

# **Nutrition Intervention (Execution and Prescription)**

**S3470C Nutrition Care Process**

**Lesson 5**

# Go through Lesson 4 E-learning Worksheet

# Learning Objectives

1. Develop client-centred nutritional goals that supports management of client's medical condition.
2. Demonstrate sensitivity towards client's needs.
3. Counsel client on client-centred intervention plan.
4. Develop a written intervention plan for client's reference.

## **Nutrition Care Process (NCP)**

- 1. Nutrition Assessment**
- 2. Nutrition Diagnosis**
- 3. Nutrition Intervention**
- 4. Nutrition Monitoring & Evaluation**

- 1. Nutrition Assessment - Nutritional health status**
- 2. Nutrition Diagnosis - Interpret data**
- 3. Nutrition Intervention – Execution of a plan of action**
- 4. Nutrition Monitoring & Evaluation - Monitor the effectiveness of the plan**

# Nutrition Intervention

• Step 3 of NCP

- Define as “purposely planned actions intended to positively change a nutrition-related behavior, environmental condition or aspect of health for an individual (and his/her family or caregivers), target group or the community at large”
- Intervention should be according to the problem and individualized for each patient and specific in describing what, how, why, when, and where.
- However, sometimes the intervention is directed towards the signs and symptoms as it cannot impact the cause of the issue

# Nutrition Intervention

2 Components to look at:

- Planning
  - Prioritize the nutrition diagnoses
  - Review practice guidelines and policies
  - Discuss with the patient (and others)
  - Set goals and determine expected outcomes
  - Defining the specific nutrition intervention strategy
  - Define time and frequency of care
- Implementation
  - Communicate and carry out the plan of care
  - Continue data collection
  - Monitor and Evaluate
  - Follow-up and verify the implementation
  - Revise nutrition intervention strategy if needed

## Determining Nutrition Intervention

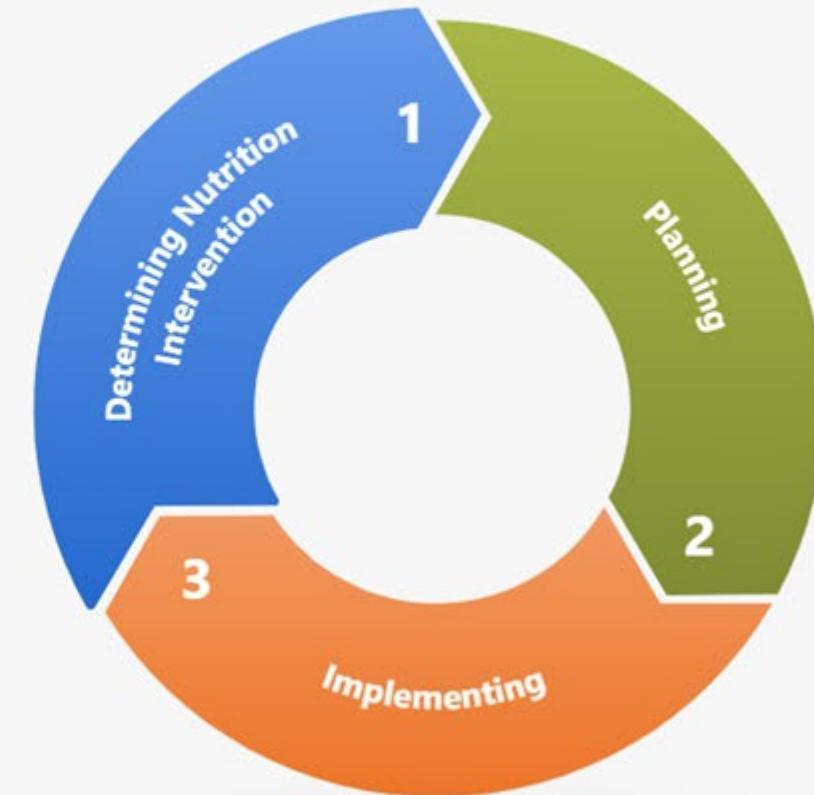
The nutrition diagnosis and its etiology drives the selection of a nutrition intervention.

Nutrition intervention strategies are selected to change nutritional intake, nutrition-related knowledge or behavior, environmental conditions, or access to supportive care and services.

Nutrition intervention goals provide the basis for monitoring progress and measuring outcomes.

### 4 Main Domains:

1. ***Food and/or Nutrient Delivery*** - Individualized approach for food/nutrient provision.



#### **4 Main Domains:**

1. ***Food and/or Nutrient Delivery*** - Individualized approach for food/nutrient provision.
2. ***Nutrition Education*** - A process to instruct or train a client a skill or to impart knowledge to help clients voluntarily manage or modify food choices and related behavior to maintain or improve health.
3. ***Nutrition Counselling*** - A supportive process, characterized by a collaborative counselor-client relationship, to establish food and nutrition priorities, goals, and individualized action plans that acknowledge and foster responsibility for self-care to treat an existing medical condition and promote health.



4. ***Coordination of Nutrition Care*** - Consultation with, referral to, or coordination of nutrition care with other health care providers, institutions, or agencies that can assist in treating or managing nutrition-related problems.



## Planning

Planning the nutrition intervention involves:

- a. Prioritizing nutrition diagnoses.
- b. Use nutrition guidelines, for example, The My Healthy Plate recommendations.
- c. Determining client-focused expected outcomes for each nutrition diagnosis.
- d. Conferring with patient/client/caregivers.
- e. Defining a nutrition intervention plan and related strategies.
- f. Defining time and frequency of care.
- g. Identifying resources needed.



# **Referred case - Mdm Eileen Tan**



Name: Eileen Tan  
ID: S6700001X  
Age: 67  
Gender: Female  
Occupation: Housewife  
Lives with husband

**Dear staff,**

**Please see the abovementioned elderly lady, presented with high BMI and slightly elevated blood pressure of 145/90mmHg.**

**She was started on antihypertensive meds, and advised to cut down weight and control blood pressure through diet.**

**Yours Sincerely,**

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Dr. Anjani Pulai

# Following Nutrition Diagnosis.....

Food items are “flagged out” based on her referral reasons:

Overweight	Hypertension
“ga dai” coffee	Sardine/black dace fish
Peanut butter crackers	Salted egg
Kueh kueh (FFQ)	Dark soy sauce
Cream crackers	Ritz crackers
Luncheon meat	



Use the above diagnosis to  
formulate Nutrition Intervention  
(Step 3)

