Health coaching initial consultation

Universal points to cover:

- Brief nutritional history
- Exercise
- Relationships
- Stress
- Sleep
- Smoking
- Alcohol
- Drugs

Consider asking about 'vitalities'. Thus on a scale of 1-10 How 'vital' (i.e. how good have these situations been) in the last week:

- Resilience (how well you have dealt with anything negative)
- Rest
- Relationships
- Activity
- Nature (getting outdoors)
- Nutrition
- Spiritual (if they are religious)

How can we help? The 5 A's

- **Assess** – beliefs, behaviours, knowledge
- **Advise** – provide specific information regarding health benefits of change
- **Agree** – step goals based on interest and confidence in their ability to change
- **Assist** - personal barriers, strategies, problem-solving
- **Arrange** – plan for follow-up

Give tailored advice and support.

SMART-SE goal setting

- **S**pecific
- **M**easurable
- **A**ction-orientated
- **R**ealistic
- **T**ime-frame
- **S**elf-directed
- **E**vidence-based

Who is their **social support**?

Self-monitoring – use a log or planning calendar.

Relapse Prevention

- Plan for it
- Identify high-risk situations – travel, stress, illness
- Encourage the use of behavioural skills to get back on trake
- Cognitive restructuring – encourage them not to abandon goals/plans if they experience a lapse. Identify unhelpful thought patterns

Follow-up

Telephone, e-mail, etc.

A good resource – www.physicalactivityplan.org

Consider resources such as activity tracking, my fitness pal.

Nutritional assessment

We will need the following details:

- Weight
- Height
- BMI
- Waist circumference

Check recent bloods – if they have not had a recent lipid profile and HbA1c it would be worth booking in for this

24 hour recall with the multi-pass method:

- 1st pass – quick list of foods
- 2nd pass – detailed questioning – e.g. first thing you had when you woke up, etc
- 3rd pass – time and occasion of the food and drinks
- 4th Pass – describe food and amounts (how was it prepared, portion size, anything between meals, drinks with meals)
- 5th pass – final check

3 day food record (preferably 2 working days one day off)

Food frequency questionnaire (either online or we design our own relevant to patient population) and

Other questions to consider:

- How typical is that recall for you?
- Weight and diet history
- Meal planning and shopping patterns/who does the shopping
- Cultural or religios aspects
- Food budget
- Any intolerances, digestive issues, avoidances.

Aims

- Eat more fruit and veg, beans and legumes (1 cup per day), wholegrains. A moderate level of nuts (e.g. ¼ cup), seeds, avocados for example (good fats) and aim for low processed foods.
- Increased fibre intake (> 50g per day)
- Low glycaemic load (https://www.diabetes.org.uk/guide-to-diabetes/enjoy-food/carbohydrates-and-diabetes/glycaemic-index-and-diabetes?gclid=EAIaIQobChMItYagv_uG6wIVVODtCh1h1wOjEAAYASAAEgKL1_D_BwE)
- Limit or eliminate: - reformed grains (bread e.g.), refined sweetners (sugar, sweets, etc), High fat foods (saturated specifically), high sodium foods, alcohol.
- Try to consider changes that fit with current intake and fit with their lifestyle needs.

SMART goals/ Nutrition prescriptions

- Must be very specific and focus on a particular food or category.
- Consider who does the shopping, food preparation, what is available (location, budget, time).
- Ask them what they are willing to try, what they like, etc
- E.g. Eat 2 pieces of fresh fruit snacks on weekdays; add 1 green veg to your dinner.

Discuss

- Other lifestyle factors will affect weight – physical activity, good sleep, minimising stress.
- True and false hunger signals
- Food addiction and withdrawal symptoms (e.g. headaches with sugar withdrawal, will disappear)
- If diabetic they may need to monitor sugars a little more.

Mindful eating

- Eat slowly – use small plates, bowls, utensils; chew at least 20 times, pause between bites (this will allow your body to notify your brain that it is full
- Eat mindfully – sit down and don't multi-task, eat with others and make it a social experience, observe and savour the moment.

