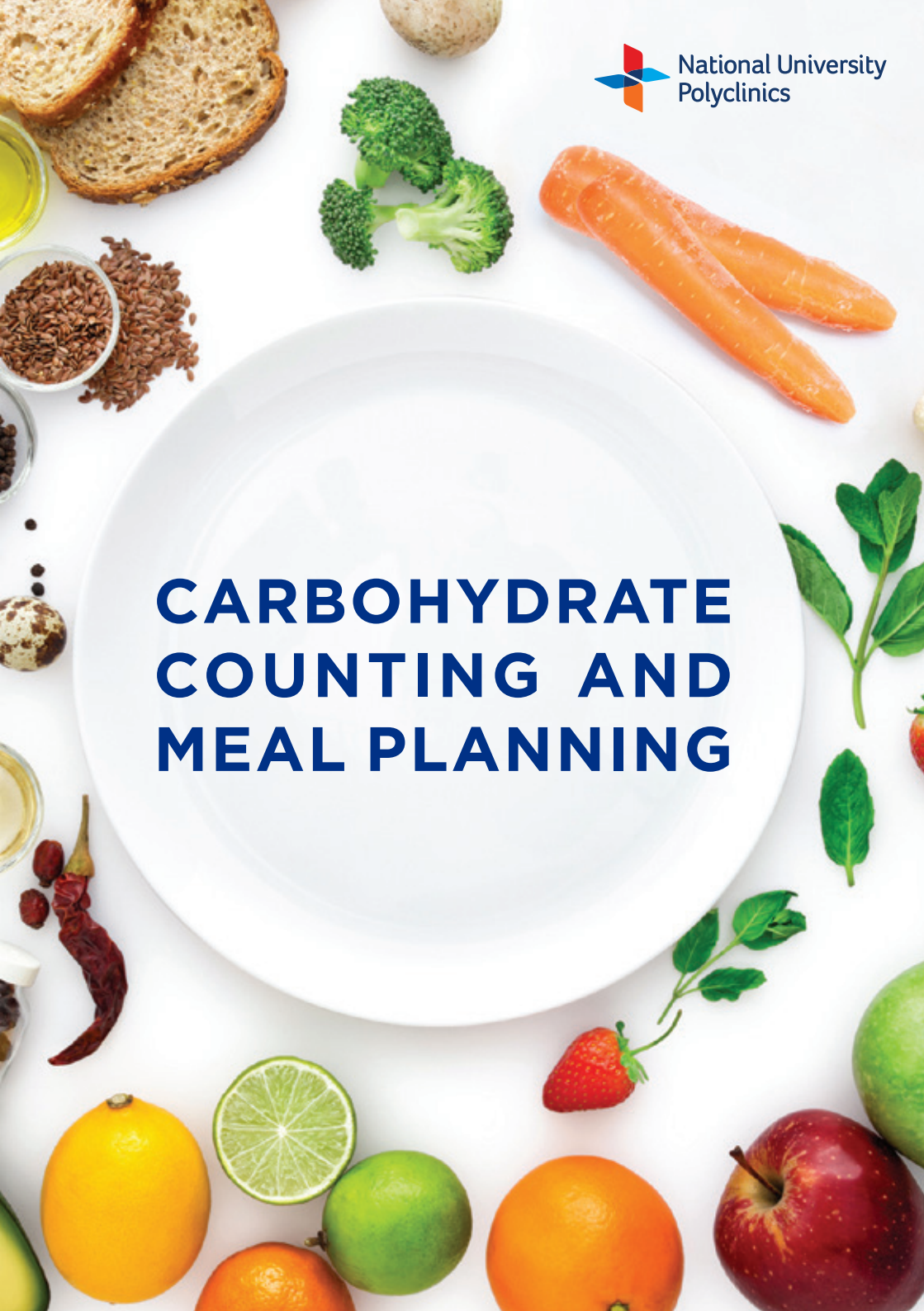




CARBOHYDRATE COUNTING AND MEAL PLANNING

CARBOHYDRATE COUNTING

Introduction

Carbohydrate counting
Plate concept

Breakfast

Practical examples

Plate Concept

Chinese, Malay,
Indian and Western meals

Nutrients Composition

Local food list

Disclaimer

This brochure has been developed for the adult and older persons who do not have any pre-existing conditions and should be used under the supervision of a healthcare professional. Please discuss meal planning with your nurse, dietitian or doctor before making major changes to your dietary habits especially if you have pre-existing medical conditions. For example, a patient with diabetes may have to take less carbohydrate than someone who does not have diabetes.