Intervention planning should bear the diagnosis in mind

Diet history:							
Breakfast:		Typically in a week Chee cheong fan x 2 (with light soy sauce), carrot cake, white bread x 2 + kaya					
		Everyday: kopi-ga dai (Extra sugar)					
Lunch		white porridge + either sardines/black dace canned fish/salted egg/luncheon meat/minced meat with dark soy sauce					
Shared by client: Usually cook once a day - Dinner typically the same		Husband has chewing problem, cooks mostly porridge and soft/minced meat					
Husband has chewing problem, cooks mostly porridge and soft/minced meat		Rarely cooks vegetables because husband dislikes					
Dinner		white porridge + either sardines/black dace canned fish/salted egg/luncheon meat/minced meat with dark soy sauce					
Snacks		Ritz crackers/peanut butter crackers/cream crackers					

## B. Use nutrition guidelines, for example, The My Healthy Plate recommendations.

- Once identified the priority diagnosis to focus on, you may start to plan what to “educate” on client, based on recommendations or guidelines.
- In this case, we will use My Healthy Plate as a guide to make recommendations.
- As My Healthy Plate do not have recommendation for sodium intake, we will aim to reduce her sodium intake taking into consideration of her behavioral – environmental diagnosis.
- Based on the recommendations of My Healthy Plate, aim to create a balanced diet for her.

Diagnosis and Interventions:	
Qualitative diagnosis:	
Adequacy of diet:	Lacking of variety (refer to below), does not fulfil the "My Healthy Plate" recommendation
What's lacking?	Lack in fibre intake (from a lack of wholegrain products, fruits and vegetables intake).
	Sodium intake (From preserved food and Ritz crackers)
What's surplus?	Empty calories intake from coffee and snacking

## C. Determining client-focused expected outcomes for each nutrition diagnosis

- Aim to create a balanced diet
  - Cut down on sodium intake to manage her hypertension
- Recommendations from My Healthy Plate.
- 1. Remember Mdm Tan's behavioural – environmental diagnosis?
- Bear in mind that she still needs to cater to husband's preference.
- How is she going to increase her variety in her diet with limited finances?
- Try not to trouble client into cooking multiple times a day, especially elderly patients

### Behavioural – Environmental Diagnosis

- Mdm Tan's lack of variety and intake of fibre is due to her husband's chewing difficulty.
- The lack of variety in her diet may be due to financial difficulty, or simply because they find it cumbersome to cook too often for just two persons.

## D. Conferring with patient/client/caregivers

- Plan on how to convey changes you have curated, bearing in mind client's needs.
- Plan for alternatives/expand choices to improve intake, e.g. soft vegetables that is easy to mash with a fork like carrots, pumpkin, gourds and melons, etc.

### Behavioural – Environmental Diagnosis

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- The lack of variety in her diet may be due to financial difficulty, or simply because they find it cumbersome to cook too often for just two persons.

## E. Defining a nutrition intervention plan and related strategies

Food and/or nutrient delivery	Nutrition Education	Nutrition Counselling	Coordination of nutrition care
Individualized approach for food/nutrient provision.	To impart nutrition related information to the client to help them manage their conditions	Supporting client in their food and nutrition goal setting, with individualized	Linking client up by referring them to other services that they may require.

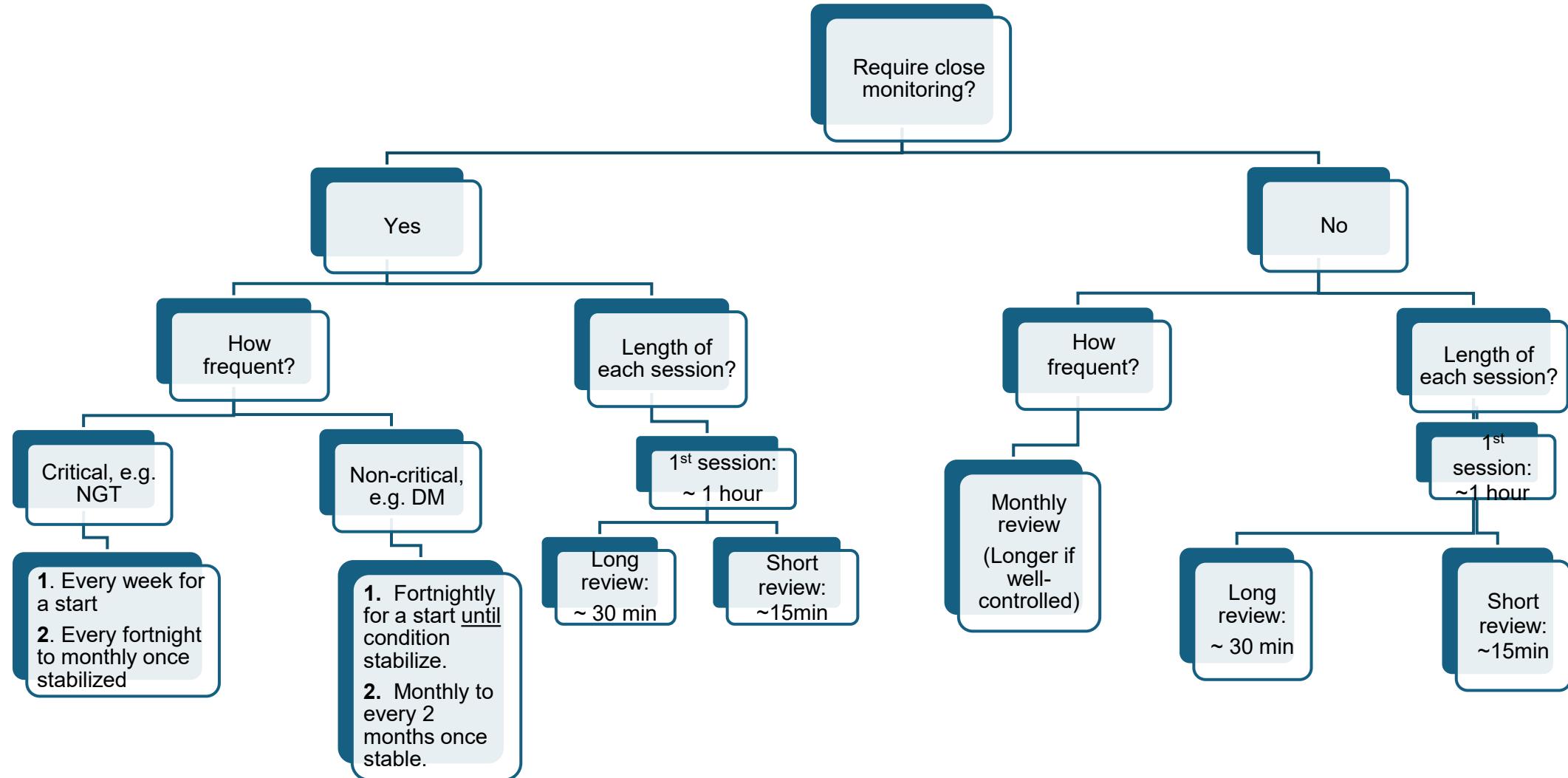
# E. Defining a nutrition intervention plan and related strategies

- Decide which type of nutrition intervention does Mdm Tan require:

Food and/or nutrient delivery	Nutrition Education	Nutrition Counselling	Coordination of nutrition care
Does Mdm Tan require tube feeding or nutrition support?  → Not adopted	Does Mdm Tan require education on adopting some skills, e.g. to expand on food variety/cooking methods?  → Yes → Adopt nutrition education	Does Mdm Tan require support in developing mutual goals, to improve her nutrition-related condition, including managing her priorities vs her husband's needs?  → Yes → Adopt nutrition counselling	Do you need to refer Mdm Tan to other services, e.g. physiotherapist, social services, or home-nursing services?  → Not at the moment → Not adopted.