Consider time restricted eating – e.g. eat all food within a 12 hour window (if they can do it a 10 or 8 hour window can be even more effective) – this is intermittent fasting

Macronutrients

- **Protein** (4 calories per gram)– about 15% of total calorie intake. There is protein in vegetables and more protein per calorie (e.g. broccoli is more protein dense than a hamburger); Soya beans are comparable to chicken for protein content. The older you get the more important protein becomes.
- **Fat** (9 calories per gram)– 15-30% of total calorie intake; aim for poly- (omega 3) and mono-unsaturated fats (olive oil, avocado); Avoid saturated fats – found in meat and dairy)
- **Carbohydrates** (4 calories per gram)– 70% of total calorie intake. Fruit, veg, legumes (soya beans, beans, lentils, peas) tubers (potatoes, sweet potato, bananas, plantain)

Micronutrients

- High in antioxidants and increase cell health.
- High micronutrient foods – broccoli, cabbage, spinach, onion, garlic, carrots, beetroots, tomato, cucumber, berries, apples, pears, stone fruits.
- Low micronutrient foods - Processed grains e.g. flour, processed sugars, processed fats (fried food, added fats e.g. spreads, animal fats)

Specific conditions:

Hyperlipidaemia – decrease saturated fats and trans fats and omega 6 fatty acids; increase fibre, omega 3 fatty acids and plant sterol

Hypertension – decrease sodium and saturated fats; increase potassium (beware of patients on spironolactone), magnesium, calcium; ensure minimal intake of alcohol and caffeine

Physical Activity

Physically active people have:

- Higher level of health related fitness
- Lower risk profile for developing a number of disabling medical conditions
- Lower rates of various chronic disease than those who are inactive

Physically active individuals:

- Sleep better (quality of sleep, increased amount of deep sleep and decreased daytime sleepiness)
- Feel better (decreased depression and depressive symptoms)
- Function better (improved executive functioning)

Even one single bout of exercise can make and impact

Physical activity is "any bodily movement produced by the contraction of skeletal muscle that increases energy expenditure above the baseline"

Exercise – is a subcategory of physical activity that is "planned, structured and repetitive with the objective of improving or maintaining components of physical fitness"

Types of exercise:

- **Cardiovascular (aerobic)** – Low intensity (LISS) endurance - improves cardio-respiratory fitness; high intensity (HIIT) – brief intermittent bursts of vigorous activity with periods of rest or LISS. It is potent and efficient though HIIT is not recommended as a starting point and has greater chance of injury.
- **Resistance (strength)** – placing resistance on a muscle or muscle groups in order to increase strength and ability to exert force. Recommendation is to perform 2 x per week. Can be bodyweight exercises, weights base of use of resistance bands. It has many benefits:
    - Decreased risk of injury
    - Increased basal metabolic rate (body burning more calories for time after the exercise)
    - Decreased fatigue
    - Improved sleep
    - Increased muscle
    - Increased bone mineral density – particularly women who are recently post-menopausal
    - Decreased body fate
    - Maintains weight
    - Improves lipid profile, glucose tolerance and control
    - Improves heart muscle functioining
    - Decreased pain and disability associate with arthritis
- **Flexibility (stretching)** – enhances the ability of a joint to move through its full range of movement. The person should aim to feel gentle tension but not pain and hold stretches for 30 seconds.

- **Postural/balance** – this may be stationary or dynamic (upon movement). It can reduce the number of falls if performed 3 x per week – particularly in the elderly population A test of balance is how long can you balance on one leg.

Things to ask:

- How many times do you undertake physical activity per week? (define physical activity so they don't think you mean specific exercise)
- How many minutes do you do it for on average?

Exercise prescription:

FITT **F**requency

Intensity

Type

Time

Talk test – can they maintain a conversation? They shouldn't be able to sing!

Progress the exercise prescription every week or two weeks to the next level.

Weight training

An appropriate weight is one that can be lifted with a perceived exertion of 5-6 on a 10-point scale. The number of repetitions should initially be 15. Once initiated then switch to 8-12 repetitions. If a weight can't be lifted 8 x then it is too heavy, and if it can be lifted more than 12 x then it is too light.