INTRODUCTION

What is carbohydrate and calorie counting?

Carbohydrate (carb) counting is a food and meal planning approach that focuses on the total amount of carbs while calorie counting focuses on the total amount of calories eaten in a day (including meals and snacks).

Why count carbohydrates?

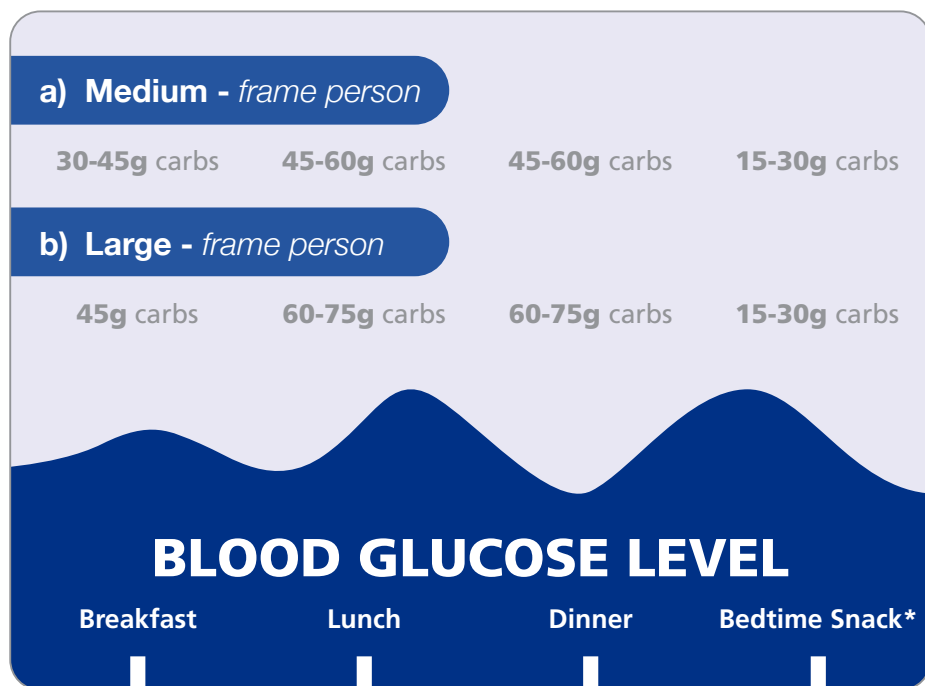
Carb counting is a very useful skill for controlling blood glucose levels. Together with regular exercise and a healthy diet, carbohydrate counting is also useful for losing weight or keeping a healthy body weight.

The amount of carbs you can eat depends on your size, gender and the amount of physical activity you do every day.

Plate concept

The plate concept is a useful guide to teach you how to maintain a healthy and balanced diet. It should include carbs, protein, fat and fibre in your diet.

SPREADING YOUR CARBS THROUGHOUT THE DAY



Total 180g carbs – based on 1500kcal/day

Total 225g carbs – based on 1800kcal/day

Note:

*Snack can be taken in between breakfast and lunch, lunch and dinner or after dinner, depending on your glucose levels and times of your meals. Please obtain advice from your doctor, nurse or dietitian.

CARB

DISTRIBUTION

Large-frame persons and those who are active are able to eat more carbs daily. People who are on weight loss programme may need to cut down 15-30g of carbs daily or as recommended by your dietitian, doctor or nurse.

A Sedentary: Sit most of the day, do little walking, watch TV / read

Mildly active: Exercise 20 min, 2-4 times/week, walk around office, climbing stairs

Moderately active: Exercise 30 min, 5 times/week, physical labour, lifting

Very active: Exercise 30-60 min, more than 5 times/week (including aerobic and resistance training)

	WOMAN		MAN	
	Carbs (g)	Calories (kcal)	Carbs (g)	Calories (kcal)
Sedentary	165	1400	180	1500
Mildly active	180	1500	195	1600
Moderately active	195	1600	210	1700
Very active	210	1700	225	1800

Note:

For 1 hour of moderate intensity exercise (e.g. tennis, swimming or jogging), additional 15g of carbs may be needed. For 1 to 2 hours of strenuous activities (e.g. basketball, football) additional 30g of carbs may be needed.