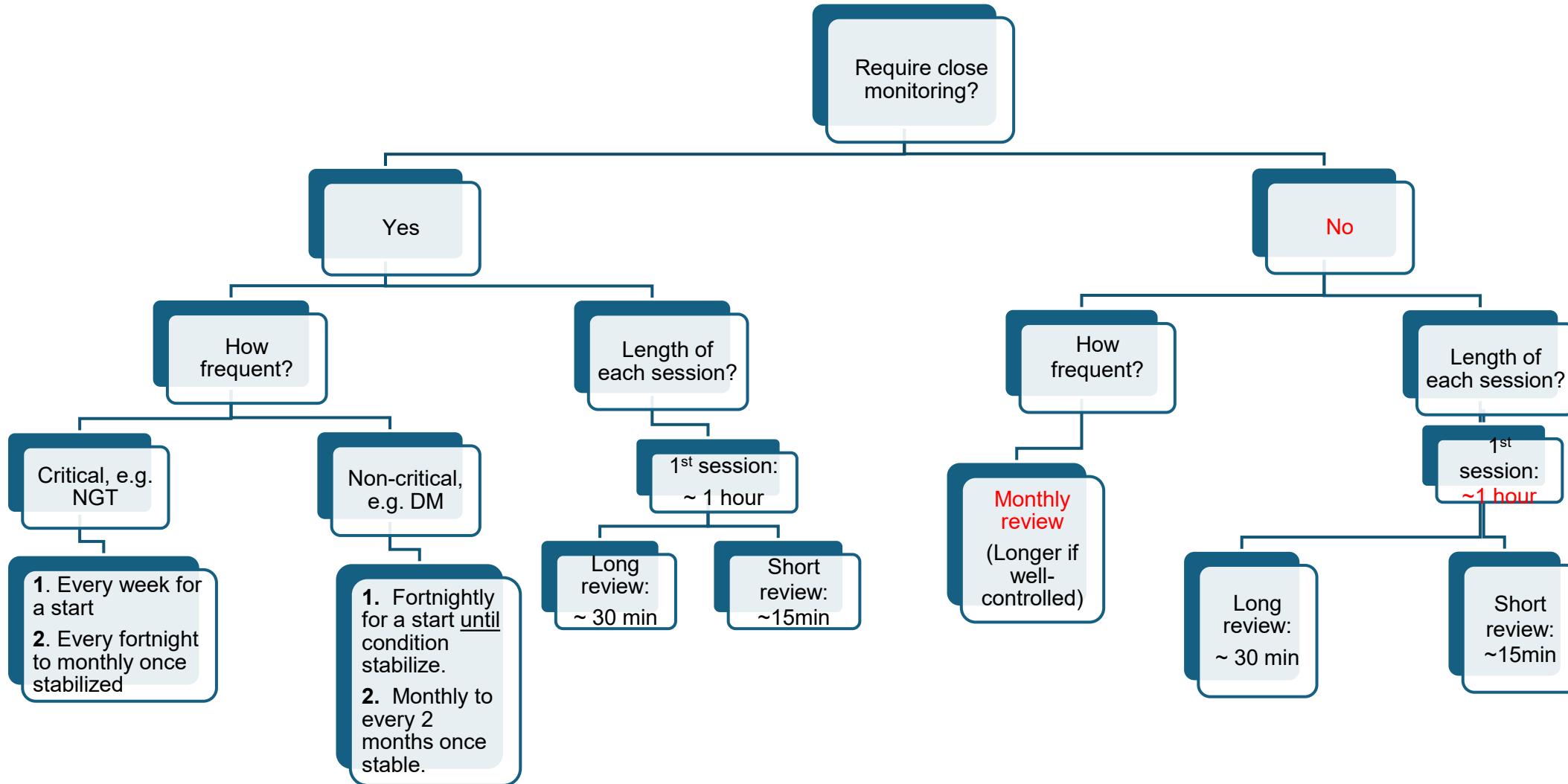
# F. Defining time and frequency of care

- Based on the type and “severity” of client’s condition, ask yourself the following questions:



# F. Defining time and frequency of care

- Based on the Mdm Tan's condition, here's an example of her frequency of care: (In red)



# G. Identifying resources needed

- Based on the intervention plan and strategies (Step E), plan for the types of resources you may require in conveying information to client.
- Some considerations may include:

Considerations:	Rationale
Written vs verbal information? Or both?	<ul style="list-style-type: none"> <li>Information detriment can be affected by many factors, such as age, literacy level, etc.</li> </ul>
Language	<ul style="list-style-type: none"> <li>Elderly may understand only dialects           <ul style="list-style-type: none"> <li>→ Do you need to prepare for translated resources?</li> <li>→ Do you need a translator to be present?</li> </ul> </li> </ul>
Food models or demonstration	<ul style="list-style-type: none"> <li>Food models can give visual to help clients have a better grasp on information such as quantity, texture, viscosity, etc.</li> </ul>
Caregiver/partner	<ul style="list-style-type: none"> <li>Caregiver or partner whom client stays with, can be a helpful source for negotiation of goals or helping client manage condition.</li> </ul>

# G. Identifying resources needed – Mdm Tan

Considerations:	Rationale
Written vs verbal information? Or both?	<ul style="list-style-type: none"> <li>Based on Mdm Tan's age, → Verbal education and counseling should be supplemented with a concise written info pamphlet for home reference.</li> <li>Based on literacy level, → If literacy level is low, use written info with pictorial illustration.</li> </ul>
Language	<ul style="list-style-type: none"> <li>Depending on Mdm Tan's language proficiency, → Generally go with the Mother Tongue → If in doubt, clarify with client.</li> </ul>
Food models or demonstration	<ul style="list-style-type: none"> <li>Based on Mdm Tan's referral condition, → Food packaging to educate on identification of sodium and fibre content may be useful.</li> </ul>
Caregiver/partner	<ul style="list-style-type: none"> <li>Key component to tackle “Behavioral – environmental” factor</li> <li>Mdm Tan's husband may be valuable to have around for goal negotiation, → To encourage <u>both</u> of them to increase fibre intake, and <u>reduce</u> sodium intake.</li> </ul>

