

# 每月乳癌教育講座

## 主題：你的體重管理與健康

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### 免責聲明

### Disclaimer

本資訊祇用作教育用途，並為出席人士對相關主題提供基本資訊。

The information provided is for educational purposes only as well as to give you general information and a general understanding of the subject.

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以英文版本為準





# Weight management

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OLIVIA CHAK

CERTIFIED CANCER EXERCISE  
SPECIALIST



# Who am I?

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## Nutrition

Health promotion practitioner (nutrition promotion) at Cancer Council Western Australia

Completion of Certificate in Understanding Nutrition and Weight Management for Personal Trainers

## Exercise

STOTT PILATES ® Certified instructor for Matwork, Reformers, Cadillac, Chair and Barrels

Certified Cancer Exercise Specialist



# What is Pilates

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# What is Pilates

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# What do you think about

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Underweight VS malnutrition

Ideal weight VS looks fit

Overweight VS obese

→ Weight management

Persistent action throughout our lives



# Index and measurements

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- 1) Body Mass Index (BMI)
- 2) Waist Hip Ratio (WHR)
- 3) Body fat percentage (Fat %)
  - 3a) Bioelectrical Impedance Analysis
  - 3b) Skinfold Test

\*Interactive activities





# Body Mass Index (BMI)

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It provides an assessment of overall body weight and baseline for weight management program

Calculation:  $\text{Weight (kg)} / \text{Height (m}^2\text{)}$

Standard: Normal range (18.5-22.9)

Ideal body weight =  $\text{Target BMI} \times \text{Height (m}^2\text{)}$

Adjusted desired body weight =  $(\text{Actual weight} - \text{ideal weight}) \times 0.25 + \text{ideal body weight}$

\*Interactive activity 1



# Body Mass Index (BMI)

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Centre of Health Protection, HKSAR BMI Index

[https://www.chp.gov.hk/en/resources/e\\_health\\_topics/pdfwav\\_11003.html?page=2](https://www.chp.gov.hk/en/resources/e_health_topics/pdfwav_11003.html?page=2)

WHO Asian BMI Index

[https://www.researchgate.net/figure/WHO-Asian-BMI-classification\\_tbl1\\_296026141](https://www.researchgate.net/figure/WHO-Asian-BMI-classification_tbl1_296026141)



# Waist circumference

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Standard : Australian Better Health Government Initiative, if waist measurement:

- ❖  $\leq 80$  cm in healthy range
- ❖ 80-88 cm at risk range
- ❖  $\geq 88$ cm at high risk range

\*Interactive activity 2



# Waist Hip Ratio (WHR)

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It provides an assessment of abdominal fat (belly fat)

Calculation:  $\text{Waist (cm)} / \text{Hip (cm)}$

Standard 1 : According to World Health Organization, a healthy WHR

Health risk	Women	Men
Low	0.80 or lower	0.95 or lower
Moderate	0.81–0.85	0.96–1.0
High	0.86 or higher	1.0 or higher

\*Interactive activity 3



# Body Fat % Measurement

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Use Bioelectrical Impedance Analysis

Considerations:

- ☐ Relax arms and look forward
- ☐ Measure at the same time of the day
- ☐ Avoid measure after lunch



Date 10/20/2014 12:26 PM



Lean body mass = weight - fat mass  
~ 50 - 11 = 39 kg

Waist = 74 cm

Hip = 86 cm

WHR = 0.86

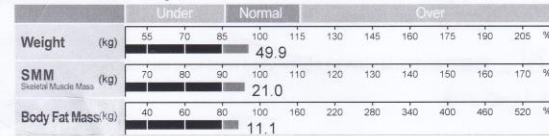
Ideal waist = 68 cm

ID	Height	Age	Gender	Test Date / Time
91617190	156cm	42	Female	10.08.2019. 11:23

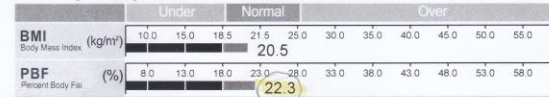
### Body Composition Analysis

Total amount of water in body	<b>Total Body Water</b>	(L)	28.5 ( 26.6~32.6 )
For building muscles	<b>Protein</b>	(kg)	7.6 ( 7.1~8.7 )
For strengthening bones	<b>Minerals</b>	(kg)	2.66 ( 2.47~3.01 )
For storing excess energy	<b>Body Fat Mass</b>	(kg)	11.1 ( 10.5~16.8 )
Sum of the above	<b>Weight</b>	(kg)	49.9 ( 44.5~60.1 )

