

## 授課講師學經歷

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## 授課內容摘要

依目前的證據顯示，減少 5-10%的體重對健康就有顯著的幫助。然而，治療的目標是幫助病人達到並且能夠長期維持減少的體重。「長期減肥成功」定義是減重 5-10%而且能保持至少半年。長期體重維持除了強化飲食控制與體能活動外，減重的維持可以藉由行為改變來增進，例如增加治療人員與肥胖者討論見面的機會、強化社會支持或團體壓力、教導問題解決與復胖的預防等。美國國家體重控制登錄系統(The National weight control registration, NWCR) 是研究如何成功維持減重效果的很好的方法，它提供了成功減重者的特徵與成功方式的重要資訊，可以作為減重者很好的參考。

要達到長期減重效果，臨床者需要加強以下的方式：

### (一) 目標設定

建議設定一個減少 10%體重的目標，鼓勵病人在 5-6 個月內達到這個目標，並且維持。

### (二) 以減少熱量攝取當作目標

早期的減重介入是降低熱量攝取為主，開始時基本熱量的目標是每天 1200 大卡，但這個目標可以視情形修正。

### (三) 增進體能活動

增加體能活動是維持減重最重要的預測因子，要減重的人應鼓勵增加日常生活的體能活動，最近的研究顯示越多的體能活動可以達到越多的減重效果，因此，剛開始最好設定每週運動 150 分鐘，經過一段時間，要將運動增加到每週 300 分鐘來達到長期維持減重效果的目的。

### (四) 讓病人覺得自己是有義務的以及需要自我警惕

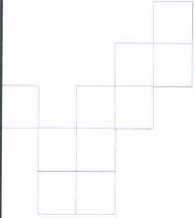
改變飲食及運動習慣是很困難的，過重者已經長年維持一種飲食方式，減重改變了原有的飲食與體能活動習慣，社會支持系統以及環境的架構要能支持這個改變，自我監控飲食與活動、每天量體重、規律的與治療人員接觸等都是很重要的自我警惕方式。

### (五) 教導解決相關問題的技巧及預防復胖

教導病人預期體重控制會發生的困難並預先計畫應付的辦法。

### (六) 讓病人瞭解成功減重及維持是可以做到的

雖然減重不容易，但長期維持減重成果並不是這麼困難。因此，只要有信心，過重的人一樣也可以減重成功而且長期維持。



**減肥後不復胖**

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復健醫學部 主任  
劉燦宏

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**Definition of Weight Loss Maintenance**

- 5~10% of body weight loss and maintained for 6 months
- Wing and Hill proposed that successful weight loss maintainers be defined as "individuals who have intentionally lost at least 10% of their body weight and kept it off at least one year"
- Greater initial weight loss more likely to weight regain
- Greater loss regain more, but achieve the best long-term outcomes.

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**What Makes Weight Loss Maintenance so Difficult?**

- Decreases in metabolic rate
- Changes in catecholamine excretion and thyroid function
- Increase in ghrelin
- Changes in lipoprotein lipase activity

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## What Makes Weight Loss Maintenance so Difficult?

- Become bored on restricted diets
- More responsive to palatable foods and social cues
- Decrease motivation, such as appearance, health
- “costs” of adhering to a weight loss regimen

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## The Challenge of Obesity Treatment: avoiding weight regain

- Avoiding weight regain is a challenge for many patients.
- Continued contact with a health care provider after weight loss is beneficial.
- Behavioral factors are associated with sustained weight loss.
- Exercise specialists and dieticians can provide support for sustained weight loss.
- Simple pragmatic programs may suffice.

CMAJ 2009

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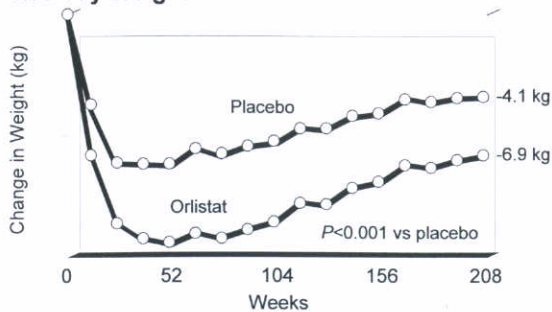
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## Effect of Long-term Orlistat Therapy on Body Weight