## **Summarizing Mdm Tan's....**

- 1. Nutrition Assessment**
- 2. Nutrition Diagnosis**
- 3. Nutrition Intervention (Planning)**

# Nutrition Assessment

Component	Data to collect	Possible Questions:
ABCD Framework		
Anthropometry	Weight, height (BMI) Optional: Body fat %, waist circumference	<ul style="list-style-type: none"> <li>- How much do you weigh now?</li> <li>- What was your weight 6 months ago?</li> <li>- How tall are you?</li> </ul>
Biochemical Data	Depending on medical condition (Refer to Checklist)	<ul style="list-style-type: none"> <li>- Do you have any blood test results that you can show me?</li> <li>- How is your blood pressure/blood sugar levels usually?</li> </ul>
Clinical History	Medical history, family history, living arrangement	<ul style="list-style-type: none"> <li>- Who else in the family has this condition?</li> <li>- How many people is living in the same household as you?</li> </ul>

# Nutrition Assessment - continued

Component	Data to collect	Potential Questions:
Dietary Assessment	<p>Frequency:</p> <ul style="list-style-type: none"> <li>- of meals</li> <li>- food intake</li> </ul> <p>Quantity of food:</p> <ul style="list-style-type: none"> <li>- Dependent on medical condition</li> <li>- Use common household items as measurements</li> </ul> <p>Quality of food:</p> <ul style="list-style-type: none"> <li>- Simple or complex carbohydrates, i.e. white rice vs brown rice</li> <li>- Types of oil, e.g pure sunflower vs hydrogenated vegetable oil.</li> </ul>	<ul style="list-style-type: none"> <li>➤ What time is the first meal of the day?</li> <li>➤ Who prepares the food at home?</li> <li>➤ How is your appetite?</li> <li>➤ How many times during the day do you have something to eat?</li> <li>➤ How much rice/noodles do you eat at lunch/dinner?</li> <li>➤ How is the chicken/meat cooked?</li> <li>➤ How much vegetables do you eat each meal?</li> <li>➤ How many servings of fruits do you consume per day?</li> <li>➤ Do you snack, if yes, on what and how much and how frequent?</li> <li>➤ How often do you eat out? What do you normally order when you eat out?</li> <li>➤ How many times do you have beer/alcoholic beverages during a week, if any?</li> </ul>

# Nutrition Diagnosis & Intervention Planning

Component	What to Analyze	Possible Impact on Intervention:
Intake Analysis	<p>Qualitative analysis:</p> <ul style="list-style-type: none"> <li>- Used for most clients</li> <li>- Usually follows recommendations from "My Healthy Plate" to seek a balanced diet.</li> </ul> <p>Quantitative analysis:</p> <ul style="list-style-type: none"> <li>- Calculation of calories, or nutrients provision</li> <li>- Usually used for enteral feeding, critical conditions like kidney diseases.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Client exceeded recommended portions of carbohydrate food per day (8 servings/day)</li> <li>- Diabetic client has very poor knowledge on portion control of carbohydrate, and has low literacy level.</li> </ul> <p>→ <u>Plan to use nutrition education involving pictorial resources.</u></p>
Clinical Analysis	Linking clinical symptoms to nutrient intake	<ul style="list-style-type: none"> <li>➤ Diabetic client with poorly controlled blood sugar levels</li> <li>- e.g. Diagnosis - client has poorly controlled blood sugar (clinical symptom) due to a high intake of sweetened beverages (nutrient intake).</li> </ul> <p>→ <u>Intervention planning should involve exploring unsweetened options, or ways to cut down on sugar intake.</u></p>
Behavioural – Environmental Analysis	Linking client's behavioural to their environment	<ul style="list-style-type: none"> <li>➤ Spouse buys only sweetened beverages for home.</li> <li>- Spouse created the home environment which caused client to drink sweetened beverages excessively</li> </ul> <p>→ <u>Plan intervention to involve spouse</u></p>

# Key Factors To Making Changes....

- To change nutrition behavior, key factors are the person's awareness that a change is needed.
- Require motivation to change.

Because....

Eating is A BEHAVIOUR



Adopted from - <https://youtu.be/StmgjXxjwKc?t=10>

# Education Strategy: Motivational Interviewing

	How client is feeling	What you can do
Expressing empathy	<ul style="list-style-type: none"> <li>• Reviewing situation in their lives</li> <li>• Lacking of time to make dietary changes</li> <li>• Uncertain</li> </ul> <p>E.g. Client: I cannot do this, I've tried many times and failed to eat healthy.</p>	<ul style="list-style-type: none"> <li>• Demonstrate empathy for what client feels</li> <li>• Not give “advice”</li> </ul> <p>E.g. You: It can be difficult to stick to a healthy diet (empathy), but with some help, I'm sure you can do it (encouragement).</p>
Developing discrepancy	<ul style="list-style-type: none"> <li>• Wants to follow new diet but don't know how/can't afford it</li> </ul> <p>E.g. Client: I want to eat healthy but I can't afford healthy food</p>	<ul style="list-style-type: none"> <li>• Build awareness of consequence</li> <li>• Identify the advantages and disadvantages of modifying a behavior</li> </ul> <p>E.g. You: Let's look at your diet history and see what we can replace with low cost, healthier (advantage) option to help you manage your blood sugar level better (consequence)</p>

# Education Strategy: Motivational Interviewing

	How client is feeling	What you can do
Rolling with resistance	<ul style="list-style-type: none"> <li>Shows some level of resistance</li> <li>Wary of describing why he/she is not ready to change</li> </ul> <p>E.g.            Client: My level of enthusiasm to follow the diet seems low now. It just seems like too much effort.</p>	<ul style="list-style-type: none"> <li>Be open to discuss resistance</li> <li>Discuss with client about their concerns.</li> </ul> <p>E.g.            You: I appreciate your honesty. At this point, many people may feel the same way about changing their diet. Tell me more about your concerns?</p>
Support self-efficacy	<ul style="list-style-type: none"> <li>Lacking of self belief to make changes</li> </ul> <p>E.g.            Client: I don't know what to buy once I get into the store. I just end up with instant noodles and luncheon meat.</p>	<ul style="list-style-type: none"> <li>Provide support to get client to try new behaviors or activities.</li> </ul> <p>E.g.            You: Let's plan out a 1-day's meal first. Then we can draw up a shopping list.</p>

