' = common: cows milk, eggs, peanuts, shellfish, soya, colourings, gluten*
- ↓ swell (E,N,M), ↓ ≠breathe, ↓ rash, ↓ vomit, ↓ nausea, ↓ diarrhoea, ↓ cramps, ↓ bloating

- Prevention & Management:
  - avoid allergen
  - read labels carefully
  - replace: milk < cow, soya
  - restaurants: ask/avoid
  - ID bracelet/necklace

CELIAC DISEASE

- allergy to gluten < wheat, rye, barley, oats* } immune system reacts = damage villi (intestine)
  - ⇓ ≠absorb nutrients
  - ⇓ malnutrition
  - → diarrhoea, bloating, gas, cramps, constipation, vomiting
    +
    itchy skin*, headaches, fatigue, mouth ulcers*, seizures*
    (not happen in gluten intolerance)

- Prevent & Manage:
  - remove gluten: FOREVER
  - read labels < ingredient list, "gluten-free"

FOOD INTOLERANCE

- does NOT involve the immune system.
- ≠ life threatening
- signs + symptoms ⇒ similar to allergies

DAIRY INTOLERANCE

= lactose intolerance < too little / no lactase

lactose ↓ milk sugar

lactase ↓ enzyme in small intestine

∴ undigested lactose → large intestine = ferments < bloating, flatulence, cramps, diarrhoea

Prevent & Manage

- replace cow's milk < soya / rice
- some dairy = tolerable: lactose converted lactic acid < hard cheese / yoghurt
- calcium intake? (supplement?)
- read labels < lactose-free / lactose reduced / *hidden*

NB: Dairy allergy = reaction of immune system to the PROTEIN in milk.

ANOREXIA NERVOSA

- Psychological eating disorder
- Distorted body image → irrational fear < weight gain / being fat
- Excessive restriction of food intake
- Low self-esteem
- Feel: no control over life

- ♡ rate ↓
- ↓ blood p°
- loss: bone density
- dry skin
- thinning hair
- amenorrhea

Prevent + Manage

- Psychotherapy < psychologists / dieticians } Recover: mentally, emotionally, physically

BULIMIA NERVOSA

- binge-purge cycle
  - eat LARGE amounts (≠ normal)
- avoid weight gain
  - self-induced vomiting
  - excess laxatives
  - diuretics
  - enemas
  - + fasting
  - + excessive exercise

- binge: ≠ hungry → "calm" / "happiness"
  : after = guilt + shame
- fear: fat
- distorted body image

- tooth decay (acid)
- dehydration
- damage - eyes
  - throat
  - oesophagus
  - stomach
- water retention
- constipation

Prevent + Manage

- support < physical health / psychological health } doctors, dieticians, psychologists

OBESITY

- excessive fat: BMI = $\frac{kg}{m^2}$: obese = 730
- e⁺ input > e⁺ output
  - KJ consumed (diet)
  - KJ used (exercise)

- Type 2 Diabetes
- ♡ disease
- ↑ blood p°
- cancer risk ↑
- Respiratory issues
- Muscular-skeletal issues
- Poor wound healing
- Back problems

- Eat breakfast (↑ metabolism)
- Eat small regular meals
- 5 fruit + veg (↑ fibre ↓ fat)
- ↓ fat intake (foods + cooking methods)
- Low GI (full for longer)
- Legumes (↑ fibre ↓ fat)
- High fibre (satiety)

+ exercise!

HIV/AIDS

- Virus = destroys white blood cells (fight disease + infection)
- Weakened immune system → * opportunistic infections)

Improving the Immune System through correct Nutrition:

- protein – prevent muscle loss
  – strengthen immune system
  } animal: meat, poultry, fish, eggs
  plant: nuts, legumes
- vitamin A – healthy mucous membranes (lungs, gut)
  – anti-oxidant: prevent cell damage
  } dark green, yellow, orange & red fruit + vegetables.
- vitamin B_6 – healthy immune system
  – healthy nervous system
  } white beans, potatoes, meat, fish, chicken, nuts maize
- vitamin C – helps recovery from infection
  – anti-oxidant: prevent cell damage
  } guava, citrus, berries, tomato, strawberries, kiwi, peppers
- vitamin E – anti-oxidant: prevent cell damage } plant oils, nuts, margarine
- selenium – anti-oxidant: prevent cell damage
  – activates T-cells (fight infection)
  } wholewheat, maize, samp, dairy, meat, fish, chicken, eggs
- zinc – protects immune system } meat, fish, chicken, whole-grain, peanuts, corn, dairy
- iron – maintain healthy immune system } liver, red meat, fish dark green leafy veg

+ flavonoids, phytosterols } not nutrients but are natural substances found in (fruit, vegetables) } boost immune system.

Remember:

- eat variety foods (avoid malnutrition: maximise nutrients)
- NB: anti-oxidant foods
- drink clean, safe water
- NB: food + kitchen hygiene
- avoid alcohol (impares (vitamin, mineral) absorption