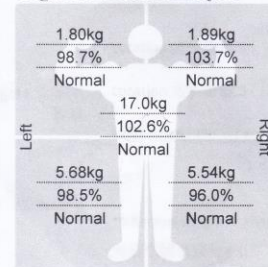
### Muscle-Fat Analysis



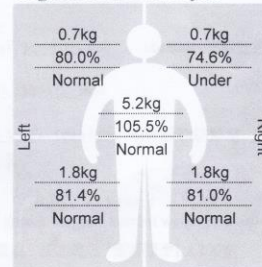
### Obesity Analysis



### Segmental Lean Analysis



### Segmental Fat Analysis



\* Segmental fat is estimated

### Body Composition History

<b>Weight</b> (kg)	49.9																		
<b>SMM</b> (kg)	21.0																		
<b>PBF</b> (%)	22.3																		
Recent Total	10.08.19 11:23																		

### InBody Score

78/100 Points

\* Total score that reflects the evaluation of body composition. A muscular person may score over 100 points.

### Weight Control

Target Weight	52.3 kg
Weight Control	+ 2.4 kg
Fat Control	+ 0.9 kg
Muscle Control	+ 1.5 kg

### Obesity Evaluation

BMI ☒ Normal ☐ Under ☐ Slightly Over ☐ Over

PBF ☒ Normal ☐ Slightly Over ☐ Over

### Waist-Hip Ratio

0.82 (0.75 - 0.85)

### Visceral Fat Level

Level 4 (Low - High)

### Research Parameters

Fat Free Mass	38.8 kg
Basal Metabolic Rate	1207 kcal ( 1117~1283 )
Obesity Degree	95 % ( 90~110 )
Recommended calorie intake	1855 kcal

### Calorie Expenditure of Exercise

Golf	88	Gateball	95
Walking	100	Yoga	100
Badminton	113	Table Tennis	113
Tennis	150	Bicycling	150
Boxing	150	Basketball	150
Mountain Climbing	163	Jumping Rope	175
Aerobics	175	Jogging	175
Soccer	175	Swimming	175
Japanese Fencing	250	Racketball	250
Squash	250	Taekwondo	250

\* Based on your current weight  
\* Based on 30 minute duration

### Impedance

	RA	LA	TR	RL	LL
Z <sub>25</sub> 20 kHz	365.3	382.1	25.4	295.2	279.2
100 kHz	328.4	346.8	22.4	263.7	250.9



# Skinfold Test

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# Skinfold test

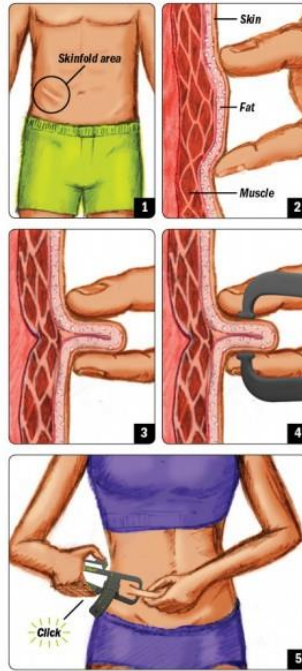
## Measuring Skinfold Body Fat with the GoFit Body Fat Caliper

The majority of fat on the body is located directly under the skin. For this reason, skinfold measurement is an effective and scientifically-trusted way to determine body fat percentage. The GoFit Body Fat Caliper is designed to make this a simple and accurate procedure that you can perform