# Skills and Attributes (1)

Cultural competency	<ul style="list-style-type: none"><li>• Being culturally sensitive, or awareness.</li><li>• Understanding the role of culture that can affect client's eating habits</li><li>• Helps to build rapport when we show cultural sensitivity</li><li>• Language can be a bridge or barrier</li></ul>
Asking question	<ul style="list-style-type: none"><li>• Most crucial in “data collection” and “goal negotiation” stages</li><li>• Use open-ended questions</li><li>→ Use <i>“What other cooking methods can you adopt to cook chicken?”</i> instead of <i>“Can you not deep-fry chicken dishes?”</i></li><li>• Allows client to express wider range of information and discussion</li></ul>

# Skills and Attributes (2)

Building rapport	<ul style="list-style-type: none"><li>• First step to gaining trust from client to open up</li><li>• Non-dismissive, understands client's difficulty and background can gain more trust</li><li>• Use of peer or social support to encourage sharing</li></ul>
Reflective listening	<ul style="list-style-type: none"><li>• Listen and try to "tag" a feeling that surface as a client is sharing or voicing difficulty</li><li>• Rephrasing statement spoken by client back to them, along with an emotion that you have "guessed" that came along with it.</li></ul> <p>E.g.</p> <p><b>Client:</b> <i>I try to stick to the meal plans that we discussed but my husband likes to eat out and that makes it really difficult for me to stay on track.</i></p> <p><b>You:</b> <i>You are feeling frustrated because you do want to follow the diet but at the same time you'd like to manage your husband's food preference. Is this correct?</i></p>

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# Skills and Attributes (3)

Affirming	<ul style="list-style-type: none"><li>• Understand the idea of supporting a client who is depressed about their eating behavior – and putting those thoughts into words.</li><li>• Affirmation usually comes along with alignment and normalization.</li><li>• Alignment is when we tell client that we understand that they're going a different time</li><li>• Normalization is telling the client that it is perfectly reasonable for them to have such a feeling or reaction.</li></ul> <p>E.g.</p> <p><b>You:</b> <i>"I know it has been hard for you, but I applaud your effort to come in today (affirmation). Given that you are managing so many things at one go (alignment), it is perfectly normal for you to feel this way (normalization).</i></p>
Summarizing	<ul style="list-style-type: none"><li>• Allows us to sum up key points of what client has told us</li><li>• Use simple and straightforward statements</li><li>• When client has contradictions, use exemplifying statements,</li></ul> <p>E.g.</p> <p><b>You:</b> <i>"On one hand you want to change, but on the other hand, you just can't give up those old eating habits."</i></p>

# Assessment Results : Choosing Focus Areas

## 1. Health and nutrition literacy

- Low ability to understand health information to make informed decisions
- Common among older adults, low socioeconomic status, cognitively challenged
- May lead to poor management of chronic diseases

*How to manage?*

- i. Educate using pictures/food models*
- ii. Get client to repeat explanations in their own words*

# Assessment Results : Choosing Focus Areas

## 2. Assessing readiness to change

- Identify the client's stage of change
- To provide appropriate help to facilitate change in client
- Determining present eating habits provide insight to change in future

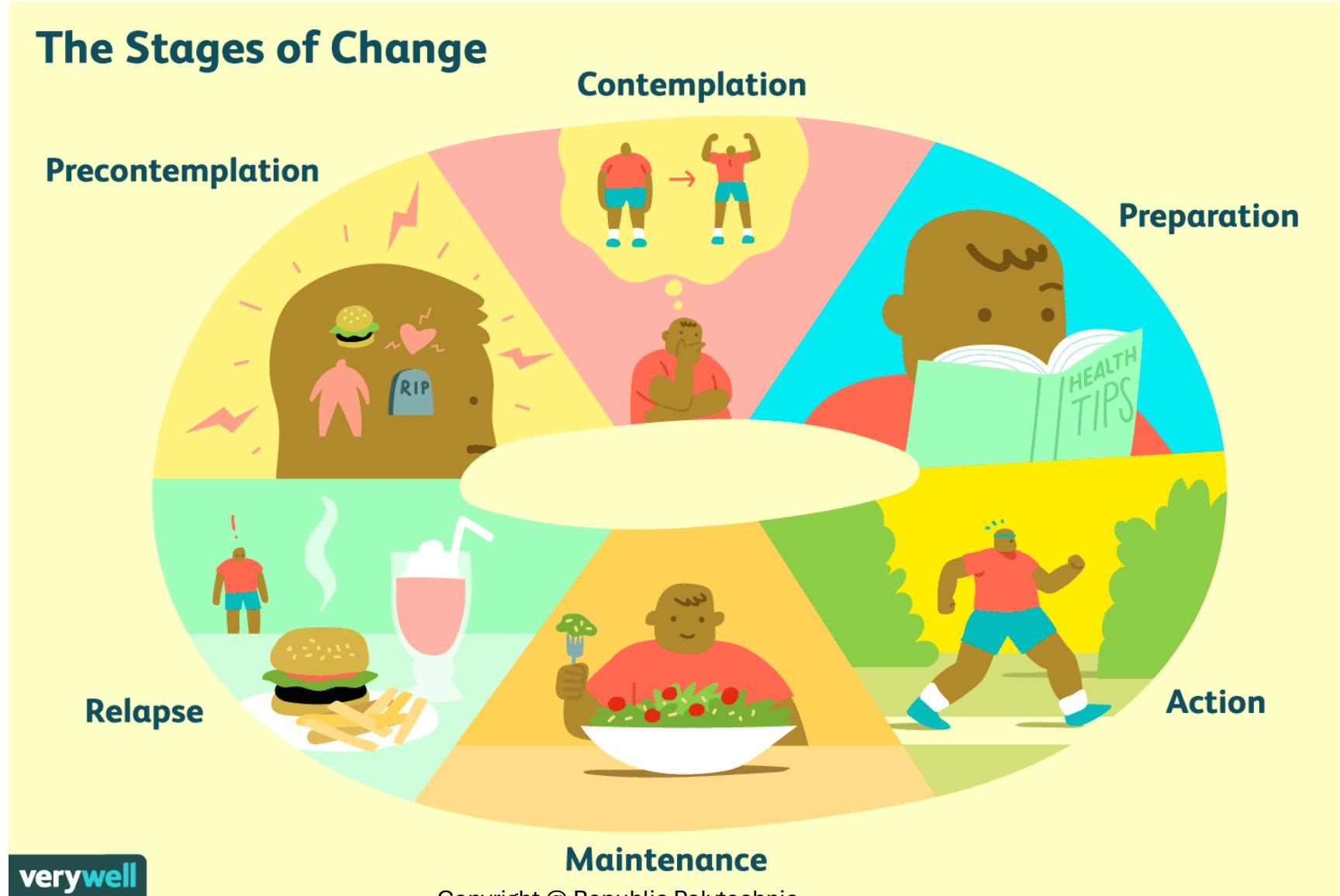
e.g. nutrition diagnosis of client is excessive fat intake