A TYPICAL MEAL PLAN FOR THE DAY...

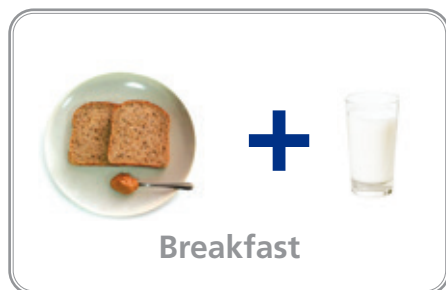
1500 kcal/day

Carb allowance = 180g

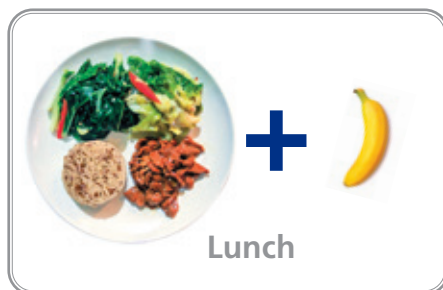
Total carbs for the day:

$45+60+60+15 = 180\text{g}$

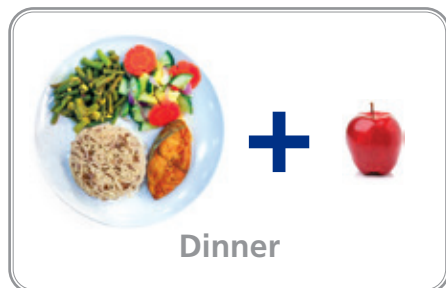
Carbs: **45g**



Carbs: **60g**



Carbs: **60g**



Carbs: **15g**



RICE AND ALTERNATIVES

15G CARBS

**White rice /
brown rice (cooked)
noodles / pasta**



¼ "Standard"
(4.25"/11cm diameter) bowl
or 3 dessert spoons

**Bread
(most types)**



1 slice

Potato



1 'egg-sized'
(70g, cooked, without skin)

Oats



(25g raw)
3 dessert spoons or 6 teaspoons

FRUITS AND JUICES

15G CARBS

Whole fruits 1 small



Apple (green/red), orange, pear, kiwi (medium), banana, guava, dragonfruit, grapefruit

Small fruits 1 handful



10 grapes, 10 longans, 5 lychees, 5 rambutans

Cut fruits 1 slice



Watermelon, papaya, honeydew, rock melon

Unsweetened fruit juices about ½ glass (i.e. 120ml)



Freshly blended or packaged

Tip:

Fruit juice contains carbs. It is better to have a serving of fruit rather than fruit juice as fruit juice will increase your blood glucose very quickly. Fruits contain more nutrients and fibre than fruit juices. Fibre helps you to feel full for a longer period and it also helps to soften your stools.

SNACKS

15G CARBS

Plain cream crackers



3 pieces

Small steamed vegetable pau



1 piece

OTHER HEALTHY SNACKS

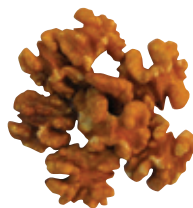
100 KCAL

Almonds



3g carbs
(Approximately 13 almonds
baked without sugar or salt)

Walnuts



2g carbs
(Approximately 8 walnuts
baked without sugar or salt)

MILK AND ALTERNATIVES

15G CARBS

Low fat milk



1 cup (250ml)

Reduced sugar soya milk



1 cup (250ml)

Low fat powdered milk



6 teaspoons

COMMON BEVERAGES

CARB CONTENT

Milo 15g carbs



4 teaspoons

Coffee/tea-O kosong 0g carbs



Coffee/tea with condensed milk 15g carbs



3 teaspoons

Tip: If you need milk in your tea or coffee once or twice a day, use small amount of low fat milk or low fat evaporated milk instead of condensed milk.