Flexibility

- 10 minutes 2-3 x per week
- Target major muscle groups
- 4+ repetitions per muscle group

Some encouraging facts:

- Any exercise is beneficial but more is better
- 15mins per day (90mins per week) leads to 14% decrease in mortality (risk of death) and a 3 years longer life expectancy.

Sitting and inactivity

- Break up prolonged sitting
- Blood glucose and insulin levels reduced following both light and moderate activity breaks compared to persistent sitting
- Sitting and limiting exercise activity may independently increase the disease risk
- Sedentary time is detrimentally associated with:
    - Waist circumference

- HDL cholesterol
- CRP
- Triglycerides
- Insulin
- Beta cell dysfunction (in the pancreas)
- Insulin sensitivity

So introduce physical activity throughout the day

Obesity and nutrition

Obesity

Is a:

- Chronic
- Relapsing
- Multi-factorial (many causes)
- Neurobehavioural disease

An increase in fat tissue in the body will lead to problems with metabolism, movement and mental health. The risk of developing health problems rises progressively starting from a BMI > 21.

Increased risk:

- Heart disease
    - Someone who is overweight (BMI 25-30) has a 32% higher risk of coronary artery disease. If the person is obese (BMI 30-35) this turns in to an 81% higher risk
    - There is a direct graded association between excess weight and stroke risk.
    - Overweight individuals have a 22% increased risk of stroke and obese individuals a 64% increase. This is further impacted upon by blood pressure (BP), cholesterol and diabetes.
- Type 2 diabetes (T2DM)
    - Men with obesity are at a 7 x increased risk of this and women a 12 x increased risk.
    - Fat cells secrete hormones and other substances that leads to inflammation in the body, it can make the body less responsive to insulin and change the way it metabolises fats and carbohydrates. This will lead to increased blood sugar levels and eventually diabetes.
    - A weight loss of 2.5 – 5.5Kg at >2y will decrease the risk of T2DM by 30-60%
    - A type 2 diabetic who loses 5-10% of their bodyweight can reduce their HbA1c by 5-11 points.
- Hypertension
- Gallstones
- Musculoskeletal problems
    - Osteoarthritis of the knee and hip are positively associated with obesity. Obese patients account for around 1/3 of all joint operations.
    - There is an increased risk of back pain, lower limb pain and disability.
- Depression
    - Obesity increases the risk of depression and depression increases the risk of obesity.
- Cancers
    - There is an association between obesity and some types of cancer – oesophageal, pancreatic, colon/rectal, breast, endometrial, kidney

Factors that will influence obesity

- Birthweight - The lowest and higher birth rates are associated with higher rates of obesity
- Poor sleep – decreases insulin sensitivity, reduces effect of leptin (a hormone that inhibits hunger), increases effect of ghrelin (a hormone that causes hunger to be felt), increase in food intake and hunger.
- Stress – increases cortisol (a hormone which will lead to increased release of sugar into the body and reduced secretion of insulin), makes it more difficult to find the motivation to exercise or eat healthily.
- Nutrition
- Physical activity
- Medication induced weight gain
- Genetics – there are hundreds of genes, but having them does not mean you will be overweight as many people carry them and are not overweight. Healthy lifestyles can counteract the genetic effect.

Changes:

Aim nutritional intake of 1200-1800 Kcals per day (<30% fat and > 15% protein)

Aim > 175mins of moderate intensity physical activity per week (increase this to > 200mins if they meet the goal) – i.e. minimum 25 mins per day

Note – a 10% weight loss with lower a person's total energy expenditure by 20-25%. Thus it will take 300-400 less calories per day to maintain the same bodyweight. This persists for some time – months to years. Eventually it will return to near baseline. But this often explains why people suddenly regain weight when dieting. They need to keep up physical activity levels or decrease calorie intake further to accommodate this change.