- Get client to express readiness for change

E.g. *“Using a scale of 1-10 (1 being least ready, 10 being very ready), how ready are you to make changes to the fat intake in your diet?”*

- 3 possible outcomes
  - i. Not-ready-to-change
  - ii. Unsure-about-change
  - iii. Ready-to-change

# Models for Behavioral Change - Nutrition Behaviors



# Precontemplation Stage

- The stage where clients have not thought about or is ready to make changes.
- Usually when they are still asymptomatic  
i.e. No impetus to make changes
- Referral by doctors (or in their words, “forced” to)
- Sees nothing wrong with their current diet/behaviour
  - Resistant and may even be aggressive/defensive



Adopted from - <https://bunnyears.com/registered-dietitians-eat-forced-them-lydia-bugg/>

# Education for Clients at Precontemplation Stage

The “Not-Ready-To-Change” education session

- In approaching clients who are not ready to change, e.g. Precontemplation stage of intervention, there are 3 goals:
  1. Facilitate client’s ability to consider change

E.g. *“What would have to happen for you to move from a scale of 9 to perhaps, 8 (small steps)? How can I help you to achieve that?”*

2. Identify and reduce the client’s resistance and barriers to change

E.g. *“In what ways has following your diet been a problem?”*

3. Identify behavioral steps toward change that are tailored to each client’s needs.

E.g. *“What is one baby step you think you can take?”*

# Contemplation Stage

- The stage where clients have thought about making a change.

BUT has done no more than think about it.

→ Usually when they see symptoms in others around them, or something happened to someone around them.

So there's a small nudge, but ....not crucial yet because "It's not happened to me"

→ Strikes a little concern in them

- Reflects a little on their current diet/behavior, but may not know what or how to do it
- Not resistant, but discussion may not go beyond sharing their concern

# Education for Clients at Contemplation Stage

The “Unsure-About-Change” education session

- “Strike the iron while it’s hot”, therefore goal in managing these clients is to:

## 1. Build readiness to change

- Point where changes in eating behavior can escalate
- Transition from not ready to deal to preparing to change the eating behavior

- Discuss client’s ambivalence
- List down positive and negative aspects of change
- Discuss thought and feelings about current status
- Encourage client to discuss dietary change progress and difficulties.
- Focus on possible reasons for change

# Education for Clients at Contemplation Stage

The “Unsure-About-Change” education session

## 2. Focus on client’s ambivalence (“*uncertainty*”)

→ Weigh the pros and cons with the client,

E.g.

“*What are the things you like about your current diet?*”

“*What can potentially happen if you manage to make changes to your diet?*”

“*What are some good and bad things about making a change?*”

- Help client see new and positive scenarios
- Tip client away from ambivalence towards making a change

# Education for Clients at Preparation, Action and Maintenance Stage

The “Ready-To-Change” education session

## 1. Educate and SET GOALS!

→ Including a plan of action

- Discuss what stands between their current status and end goals
- Use open-ended questions to elicit information on feelings and thoughts about changes:

E.g.

*“What made you choose to manage your weight instead of blood pressure?”*

*“What is a reasonable first step you’d like to make? What is your first goal?”*

# Education for Clients at Preparation, Action and Maintenance Stage

The “Ready-To-Change” education session

## 2. Action(!) plans

- Map out the specifics of goal achievement.
- Identify network/resources to support dietary change
- Identify barriers that can potentially prevent change
- So that plans are created to help eliminate roadblocks
- Client should initiate action plan, we guide them in exploring ways
- Spot efforts client put in and be encouraging!

E.g. *“Remember that change is gradual and it will take time to lose and keep off those weight. Cutting down one slice of bread at breakfast is a good start!”*

# Differentiation Between Goals and Action Plans

Goals	Action Plans
1. To lose 2 kg within a month	<ul style="list-style-type: none"> <li>i. Cut down by 1 slice of bread instead of 3 slices at breakfast.</li> <li>ii. Alight 1 bus stop earlier to and fro work.</li> <li>iii. Replace afternoon snack with a fruit instead of cake or pastry.</li> </ul>
2. To bring systolic blood pressure readings down by 20mmHg within 2 months.	<ul style="list-style-type: none"> <li>i. Incorporate brisk walking x 30 minutes per day at least thrice a week.</li> <li>ii. Avoid gravy on rice</li> <li>iii. Do not use dipping light soy sauce when eating noodles.</li> </ul>
3. To have lesser heartburns per week.	<ul style="list-style-type: none"> <li>i. Cut down on spicy and oily food → Go for soup based dishes when eating out</li> <li>ii. Eat slowly by chewing thoroughly</li> </ul>
4. To bring total cholesterol level down within the next three months	<ul style="list-style-type: none"> <li>i. Change cooking oil to a polyunsaturated cooking oil, e.g. sunflower oil</li> <li>ii. Avoid deep-fried food to not more than twice a week</li> <li>iii. Go for more soup based dishes</li> </ul>

# Why Do We Need Nutrition Education and Counseling?

Nutrition education and counselling provide information and motivation - *in different ways*

<u>Nutrition education</u>	<u>Nutrition Counseling</u>
<ul style="list-style-type: none"><li>• Individualized or group setting</li><li>• More preventive than management</li><li>• Transmission of knowledge</li></ul>	<ul style="list-style-type: none"><li>• One-on-one</li><li>• Used most often during medical nutrition therapy</li><li>• Help client manage social and personal demands and needs → To identify favorable conditions for change</li></ul>
 <p>→ Make meaningful changes to dietary behaviors</p>	

# Nutrition Education

- Putting nutrition knowledge into words/form that client can understand
- Based on the literacy level you have assessed (Slide 9)
- Different tools to use
  - Portion guide
  - Food models
  - Food pictures
  - Charts/graphs (especially for diabetes)
  - Handouts for home reference

# Portion Guide

**'CARBS': 1 Fistful**



**VEGETABLES**

**Cooked: 1 Handful; Raw: 2 Handfuls**



**FRUITS**

**1 Fistful**

# Food Models



Adopted from [https://ncescatalog.com/MyPlate-Food-Model-Kit-\\_p\\_1152.html](https://ncescatalog.com/MyPlate-Food-Model-Kit-_p_1152.html)

# FOOD MODELS



Adopted from <https://agclassroomstore.com/food-models/>

# Food Pictures



2 slices of wholemeal bread (60g)



1/2 bowl\* whole-grain noodles, bee hoon or spaghetti (100g)



4 plain wholemeal crackers (40g)