BREAKFAST

45G CARBS

30g carbs



Wholegrain bread
(2 slices)
Peanut butter
(1 teaspoon)



Sliced fish porridge
(1 bowl at
16.5cm diameter
and 6cm depth)



Wholegrain bun
(1 ½ buns)



Oats
(6 dessert spoons)



Chee cheong fun
(1 piece with
little sauce)



Steamed pau
(medium size)



Plain thosai
(1 piece)
Weight of 1 piece
of thosai = 75g

15g carbs

Optional **+**



Milk (250ml)
Low fat: 15g carbs
No sugar soya milk: 5g carbs
Reduced sugar soya milk: 15g carbs

PLATE CONCEPT

(9 INCH/23 CM PLATE)

Lunch/Dinner
(45g carbs)



Fruit

(15g carbs)

Choose any one serving
of fruit

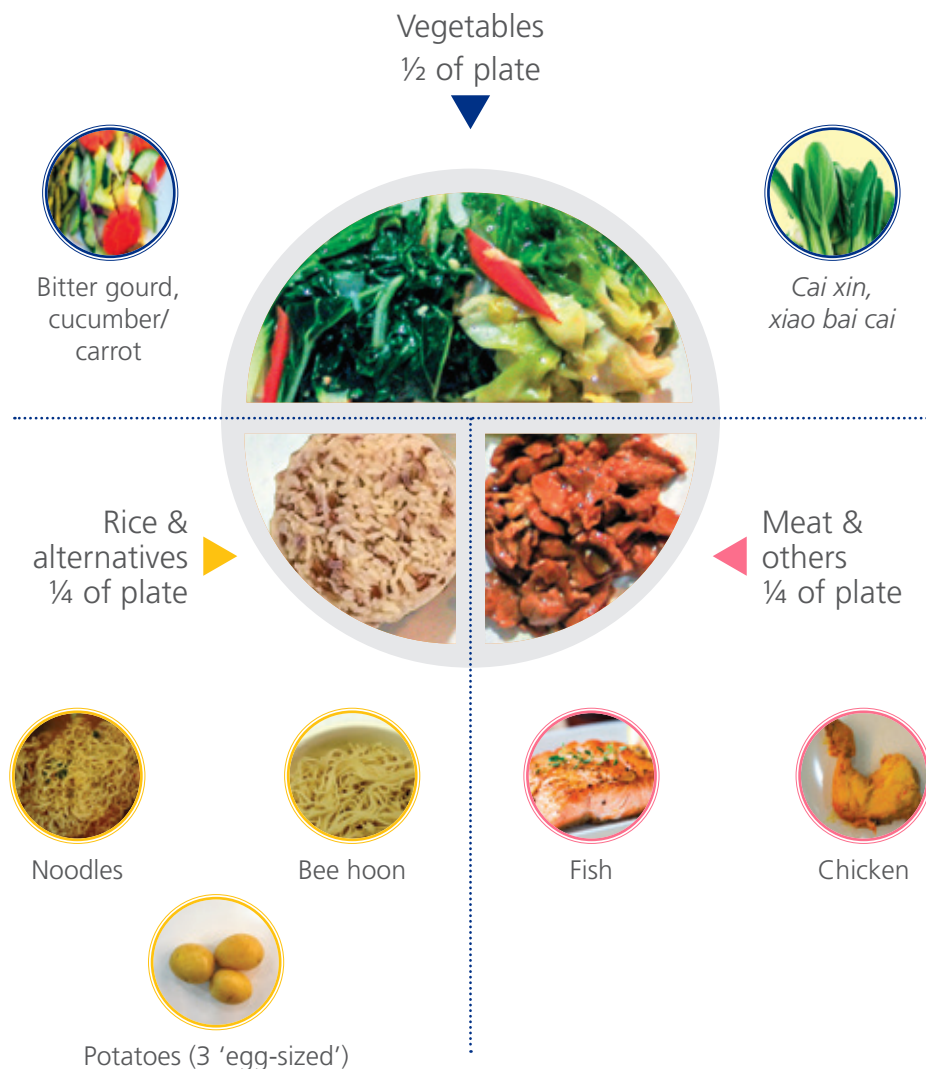


Example

To have a 45g-carb meal, fill up the 1/4 plate portion with 3/4 “standard 11cm diameter” bowl of rice, noodles, pasta or alternatives.