Consider **energy density** (that's the amount of energy per gram of food) – carbohydrates and protein 4 calories per gram and fat 9 calories per gram (alcohol is 7 calories per gram). So aim for more low density energy foods as you can eat more grams of food that way. This will allow for satiety (feeling of fullness) to occur.

A Mediterranean diet is an effective diet to follow.

Protein and weight loss – aim for 1.2-1.5gper Kg of lean bodyweight, per day, for weight loss and 0.7-1g/kg/day for maintenance. An increased protein intake will increase satiety and body production of heat and this may lead to a subsequent decrease in energy intake. A high protein diet alongside 8 weeks of resistance training can lead to increased fat free mass and decreased fat mass compared to a low protein diet.

Carbohydrates – consider the glycaemic index (GI) of a food – it means how much and how quickly an ingested food affects glucose in the blood. My analogy is the shop and it's visitors! A high GI food is like a coach turning up to a shop – it elevates the blood sugar (the number of people in the shop) higher and quicker than a low GI food (think of a car with a maximum of 5 passengers). Low GI foods

are those < 55 and high is > 70. The glycaemic load accounts for the serving size – the GI x grams of carbohydrate/100 (low < 10 and high > 20.

Very low calorie diets

- Aim for a maximum of 800 calories per day
- **Protein** 75-105g (men 1.5g/kg of ideal bodyweight and women 1.2g/kg of ideal bodyweight)
- **Carbohydrates** – 50-100g (if < 50g then ketosis is likely – this can make people feel unwell)
- **Fats** – 10-20g including essential fatty acids
- It is very effective at inducing weight loss and can reverse T2DM quite quickly. However, there are side effects:
    - Nausea, constipation
    - Dizziness, tiredness, cold intolerance
    - Electrolyte imbalances
    - Skin, hair and nail changes
    - Cessation or menstrual periods
    - Insomnia, euphoria, apathy, depression, irritability, anxiety
    - Gout
    - Gallstones
- Thus it is intended as a shorter-term intervention with a transition to a sustainable diet and improved nutrition behaviours.
- A particularly successful one to look up is Michael Moseley's fast 800.

Physical activity

In the absence of weight loss an increase in physical activity will decrease blood pressure, lipids and visceral fat (the fat that sits around the organs in your abdomen). It also leads to increased glucose tolerance and increased insulin sensitivity, which will give better blood sugar control.

For weight loss the minimum weekly activity level needs to be 150-180mins.

An obese person needs to have a deficit of 3500 calories per week (500/day) in order to lose 1lb (about 0.5kg) per week. This would equate to 5 mils of brisk walking per day. Hence the need to combine with dietary changes. When weight loss is successful the activity level needs to be increased to compensate for the increased energy efficiency of the body.

It's also relevant to say that multiple short bouts of activity are as effective as one long bout.

Be more active

- 10,000 steps = 4-5 miles per day which could equate to 400-500 kcals per day
- decrease sedentary behaviour e.g. screen time
- Increase activities of daily living

Behavioural change

- Problem solving
- Self- monitoring – weekly weights
- Goal setting
- Cognitive behavioural techniques – stimulus control, slow rate of eating, incentives, reinforce success

Social support

Weekly email feedback – can induce weight losses of 2/3 that achieved by on-site programs

Emotional wellness

Emotional distress and mental illness are associated with poor health.

70% of primary care visits relate to stress and lifestyle.

Chronic conditions are associated with stress and mental illness.

Screening for stress

- **Ultra brief assessment questions**
    - How much are you bothered by stress on a scale of 1-5?
    - Are you feeling so sad, down or anxious that you are having trouble at your job or at home?
    - Have you had any thoughts of harming yourself?

    If this this flags up a positive result the screen further with **PHQ-9**

    The higher the scores the more likely there is to be functional impairment, disability days and increased healthcare use.

    If symptoms are mild consider the use of:

    - CBT
    - Support groups
    - Physical activity

    Re-evaluate after 3-4 weeks.