Torgenson et al. Diabetes Care 2004;27:155

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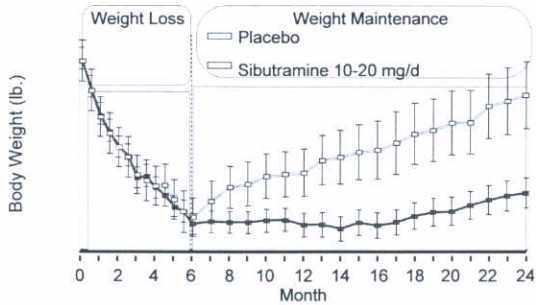
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### Initial Responders to Sibutramine Can Maintain Long-term Weight Loss



James et al. *Lancet* 2000;356:2119.

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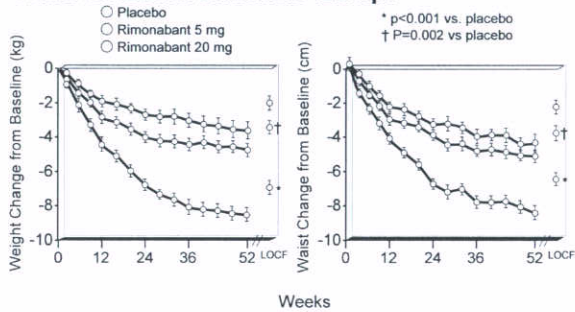
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### Change from Baseline in Body Weight and Waist Circumference: RIO-Europe



Van Gaal LF et al. *Lancet* 2005;365:1389-1397.

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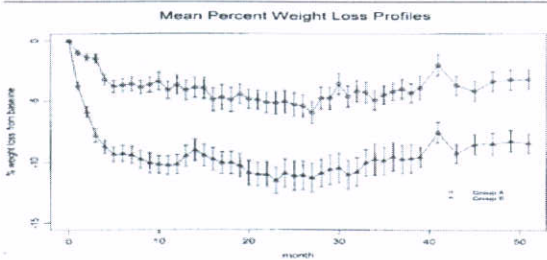
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### Meal Replacement and Weight Maintenance



Obes Res 2000;8:399-402

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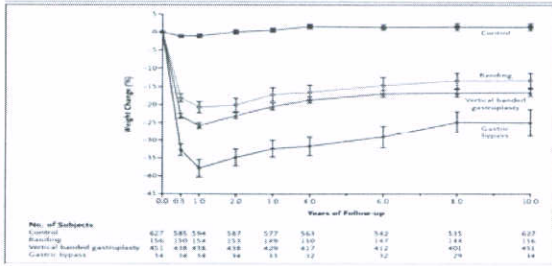
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### Bariatric Surgery and Weight Maintenance



N Engl J Med. 2004;351:2683-93

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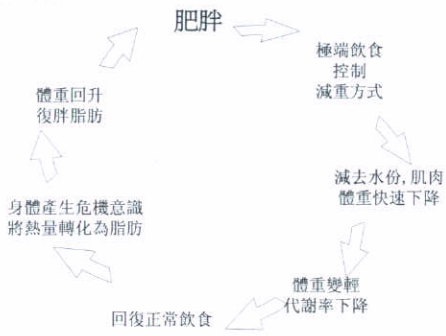
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### Consequence of Poor Weight Maintenance: Yo-yo effect




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### Weight Maintenance Strategies

- Eating habits
- Self-monitoring
- Physical activity

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### Dietary Intake in Long-term Weight Control

- Total calories
  - Calories and fat intake
  - LCD Vs. VLCD
- Macronutrient
  - Low fat Vs. low CHO
  - Adherence
- Simplicity
  - Meal replacement

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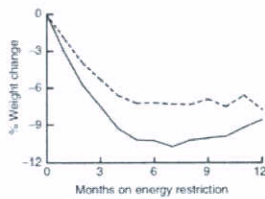
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### Low or Moderate Dietary Energy Restriction for Long-term Weight Loss: What Works Best?



**Figure 1** Mean percentage weight change in the 10% (dotted line) and 30% (solid line) energy-restricted (ER) groups over 12 months. Significant change in percent weight over time ( $P < 0.001$ ), no significant difference in change in percent weight overtime between the 10 and 30%ER ( $P = 0.87$ ).