1/4 round plate\* of cooked vegetables



150g raw leafy vegetables



100g raw non-leafy vegetables



1/2 bowl\* of rice/brown rice (100g)



2 wholemeal chapatis (60g)



3/4 mug\*\*\* of cooked leafy (100g)



3/4 mug\*\*\* non-leafy vegetables (100g)



1 1/2 cups\*\* whole-grain breakfast cereal(40g)



2/3 bowl\* of uncooked oatmeal (50g)



1 palm-sized piece of meat, fish or poultry (90g)



2 glasses\* of reduced-fat milk (500ml)



2 small blocks of soft beancurd (170g)



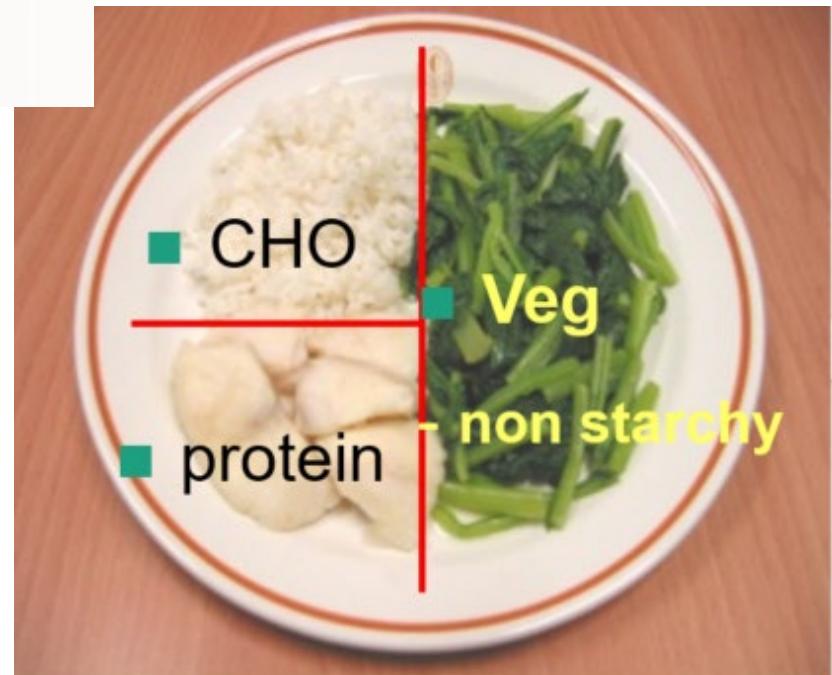
5 medium prawns (90g)



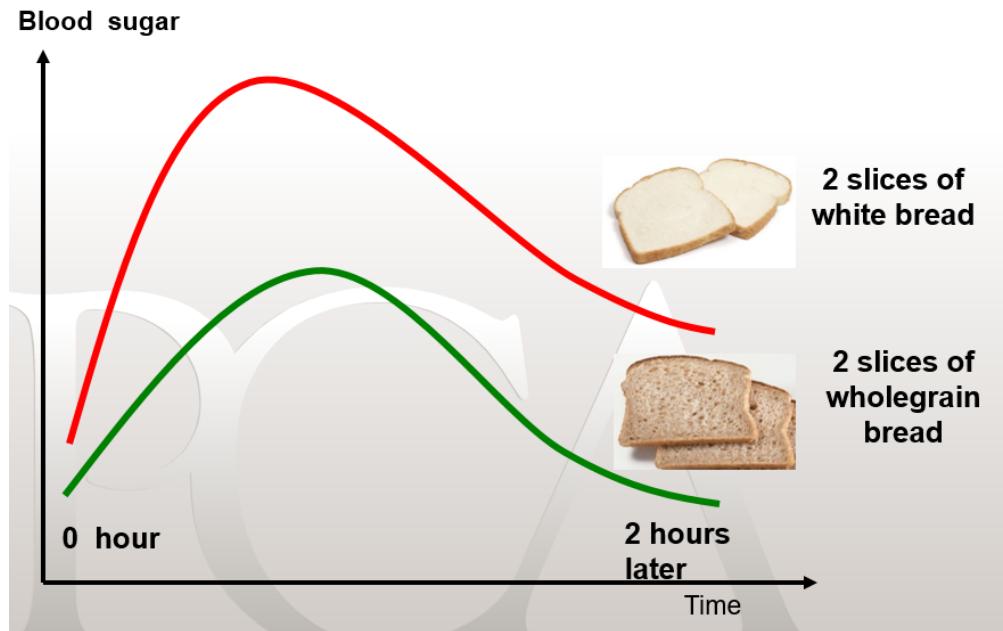
3/4 cup\*\* of cooked pulses (peas, beans, lentils) (120g)



3 eggs (150g)