Other options:

- Physical activity
- Increased fruit and veg intake
- Sleep management
- Mindfulness
- Bibliotherapy (reading)
- Light therapy
- Digital programs such as online CBT
- Positive relationships and social support

Key coping skills:

- Cognitive-behavioural restructuring
- Problem solving
- Mindfulness
- Self-compassion
- Improving a sense of humour
- Time management skills
- Assertiveness techniques

- Abdominal breathing
- Flow experiences – e.g. running, gardening
- Tai-chi
- Self-help websites
- Reading
- Volunteering
- Spiritual and religious activities
- Time in nature

Social support is key:

- List the person's social support needed and people who fulfil these roles
- Identify gaps not addressed by their social network
- Interact with people encountered throughout the day

ABCD:

- **A**ction
- **B**eliefs
- **C**onsequences (emotional)
- **D**ispute distorted thoughts and beliefs

Develop a well-being action plan

Relapse prevention planning - plan for challenging times

Physical Activity

- Comparable to cognitive behavioural therapy (CBT) in impact upon depression
- Slightly more effective than standard treatments

Nutrition

- Processed foods more linked with mood disorders
- Diet rich in fruit and veg can improve mood and help to treat depression
- Those who eat the most fast food are almost 40% more likely to develop depression.
- Helpful vitamins to increase in the diet – folate, B12, calcium, iron, selenium, zinc, Omega-3 fatty acids

Sleep

- Mental health is better with 7-9 hours of sleep per night

Pillars of happiness and emotional wellbeing

Positive emotions

Engagement

Relationships

Meaning

Accomplishments (achievement)

Activities that build up PERMA build resilience and effective coping.

Mindfulness

Dr Jon Kabat-Zinn “Paying attention in the present moment without judgement”

Anything can be done mindfully.

Allowing what is happening in your body to be what it is and bringing wide open awareness, or relaxed alertness without judgement.

Mindfulness Principles

- Mindfulness and resilience are cultivated by practice.
- How we perceive things shapes our experience and plays a large role in stress.
- The present moment is the only time for perceiving, learning, growing and transforming.
- With practice we can learn to live our lives more deliberately.

Necessary stress:

Unpleasant aspects of life that are inevitable or unchangeable e.g. illness or death of a loved one

Unnecessary stress:

Our response to stressors can either be mindful and productive or make situations worse

Mindfulness is an approach to accepting that reality:

- Supports an adaptive, productive response
- Avoids additional unnecessary stress

Mindful response:

- An intentional, conscious process that takes into account all relevant info available at present
- Facilitates a sense of control and can lead to better outcomes

Mindless reactivity:

- Judgement
- Anticipation of worst
- Repeating negative narratives
- Trying to avoid the unavoidable

Mindful presence

- With practice we can become more resilient and learn to live intentionally.

Mindfulness Based Stress Reduction (MBSR)

Online people can sign up to headspace

https://goamra.org

Basic MBSR tool:

STOP Stop

Take a breath

Observe (become aware of what's going on in your mind and body)

Proceed

Anchoring

- Being fully present in your body.
- A powerful way to perform at your highest levels of executive function and empathy.
- Reorient yourself away from mental states that create stress.
- Mindful breathing is an easily accessible way to anchor in the present.

Mindful movements:

- Yoga
- Tai- Chi
- Walking meditation
- Running/swimming

This can be helpful for people who find seated practice difficult

Biofeedback

Such as monitoring heart rate variability and diaphragmatic breathing.

RAIN of compassion

- **R**ecognise what's happening
- **A**ccept the experience
- **I**nvestigate and bring curiosity to the experience
- **N**on-identification – become a witness and don't get caught in it.
- **C**ompassion

Sleep health

Functional performance is typically best if a person gets 7-8 hours per night

2-3 nights per week of < 6 hours sleep suggests an insomnia problem.