Obesity, 2009

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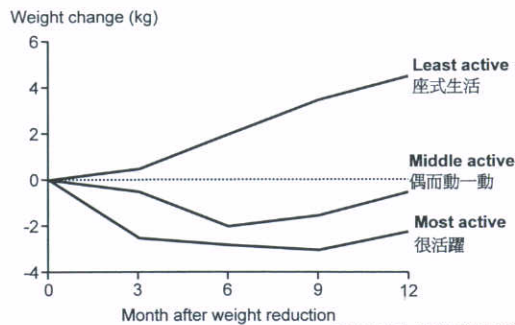
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### 如何避免復胖? Body weight changes and physical activity



Andersen et al. JAMA 1999;281: 335-40

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### Improving Long-term Adherence to Physical Activity

- Short bouts
- Home exercise equipment
- Small incentives
- Pedometers
- Group and supporter

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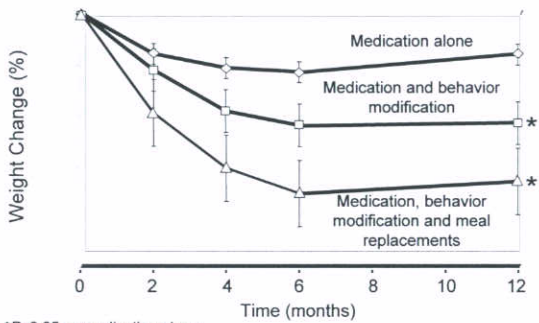
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### Additive Effects of Behavior and Diet Therapy with Pharmacotherapy for Obesity



\*P<0.05 vs medication alone.

Wadden et al. *Arch Intern Med* 2001;161:218.

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### Behavioral Strategy in Weight Maintenance

- Extended contact
- Clinical visit
- Phone call
- Internet
- Social support
- Problem solving and Relapse prevention

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## Long-term Behavioral Modification Programs

- The spa
- Starvation
- Long-term treatment strategies
- Weight-loss camps
- Day care treatment
- The Internet and website

Obes Rev. 2008

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## Objectives of the WLM Interactive Behavior Change Website

- Reinforce existing behavioral self-management strategies
- Facilitate and encourage new self-management skills
- Improve self-efficacy for long-term weight management
- Remain fresh and inviting to encourage regular, long-term contact
- Promote social support among website users

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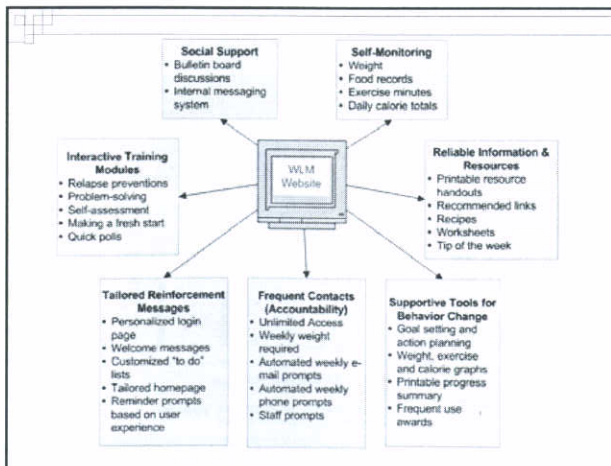
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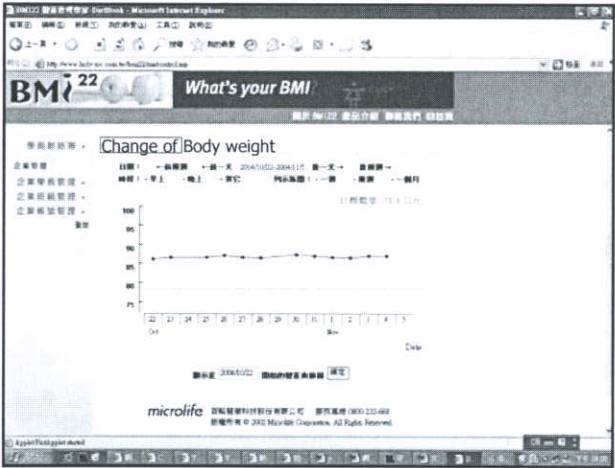
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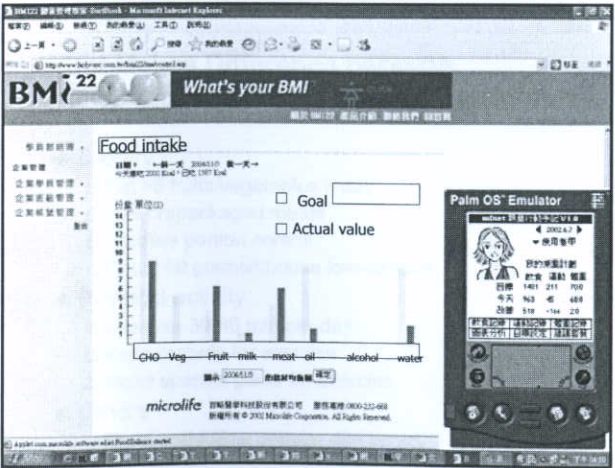
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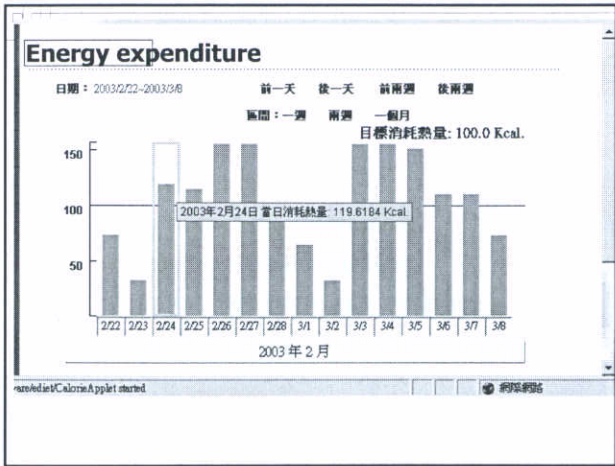
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### The National Weight Control Registry (NWCR)