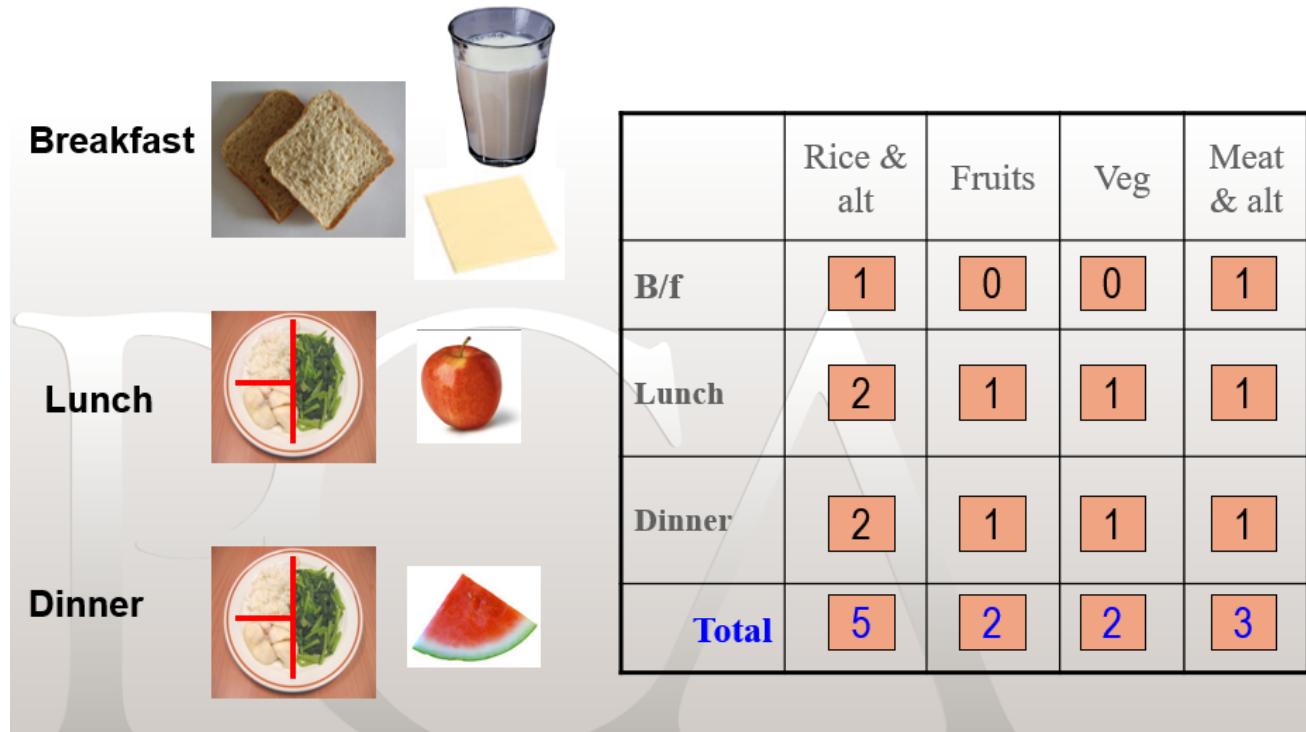


# Charts/Graphs/Tables



High GI Foods	Low GI Foods ✓
White bread	Multi grain/ Whole meal bread
Refined pastas	Whole meal pastas
Processed breakfast cereals	Unrefined cereals eg Oats, All bran, Weet-Bix; Natural muesli
Instant white rice; Glutinous rice; Short-grain rice such as Calrose rice	Brown rice; Long grain rice eg Basmati & Doongara rice
Starchy staples eg Potatoes, Tapioca	Yam, Sweet Potatoes
Sweet chocolate or sweet biscuits	Biscuits made with dried fruit, oats whole grains
Fruits eg watermelon, dates	Apples, Peaches, Cherries, Plums, Grapefruit
Vegetables eg Pumpkin, Parsnip	Broccoli, Cauliflower, Cabbage, Tomatoes, Green beans

# Handouts (Home Reference)



Summary guidelines for  
 <chronic disease>

*Sample: Lower cholesterol level*

1. Cut down on deep-fried food
2. Limit dietary cholesterol, eg organ meat, seafood, yolk
3. Increase fibre
4. Reduce on alcohol

# Nutrition Education: What To Teach?

1. What is the medical condition(s) that client has
2. Explain the medical-nutrition relationship
3. List out nutrients/food group that can affect medical condition(s)
4. Consequences (Complications) of uncontrolled medical condition(s)
5. Benefit of managing medical condition(s)
6. Explore with client which are the food in current that he/she can remove/include in diet to help alleviate medical condition(s)
7. Summarize session

# Example of Nutrition Education – Type 2 DM

## 1. *What is the medical condition.*

- Type 2 diabetes mellitus (DM) is a condition where your cells are no longer sensitive towards insulin, or your pancreas is not producing adequate insulin.
- Insulin is the key to open up cells to bring glucose into the cells to use as energy

## 2. *Explain the medical-nutrition relationship.*

- Glucose come from carbohydrate-containing food, or food that are sugary. When our body digest carbohydrate-containing food, glucose goes into our blood stream ready to be absorbed by our cells.
- However, in diabetic individuals, the cells are unable to absorb blood glucose into the cells due to the lack of insulin or lack of sensitivity (“cannot see”) towards insulin.

# Example of Nutrition Education – Type 2 DM

3. List out nutrients/food group that can affect medical condition(s)

→ Common carbohydrate-containing food are example:

- Rice, noodles, biscuits, bread
  - Root vegetables, e.g. potato, yam, sweet potato, carrots, tapioca
  - Some vegetables, e.g. sweet corn
- Sugary beverages or desserts

4. *Consequences (Complications) of uncontrolled medical condition.*

- When our cells are unable to bring glucose into the cells as energy, the glucose will continue to “float” in our blood, causing rising blood glucose levels.
- Prolonged high blood glucose levels can cause many complications, such as kidney failure (nephropathy), eye problem (retinopathy), foot amputation (neuropathy), and cardiovascular heart diseases.

# Example of Nutrition Education – Type 2 DM

## 5. *Benefit of managing medical condition.*

- We can manage our blood glucose levels by managing the amount and type of carbohydrate-containing food that we eat.
- A well-controlled blood glucose level can delay and prevent the onset of the complications of diabetes.

## 6. *Explore with client which are the food in current that he/she can change in diet to help alleviate medical condition(s)*

- “Which food in your diet can you change to better manage your blood glucose?”
- Explain quality and quantity of carbohydrate-containing food using food pictures and portion guide, as well as the “My Healthy Plate” picture guide.

# Group Discussion

- Break into 4 groups
- Spend 20 minutes to devise a nutrition education plan for

Team 1 – *Client with high blood pressure*

Team 2 – *Client with high blood cholesterol*

Team 3 – *Client with high fat percentage*

Team 4- *Client with BMI > 27.5kg/m<sup>2</sup>*

- Team sharing on nutrition education plan

# Points for consideration:

1. Assess client's health and nutrition literacy
2. What's client's readiness to change?
3. Execute nutrition education plan:
  - What is the medical condition(s) that client has
  - Explain the medical-nutrition relationship
  - List out nutrients/food group that can affect medical condition(s)
  - Consequences (Complications) of uncontrolled medical condition(s)
  - Benefit of managing medical condition(s)
  - Explore with client which are the food in current that he/she can remove/include in diet to help alleviate medical condition(s)
4. What kind of tools will you use?
5. Summarize session

# Post-Sharing : Discussion Points

- Was the condition explanation clear?
- What was/were the nutrient(s) identified pertaining to the medical condition?
- How will you improve on the description of consequences/benefit of managing the condition?
- As a “client”, how well did the presenting team “educate” and improve your knowledge on managing the medical condition through diet?

# Summary of Nutrition Intervention (Execution and Prescription)

1. Eating habit is a behavior – takes time and patience to change
2. Empathy to understand what client is struggling with  
(*You can do it, don't mean others must be able too*)
3. Communication skills is crucial
4. Know your client's readiness to change – plan education accordingly.

# E-learning (Lesson 6)

Submit Logsheet 2 (Task 4 & 5)

Deadline: By 25 Jan

# References

- Nahikian-Nelms, M. (2017). *Medical nutrition therapy: A case-study approach* (2nd ed.). Boston, MA: Cengage Learning.
- Mahan, L. Kathleen, and Janice L. Raymond. *Krause's Food & The Nutrition Care Process*. 14th ed., Elsevier, 2017.
- Gable, Judy, and Tamara Herrmann. *Counselling Skills for Dietitians*. Wiley Blackwell/John Wiley & Sons Inc., 2016.