Mini sleep assessment

- Typical weekday hours of sleep
- Typical weekend hours of sleep
- Perceived sleep quality
- Red flags:
    - < 7 hours
    - Poor quality sleep despite 7+ hours in bed
    - 9 hours sleep
    - 'I don't have time for sleep'
    - Frequency of daytime fatigue, sleepiness or difficulty waking up
- Frequency and type of sleep disturbance
    - Falling asleep > 8 hours before ideal wake up time
    - Sleep onset is > 15-20 minutes after lights out
    - Prolonged wakefulness after initial sleep onset
    - Waking < 7-8 hours after bedtime
    - 2-3 nights per week suggests chronic insomnia
- Attitude towards sleep and sleep barriers

Brief Obstructive Sleep Apnoea (OSA) assessment

STOP Loud **S**noring

Often feels **T**ired

Others **O**bserved apnoea

Elevated B**P** or on medications for hypertension

<2 = Low risk

2+ = High risk

Needs medical referral if 2+

Sleep hygiene assessment

- Daytime naps > 30mins
- Poor daytime hydration
- Variations in sleep on/offset
- Prolonged non-sleep periods in bed
- Stimulating activities pre-bedtime
- Going to bed stressed, angry or upset
- Read, watch TV, eat in bed
- Uncomfortable bed or bedroom
- Think, plans, worries in bed
- Caffeine and/or alcohol within 3 hours of bedtime

Actions:

- Use bed only for sleep and sex
- Establish a regular schedule for bedtime and wake-up
- Increase bedtime cutaneous vasodilation – bath/shower, socks/heat pads for cold feet, non-caffeinated warm drink
- Increased daytime exposure to daylight
- Increased daytime physical activity
- Power nap < 30mins
- Dietary
    - Eliminate night-time caffeinated drinks and limit daytime ones
    - Avoid alcohol within 3 hours of bedtime
    - Eliminate late night snacks
    - Avoid high sodium food at dinner
    - Adequate daytime fluids
    - Weight decrease if raised BMI

Environment

- Turn off or dim lights
- Allow air temperature to gradually cool
- Bedding to ensure warm peripheries
- Minimise noise and light
- No TV or computer in the bedroom
- Alarm clock out of sight

Stress reduction:

- Start winding down at least 1 hour before bed
- Develop a wind-down routine
- Stop work and stimulating activities 1.5 hours before bedtime
- Minimise night-time worrying, planning, ruminating using mindfulness
- CBT for sleep anxiety

Specific situations:

Sleep fragmentation – waking:

Mindfulness

- CBT
- Comfortable bed/bedding
- Good room temperature
- Adequate daytime hydration
- Mid afternoon and late afternoon sun exposure
- Increase mid-late afternoon physical activity
- Avoid evening diuretic drinks (caffeine and alcohol)
- Dark bedroom

Delayed sleep onset:

- Reduce caffeine and alcohol intake and decrease high sodium foods
- Active relaxation to minimise stress
- Clothing – ensure warm extremities
- Ensure adequate sleep environment
- Increase early morning sunlight and reduce light at night
- Increase afternoon physical activity

Early waking:

- Have breakfast and caffeine 45 minutes after ideal wake up time
- Avoid bright lights until ideal wake up time
- Increase late afternoon/evening sunlight
- Increase evening physical activity
- Shift carbohydrates to dinner
- Ensure bed sheets are warm in the early morning
- Blue spectrum light until one hour pre-bed.

Shift work

Try to ensure a clockwise rotation – day – evening – night is better tolerated. Slow predictable rotations are better tolerated.

Useful knowledge:

Light:

- Light during the day suppresses melatonin
- Light at night will suppress melatonin and delay sleep onset and shift sleep cycle later
- Low daytime light increases sensitivity to melatonin suppression from light at night

Fluid status:

- Dehydration in the late afternoon will lead to more of the circulation going to work the muscles than to warm the peripheries. Warm peripheries are important for sleep. It will also increase core temperature, which should be lower at night.
- Greater fluid intake will increase the fluid volume in the body and increase the peripheral blood flow at night leading to warming the peripheries and a lower core body temperature.
- Sleep deficiency can increase cortisol, which can, in turn, make fluid volume lower. The normal morning rise in cortisol may be skipped if a person misses breakfast/eats late or has a low carb breakfast. So shift calories from carbohydrates to the morning.
- Eating carbohydrates late may maintain wakefulness and can delay sleep onset if eaten too late.