### Taking an accurate skinfold body fat caliper reading

1. Move the "measure slide" on the curved part of the Caliper fully to the right. Hold the Caliper in your right hand.
2. The area to use for skinfold measurement is called the suprailiac. To find this area, put your left index finger on the point of your right hip bone and move up one inch (figure 1).
3. Stand straight. With the left hand, place your thumb and index finger two-to-three inches apart, then firmly grasp the suprailiac skinfold. Gently pull the skinfold outward, pulling the skin and underlying fat away from the muscle tissue (figures 2 and 3). If there is a large amount of fat, open your thumb and index finger wider to grasp and pull the skinfold. Grasp the skin directly, without clothing covering it.
4. Using your right hand, place the jaws of the Caliper over the skinfold about 1/4 of an inch from your thumb and index finger (figures 4 and 5). The Caliper tips should be placed in the center area of the skinfold. Be sure the Caliper is at a right angle to the skinfold.
5. Continue holding the skinfold with your left thumb and index finger. With your right thumb in the indentation of the "Accuracy Lever," squeeze the Caliper, closing it onto the skinfold until you feel a slight click. Stop squeezing when you feel the click (figure 5). Let the Caliper spring open. The lines on the "measure slide" now line-up with the measurement scale indicating your skinfold measurement. Record this reading to the nearest millimeter, then return the "measure slide" back to the right for your next reading.
6. After you have taken one measurement, take a second. If this reading is more than 1mm apart from the first measurement, take a third reading and so on. When the readings are consistent, your measurement is accurate.
7. To calculate body fat percentage from your measurement, follow the steps and refer to the Male or Female Body Fat Percentage Calculation Charts to the right.

on yourself (or have someone else perform). Although this measuring process is simple, it's best to carefully follow the instructions to do the procedure correctly and consistently.



## Calculating Body Fat Percentage

**Step 1:** Use the GoFit Body Fat Caliper to get your skinfold measurement in millimeters.

**Step 2:** Find the column with your measurement—follow it down to where it intersects with your age range.

**Step 3:** The number at this intersection is your body fat percentage.

**Step 4:** For measurements exceeding 36mm, add 25% for each additional millimeter of skinfold thickness.

### Body fat percentage calculation chart – Male

		GoFit Body Fat Caliper measurement in Millimeters																				
		2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25	26-27	28-29	30-31	32-33	34-35				
Age	18-22	2	4	6	8.5	10.5	12.5	14.5	16	17.5	19	20	21.5	22.5	23	24	24.5	25				
	23-27	2.5	5	7.5	9.5	11.5	13.5	15.5	17	18.5	20	21	22.5	23.5	24	25	25.5	26				
	28-32	3.5	6	8.5	10.5	12.5	14.5	16.5	18	19.5	21	22.5	23.5	24.5	25	26	26.5	27				
	33-37	4.5	7	9.5	11.5	13.5	15.5	17.5	19	20.5	22	23.5	24.5	25.5	26.5	27	27.5	28				
	38-42	5.5	8	10.5	12.5	15	17	18.5	20	22	23	24.5	25.5	26.5	27.5	28	28.5	29				
	43-47	6.5	9	11.5	14	16	18	19.5	21.5	23	24.5	25.5	26.5	27.5	28.5	29	29.5	30				
	48-51	7.5	10	12.5	15	17	19	20.5	22.5	24	25.5	26.5	27.5	28.5	29.5	30	30.5	31				
	52-55	9	11.5	13.5	16	18	20	22	23.5	25	26.5	27.5	28.5	29.5	30.5	31	32	32				
56-Up	10	12.5	14.5	17	19	21	23	24.5	26	27.5	28.5	30	31	31.5	32.5	33	33.5					
		Lean					Fit				Average				Unhealthy							

### Body fat percentage calculation chart – Female

		GoFit Body Fat Caliper measurement in Millimeters																				
		2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25	26-27	28-29	30-31	32-33	34-35				
Age	18-22	11.5	13.5	15.5	17.5	19.5	21.5	23	25	26.5	27.5	29	30	31.5	32.5	33	34	34.5				
	23-27	12	14	16.5	18.5	20.5	22	24	25.5	27	28.5	29.5	31	32	33	34	34.5	35				
	28-32	12.5	15	17	19	21	22.5	24.5	26	27.5	29	30.5	31.5	32.5	33.5	34.5	35	36				
	33-37	13	15.5	17.5	19.5	21.5	23.5	25	26.5	28	29.5	31	32	33	34	35	36	36.5				
	38-42	14	16	18	20	22	24	25.5	27.5	29	30	31.5	32.5	34	35	35.5	36.5	37				
	43-47	14.5	16.5	19	21	23	24.5	26.5	28	29.5	31	32	33.5	34.5	35.5	36.5	37	37.5				
		48-51	15	17.5	19.5	21.5	23.5	25	27	28.5	30	31.5	33	34	35	36	37	37.5	38.5			
		52-55	15.5	18	20	22	24	26	27.5	29	30.5	32	33.5	34.5	35.5	36.5	37.5	38.5	39			
		56-Up	16.5	18.5	20.5	22.5	24.5	26.5	28	30	31.5	32.5	34	35	36.5	37	38	39	39.5			
		Lean				Fit				Average				Unhealthy								

