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• 中文關鍵字	體重過重；基礎代謝率；身體組成；飲食；運動
• 英文關鍵字	Overweight；Basal metabolic rate；Body composition；Diet；Exercise
• 中文摘要	體重過重或肥胖常與許多慢性疾病的發生或嚴重程度有關,而減重可使其疾病症狀減輕或消除。因此本實驗在研究 67 個停經前女性,減重前先測定其體組成、熱量代謝及血液生化值做爲基本資料,並與年齡相配合之正常體重婦女比較各項差異。肥胖婦女依其肥胖程度將身體質量指數(BMI)值 26.4-30.7 者分爲輕度肥胖組,而 BMI>30.8 以上者分爲中度肥胖組,而 BMI 值 19.8-24.2 者爲正常體重組。肥胖婦女以飲食控制方式減輕體重,追蹤半年至一年,在 67 個受測者中選取體重減輕大於原體重 5%以上者 29 人加以分析比較減重前後體組成、熱量代謝及血液生化值變化情形。結果顯示:不同程度肥胖女性,不管是體重、瘦體組織重、脂肪重及休息狀態下熱量代謝(RMA)皆有顯著之不同,中度肥胖組高於輕度肥胖組,輕度肥胖組又高於正常體重組。在血液生化值中,中度肥胖組血漿三酸甘油酯(TG)、膽固醇(Cholesterol)、低密度脂蛋白膽固醇(LDL-C)、LDL-C 與高密度脂蛋白膽固醇(HDL-C)之比值及表面蛋白 B(apo B)皆顯著較輕度肥胖者爲高,而 HDL-C 則顯著較低。在減重大於 5%之 29 人中,減重後體重平均下降 9.2.plmin.5.2kg(由 79.6.plmin.13.8kg 下降至 70.4.plmin.11.2kg),脂肪含量百分比下降 3.6.plmin.2.3%(由 35.8.plmin.3.6%下降至 32.2.plmin.3.4%)均有顯著差異($p<0.05$)。在休息狀態下之熱量代謝,減重後明顯較減重前低,但若以每公斤體重或每公斤瘦體組織來看則沒有顯著差異,顯示減重後 RMR 伴隨瘦體組織減少而降低。血漿 TG、Cholesterol、LDL-C、apoB 在減重後均顯著降低,HDL-C 則顯著上升($p<0.05$),顯示體重減輕只要大於原體重 5%以上,即可有效改善血脂質組成可能藉此改善相關疾病危險因子。
• 英文摘要	Epidemiological studies have shown that obesity has positive correlation with the incidence of chronic diseases, and weight reduction ameliorate the severity of the diseases. Domestic studies about the various comparisons before and after weight reduction are rare. The aim of this study was to

investigate the changes in body composition, energy metabolism and biochemical indices before and after weight reduction. Besides, the possible advantages of weight reduction were also discussed. Sixty-seven premenopausal obese women were recruited into our study for a weight reduction program for one half to one year period. Eighteen normal weight age matched women served as control. The body mass index (BMI) of control group was 19.8-24.2. Women with BMI ranged from 26.4 to 30.7 were classified as mildly obese group (n=44), and those with BMI>30.8 were regarded as moderately obese group (n=23). The results revealed that body fat mass (FM), fat free mass (FFM) and resting metabolic rate (RMR) were significantly different among the normal weight, mildly obese and moderately obese groups, and these parameters were increased in accordance with the body weight. There was no difference in RMR/FFM ratio among the three groups, the ratio of RMR/BW, however, was significantly lower in obese groups than in the normal weight group. Among the 67 subjects, only 29 subjects reduced weight for more than 5% of their initial body weight, and the mean weight loss of the subjects were 9.2.plmin.5.2kg. Body fat content was reduced for 3.6.plmin.2.3% after weight reduction. Plasma triglyceride (TG), total cholesterol (TC), low density lipoprotein cholesterol (LDL-C), LDL-C and high density lipoprotein-cholesterol (HDL-C) ratio and Apolipoprotein B (Apo B) concentrations were significantly higher whereas HDL-C was lower in moderately obese group than in the normal weight group. Plasma TG, TC, and LDL-C concentration were significantly lowered and HDL-C was significantly increased after weight reduction. However, the concentration of HDL-C of the obese groups was still lower than in the normal weight group. In conclusion, body FM, FFM and RMR were significantly higher in obese groups than those of the normal weight group. RMR/BW was significantly lower in obese groups than the normal weight group, this finding may indicate that obese women have relatively hypometabolic response compared to normal weight women. Weight reduction in obese subjects significantly decrease FM, FFM and RMR. On the other hand, plasma TG, TC, LDL-C and apo B concentration were significantly lowered and HDL-C was increased after weight reduction. The results suggest that weight reduction for more than 5% of initial body weight can significantly reduced plasma lipids, and may improve the overall health condition of the individual subject.