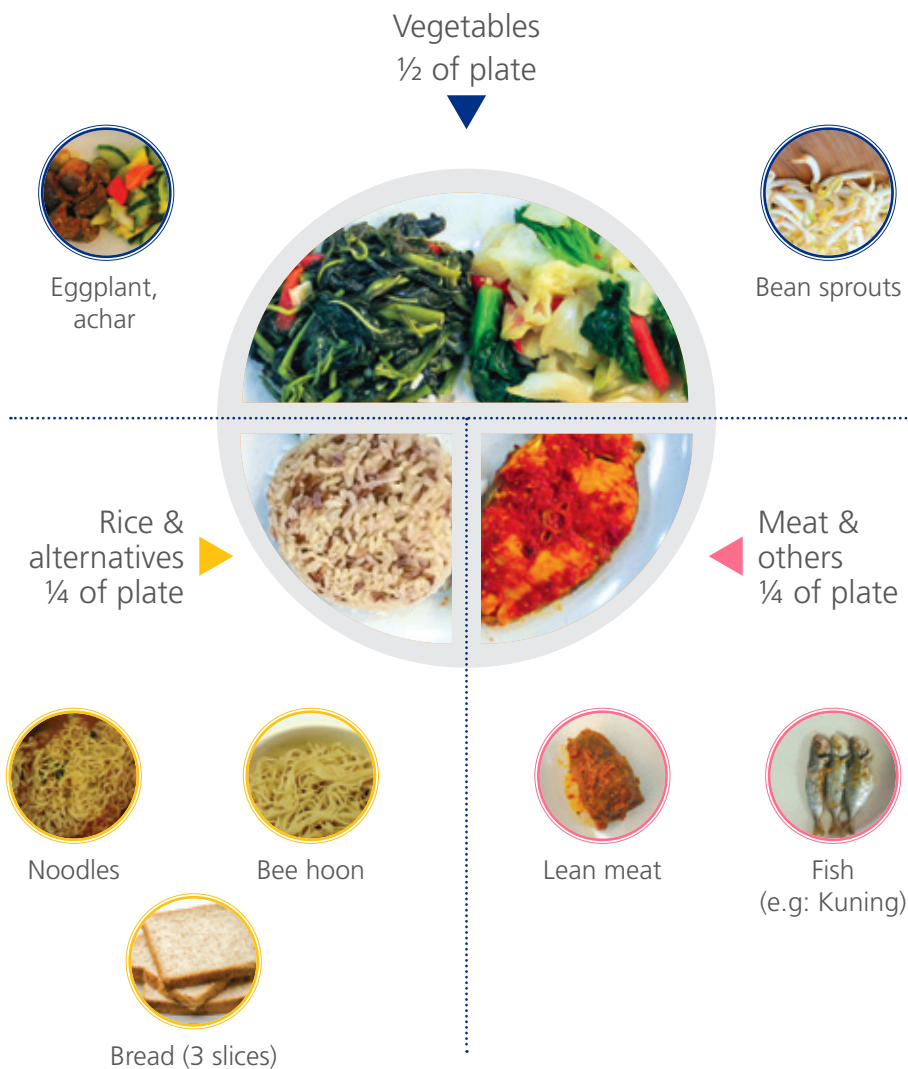
CHINESE CUISINE

45G CARBS



MALAY CUISINE

45G CARBS



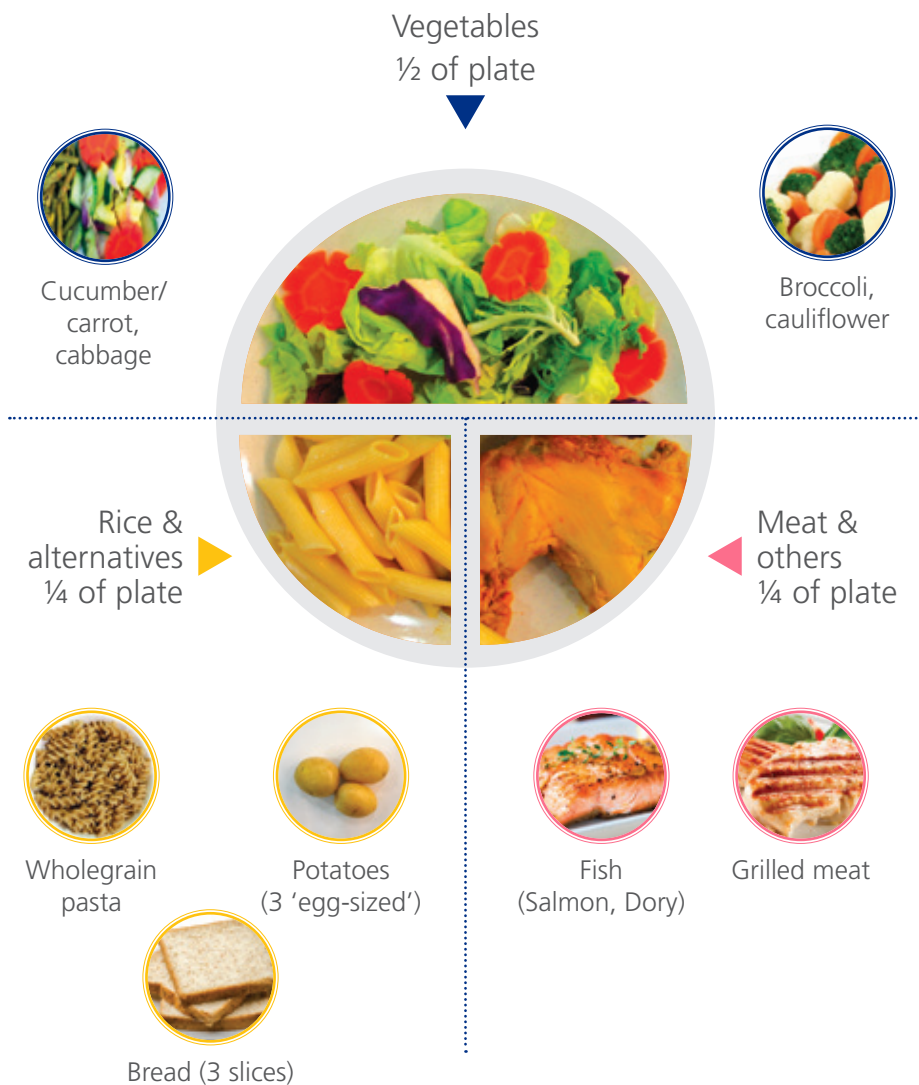
INDIAN CUISINE

45G CARBS



WESTERN CUISINE

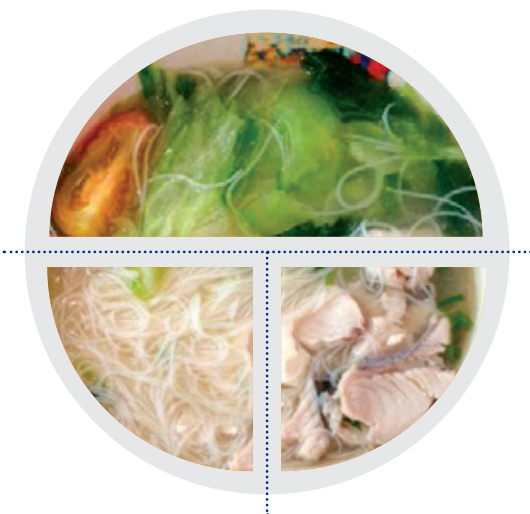
45G CARBS



SOUP-BASED MEALS

45G CARBS

**Sliced fish soup
with bee hoon/rice
(without milk)**



OR

**Yong tau foo with
bee hoon/rice**

examples of healthy choice:

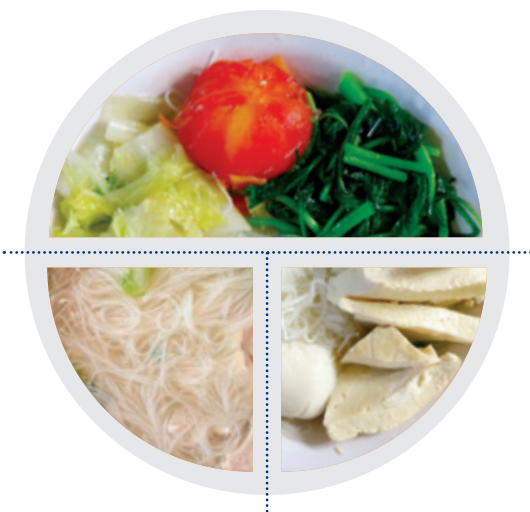
tau kwa (not fried)

leafy vegetables

non-leafy vegetables

(e.g. bittergourd/tomato/
lady's fingers)