### GoFit Body Fat Caliper Measurement suggestions

- For optimal consistency, use the same caliper for each reading, doing the readings at the same time of day.
- Always take measurements on your right side.
- Take readings only on healthy, unblemished skin.
- Skinfold site and fingers must be dry and free of lotion.
- Practice grasping the skinfold to develop consistency. Remember to be gentle, avoiding skin irritation.
- Avoid taking measurements if you feel overheated, or following physical activity. This creates added fluid under the skin, which may cause skinfold to be thicker.
- Females should avoid measuring during the menstrual cycle, during which time there may be weight gain.
- It is not recommended for an obese individual to take skinfold measurements. It is recommended to use tape measures like GoFit Go Tape, Fitness Tape Measure.



# Body Fat % Measurement

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## STANDARD FOR WOMAN (17-27%)

	Body Fat Percentage in Women			
Age	Lean	Ideal	Average	Over Fat
Up to 20	11-18%	18-23%	23-30%	30-35%
21-25	12-19%	19-24%	24-30%	30-35%
26-30	13-20%	21-25%	25-31%	31-36%
31-35	13-21%	21-26%	26-33%	33-36%
36-40	14-22%	22-27%	27-34%	34-37%
41-45	14-23%	23-28%	28-35%	35-38%
46-50	15-24%	24-30%	30-36%	36-38%
51-55	16-26%	26-31%	31-36%	36-39%
56 & up	16-27%	27-32%	32-37%	37-40%

## STANDARD FOR MAN (14-23%)

	Body Fat Percentage in Men			
Age	Lean	Ideal	Average	Over Fat
Up to 20	2-8%	8-14%	14-21%	21-25%
21-25	3-10%	10-15%	15-22%	23-26%
26-30	4-11%	11-16%	16-21%	21-27%
31-35	5-13%	13-17%	17-25%	25-28%
36-40	6-15%	15-20%	20-26%	26-29%
41-45	7-16%	16-22%	22-27%	27-30%
46-50	8-17%	17-23%	23-29%	29-31%
51-55	9-19%	20-25%	25-30%	31-33%
56 & up	10-21%	26-31%	26-31%	31-34%



# Where to start?

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Goal setting

S – specific e.g. how many kg away from ideal weight

M – Measurable e.g. from medium size to small size

A – Attainable e.g. to lose 1-2 pounds per week

R – Relevant e.g. food choice, eating time, sleep quantity and quality, stress

T – Time-bound e.g. achieve the goal in 3 months

Example: I am **READY** to spend 6 months to lose 12 pounds (plus reduce 3% of body fat) and wear my wedding gown nice and fit.



# What's next? CHANGE

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# Identify barriers

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List the barriers of being physically active and balanced diet

\* Interactive activity 4



# Possible solutions

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# Question and comment

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# Reference

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Centre of Health Protection HKSAR BMI index

[https://www.chp.gov.hk/en/resources/e\\_health\\_topics/pdfwav\\_11003.html?page=2](https://www.chp.gov.hk/en/resources/e_health_topics/pdfwav_11003.html?page=2)

WHO Asian BMI Index

[https://www.researchgate.net/figure/WHO-Asian-BMI-classification\\_tbl1\\_296026141](https://www.researchgate.net/figure/WHO-Asian-BMI-classification_tbl1_296026141)

Australian Dietary Guidelines by National Health and Medical Research Council

<https://www.eatforhealth.gov.au/guidelines/australian-guide-healthy-eating>

衛生署星級食肆

<https://restaurant.eatsmart.gov.hk>





Thank You