

# Employees Lost Weight & Improved Health

Authors: Yen Ang (DrPH, RD, ACSM), Chan Wai See (MBBS), Pua Sze Ning (MBBS), Ellena Chong (BN, RN), Chun Teik Lan (SRN), Tay Pai Lim (RN), Ch'ng Keat Hui (BSc), Choo Yong Chek (MSc), See Wee Dee.

## INTRODUCTION

The business of a hospital is to take care of the sick, but the workers of the hospital are not the healthiest employees. Penang Adventist Hospital found itself saddled with a large proportion of its employees who are obese or overweight, and with many chronic diseases.

## PURPOSE/METHOD

Overweight and obese employees (n=45) participated in a weight-reduction program provided by the hospital. The Intervention Group or IG (n =22) went through a 10-week educational intervention. Besides the pre-post health screening, the intervention group attended 3 full-day classes focusing on healthy eating, exercise, and behavior modification. They kept a weekly exercise log and were instructed to exercise at least 3 times a week, had weekly weigh-in and met with the health educators once a week for compliance and motivation. The Control Group or CG (n=23) received no contact or education from the health educators, except the 2 health screenings, and were free to attend any health promotional activities organized for all the employees during that period.

## FINDINGS

At the end of the 10 weeks, the IG experienced significant changes as compared to CG in the following areas:

- Weight loss : IG average weight loss in kg was **9X more** was than CG (3.6kg and 0.41kg, p=0.00 )
- Waist Circumference: IG reduced an average of 4.83cm, CG average 1.57cm, p<0.01
- Body fat %: IG reduced an average of 2.88%, CG average 1.38%, p=0.00
- BMI: IG reduced an average of 1.34; CG average of 0.17, p=0.00
- Max weight loss of 8 kg was achieved in the IG, but only 3.8kg in the CG.
- 12 individuals (54.55%) in the IG but only 1 person (4%) in the CG lost more than 5% of their initial weight.
- This presents a **12x more** weight loss cases that correlate to health improvement in the IG than CG. (i:e weight ≥ 5% of body weight)
- The number of dislipidemia was reduced by 41.6% (5 out of 17 individuals) in the IG, but the number was increased in the CG (from 16 to 18 individuals).
- All 3 individuals in the IG group who had elevated HbA1C experienced a reduction (0.4%, 0.6%, 1.8%)
- The number of dislipidemia was reduced by 41.6% (5 out of 17 individuals) in the IG, but the number was increased in the CG (from 16 to 18 individuals). All three individuals who had elevated HbA1C experienced a reduction (0.4%, 0.6%, 1.8%) in the IG.



The author sits in the center, of the high risk employees. Combined, this group lost a total of 80kg in just 10 weeks.



Above: employees learnt through group activities

Below: one employee lost weight and improved health

Table 1: Anthropometric changes after 10 weeks

Variable	Group	Mean	Significance level
Weight loss (kg)	Intervention	3.60	p=0.00
	Control	0.41	
Waist circumference reduction (cm)	Intervention	4.83	p<0.01
	Control	1.57	
Body fat % reduction	Intervention	2.88	p=0.00
	Control	1.38	
Body Mass Index (BMI) reduction (kgm <sup>-2</sup> )	Intervention	1.34	p=0.00
	Control	0.17	

## CONCLUSION

Our findings show that when a high risk group (overweight and obese) received a structured intervention and more attention, there was a statistical significant difference in weight loss and waist circumference reduction compared to the group that did not. Though we cannot draw any statistical correlation, it is worth noting there are positive health improvement in terms of reduction of dislipidemia and HbA1C cases in the intervention group in the short time of 10 weeks.


## PENANG ADVENTIST HOSPITAL

Operated by Adventist Hospital & Clinic Services (M) (255697-M)

465, Jalan Burma, 10350 Penang, Malaysia  
Tel: (+604) 2227200 LoCall: 1-300-88-4325  
E-mail: enquiry@pah.com.my Website: www.pah.com.my

Fax: (+604)2280443  
Facebook: fb.com/pahpg

### Shuhaimi



Diabetes 8 years

Lost : **7 kg** (5.3%)

FBG: **↓ 28.5%**

HbA1C: **↓ 1.8%**

TC: 7 to 6.3 (**↓ 9.5%**)

LDL: 4 to 3.7 (**↓ 7.5%**)

TG: 2.5 to 2 (**↓ 20%**)

Compared to Anti-diabetic medications:  
FBG **↓** Up to 25%  
HbA1C **↓** up to 1.5%