- 1994, Drs. Rena Wing and James Hill
- 18 years-old or older
- Have maintained a weight loss of at least 30 lbs. for at least one year
- More than 6000 participants enrolled to date
- Predominately female (77%)
- Before losing weight, the average BMI of 36.7

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### What Makes Difference between Successful and Unsuccessful Maintainers

- Dietary
  - Eat >5 fruits/vegetables a day
  - Use prepackaged meals
  - Practice portion control
  - Count fat grams/choose low-fat food
- Physical activity
  - Exercise 30-60 min per day
  - Keep records for exercise
  - Make specific plans for exercise
- Others
  - Read and follow popular diet books

IJO, 2008

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### What Makes Difference between Successful and Unsuccessful Maintainers

- Job commitments
- Healthy eating too expensive
- Exercise too time consuming
- Too easy to slip back into old habits
- Perceived difficulty of managing weight

IJO, 2008

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### Weight Maintenance, Behaviors and Barriers

**Table 6** Final logistic regression model on successful weight loss maintenance outcome

Dependent variable	Odds ratio (95% CI)	P-value
Time since treatment	0.95 (0.91, 0.99)	0.011
Maximum weight loss on study	0.85 (0.78, 0.93)	< 0.001
Exercise 30–60min per day	<u>5.09 (1.69, 15.36)</u>	0.004
<i>Perceived difficulty of managing weight</i>		
Impossible	1.00	
Very difficult	2.80 (0.81, 9.69)	0.103
Fairly difficult	8.07 (2.21, 29.48)	0.002
Easy/relatively easy	<u>24.08 (2.24, 259.4)</u>	0.009

Abbreviation: CI, confidence interval.

IJO, 2008

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### Experience from NWCR

- Self-monitoring
  - Weight self regularly (at least once/week)
  - Count calories
- Dietary Intake
  - Consume a low-calorie, low-fat diet
  - Eat breakfast regularly
  - Limit portion sizes
  - Limit intake of high fat/high calorie foods
- Physical Activity
  - Engage in high levels of physical activity (>300 min/week)

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### What Successful Registry Weight Loss Members Do?

- A low daily caloric intake
- Most meals are prepared at home
- Rarely eat fast food
- Very little variety in their diet
- self-monitoring
- Count calories
- Walking and cycling
- Watch 6-10 hr/week TV (Vs. 28 hr)

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### Summary

- Goal setting
- Targeting decreased caloric intake
- Increasing physical activity
- Making patients accountable and vigilant
- Teaching skills related to problem solving and relapse prevention
- Helping patients realize that successful weight loss maintenance is possible

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Thanks for your attention

劉燦宏

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