



Losing Greater Amounts of Weight Leads to Greater Changes in Medical Risk Factors

S. May, Ph.D.; L. Grant, BS; L. Gotthelf, PhD
Health Management Resources, Boston, MA, US

Objective To evaluate whether patients who lose > 20% of initial body weight experience greater changes in medical risk factors compared to those who lose lesser amounts of weight.

Subjects ✓ Patients who entered the HMR Program for Weight Management™ and completed a follow-up health risk appraisal between January, 2003, and May, 2006.
✓ 2564 patients from 65 clinics were assessed.

Program HMR offers a range of weight-loss treatment options, including medically supervised low and very low-calorie diets, moderately restricted diets and phone-based programs as well as long-term maintenance. The program is based on measurable, evidence-based variables allowing for specific goals to be set and compliance to be tracked. All options for weight loss and maintenance focus on the same lifestyle changes: increased physical activity (≥ 2000 kcal/wk); use of meal replacements (≥ 35/wk in weight loss and 14/wk in maintenance); increased vegetable and fruit intake (≥ 35/wk) is included in some weight-loss options and in maintenance.

Results

Measure	% of Initial Body Weight Kept Off (Average time = 123 weeks)			
	> 20%	20%-16%	15%-11%	10%-5%
Number of Patients	789	501	623	651
Weight	↓ 80 lbs.	↓ 43 lbs.	↓ 30 lbs.	↓ 17 lbs.
Total Cholesterol/HDL	↓ 22.5 %	↓ 13.2 %	↓ 12.0 %	↓ 8.1 %
Triglycerides	↓ 40.7 %	↓ 19.5 %	↓ 21.7 %	↓ 12.9 %
Systolic Blood Pressure	↓ 12 mmHg	↓ 6 mmHg	↓ 6 mmHg	↓ 4 mmHg
Diastolic Blood Pressure	↓ 9 mmHg	↓ 5 mmHg	↓ 5 mmHg	↓ 3 mmHg
Fasting Blood Glucose	↓ 12.5 %	↓ 6.7 %	↓ 6.9 %	↓ 4.0 %
Medications Eliminated	↓ 51.0 %	↓ 35.3 %	↓ 29.2 %	↓ 21.3 %
Physical Activity (kcal/wk)	↑ 256 %	↑ 189 %	↑ 98 %	↑ 98 %
% Dietary Fat	↓ 32 %	↓ 26 %	↓ 18 %	↓ 13 %
Total Risk Factor Score	↓ 36	↓ 25	↓ 18	↓ 14

Medical changes occurred in addition to substantial decreases and/or elimination of medications

- ✓ All measured medical risk factors (TC/HDL, triglycerides, blood pressure, and fasting blood glucose) decreased significantly (p < .01) more in those losing the most weight as compared to all other groups.
- ✓ Patients reporting the greatest changes in lifestyle behaviors (physical activity, % dietary fat, and vegetable/ fruit) lost more weight, indicating a dose-response relationship.
- ✓ There was also a dose-response relationship in terms of weight loss and the % of medications eliminated (cholesterol, blood pressure, oral diabetes, and insulin).

Conclusions ✓ Although all patients in a structured weight management program experienced substantial medical changes with weight loss, those losing > 20% of initial body weight had the greatest change in all measured risk factors.

✓ The standard 5-10% of initial weight should not be considered a limit for weight loss.