fishball/fishcake



Average diameter of bowl 16.5cm

Average depth of bowl 6cm

NUTRIENTS COMPOSITION

LOCAL FOOD LIST

Food item	Serving size	kcal	Fat (g)	Carbohydrate (g)	Protein (g)
Chicken porridge	1 bowl	181	6	21	12
Fish porridge	1 bowl	211	3	32	14
Minced meat porridge	1 bowl	320	10	42	16
Ban mian (soup)	1 bowl	475	22	48	22
Sliced fish bee hoon soup, no milk	1 bowl	375	4	53	32
Chicken macaroni soup	1 bowl	199	1	31	15
Fried bee hoon, vegetarian	1 plate	549	17	83	16
Fishball noodles, dry	1 bowl	475	11	71	25
Hokkien prawn mee	1 plate	522	19	69	18
Ipoh hor fun	1 plate	453	14	66	16
Sliced fish hor fun	1 plate	526	7	78	38
Noodles, mee pok (minced meat and mushroom) dry	1 bowl	511	23	57	20
Wonton noodles, dry	1 bowl	441	14	58	20
Wonton noodles, soup	1 bowl	318	7	37	25
Yong tau foo, mixed items, without noodles, with sweet sauce and chilli sauce	1 bowl	307	16	22	20

NUTRIENTS COMPOSITION

LOCAL FOOD LIST

Food item	Serving size	kcal	Fat (g)	Carbohydrate (g)	Protein (g)
Chicken drumstick, baked, lean	1 drumlet	76	3	N.A	12
Ham, honey baked	1 slice	23	0.7	0.7	3.5
Lamb chop, trimmed, pan-fried	1 piece	115	6	8	6
Salmon, grilled, with potato and broccoli	1 plate	416	12	31	44
Croissant	1 piece	69	3	9	1
Chicken curry puff	1 piece	339	22	27	8
Dumpling, rice with meat filling (bak chang)	1 piece	387	14	55	12
Idli	1 piece	79	0.5	15	3
Popiah	1 whole	188	11	14	8
Pau, char siew, steamed	1 piece	161	6	20	6
Pau, meat, steamed	1 piece	302	14	35	9
Pau, red bean, steamed	1 piece	205	6	33	4
Pau, vegetable, steamed	1 piece	150	5	23	4
Tuna mayonnaise wholemeal sandwich	1 portion	254	6	34	15
Tuna sushi roll	1 piece	19	0.1	4	1
Yoghurt – low fat natural	150g	89	2	12	7

NUTRIENTS COMPOSITION

LOCAL FOOD LIST

Food item	Serving size	kcal	Fat (g)	Carbohydrate (g)	Protein (g)
Chicken rice, with skin removed	1 plate	635	22	84	26
Char siew rice	1 plate	605	16	91	24
Claypot rice	1 plate	527	22	55	28
Duck rice, skin removed	1 plate	530	11	84	24
Mee rebus	1 plate	559	18	78	21
Mee siam	1 plate	562	18	80	19
Mee soto	1 bowl	433	13	60	19
Nasi briyani with mutton	1 plate	752	25	96	36
Nasi briyani with vegetable	1 plate	332	14	46	7
Nasi lemak with fried egg and anchovies	1 plate	494	14	80	13
Rice, long beans (fried), tandoori chicken	1 plate	561	16	68	35
Tempeh, with long beans and taukwa, stir fried	1 plate	419	30	19	18
Chapati	1 piece	143	5	21	3
Roti prata (plain)	1 piece	163	7	20	5
Thosai	1 piece	97	2	18	2
Rawa thosai	1 piece	204	6	34	4

*References : Energy and Nutrient Composition of Food (HPB)
National Nutrient Database for Standard Reference (USDA)*

Note: For food high in carbs or fat on usual serving sizes, please take smaller portions.

REFERENCES

- Energy and Nutrient Composition of Food by Health Promotion Board (HPB) <http://focos.hpb.gov.sg/eservices/ENCF/> (Accessed on 23 January 2019)
- National Nutrient Database for Standard Reference by United States Department of Agriculture (USDA) <http://ndb.nal.usda.gov/ndb/nutrients/index>
- My Starter Meal Plan, Joslin Diabetes Center
- Nutrition Care Manual and Academy of Nutrition and Dietetics

ACKNOWLEDGEMENTS

This brochure was developed in collaboration with Clinical Services Allied Health - Dietetic Services and Nursing Services, National University Polyclinics.

National University Polyclinics
nup.com.sg