



BALANCED DIET; BALANCED LIFE

Dr. Sirajul haque¹, Dr. Shehla Basit², Dr. Ramesh Kumar Tanwani³, Dr. Tabassum Zehra⁴,
Prof. Nazir Ahmad Solangi⁵

1. Medical Officer, PCSIR; Karachi
2. SMO PCSIR; Karachi
3. Assistant Professor Pharmacology, PUMHSW-SBA, Nawabshah
4. Associate Professor Pharmacology, LNMC; Karachi
5. Professor Pharmacology, LNMC; Karachi

Correspondence Address:

Prof Nazir Ahmed Solangi
Professor Pharmacology,
LNMC; Karachi

snaiqra@gmail.com

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ABSTRACT: Objective: Non-pharmacological intervention to manage the health by healthy balanced diet and life style modifications. **Study Design:** Randomized Cross sectional Study. **Place & Duration:** Pakistan Council of Scientific and Industrial Research (PCSIR) laboratory Karachi from March 2012 to June 2013. **Material & Methods:** In this study, 210 volunteers were included (137 male and 73 female) aged between 25-60 years. The study was conducted with the questionnaire being filled at PCSIR labs, Karachi. The study period included from March to May 2012. One year later the same group of volunteers were re-examined from March to June 2013, who managed to alter the diet and life style for one year. The questionnaire was filled by an expert well versed in collecting the data from the patients who attended the OPD at PCSIR labs. **Results:** The results indicate that a lot of people in our population lead a sedentary life style and do not take part in physical activity which leads to health problems due to comparatively less energy / calories expenditure. **Conclusion:** Efforts should be made globally to create a public awareness and provide healthy environment to the people about pursuing healthy lifestyles. Several life style behaviors may influence to maintain energy balance over long term. The primary approach for achieving weight loss is lifestyle changes which includes reduced intake of calories and increase in physical activity. Regular, moderate intensity physical activity enhances long term weight maintenance and balance between energy input and output.

Key words: Balanced diet, Exercise and Weight loss

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INTRODUCTION

Balance healthy nutrition and regular physical movements are the key forces as a major adaptable determinant and obstacle for chronic diseases like obesity, hypertension. The scientific facts gradually more linked with the concepts that alteration in diet pattern and physical activities have strong effects, both positive and negative. Prominently, dietary adjustment not simply manage current physical state of body, in addition bodily movement resolve it. The individual will have the chances to diminish or modify diseased process such as cardiovascular disease and diabetes; to a great extent afterward in life. However, these concepts are capable of change in policies or in carry out by general men.¹

In many rising countries, foodstuff polices stay paying attention not only on under nutrition persons but also addressing for the avoidance of dis-

eases. The chief rationale for the discussion was to look at and to build up the recommendation for balance diet and way of life for the prevention chronic diseases,² means non-pharmacological and non drug approach for restore to health and avoidance from persistent diseases.

Energy outflow from body through the bodily movement or exercise, an important way of the vigorous energy consumption, to maintain the body mass index. Increase in BMI, occur through reduced exercise or by increase fatty diets intake. These are the key basis to add the universal epidemic of overweight and heaviness. Physical activity has enormous influence on body composition, like quantity of fat, strength of muscles and body tissues. Physical movements and balanced nutrients intake have great values, they decrease the hazard and progress in the pathogenesis of several chronic diseases,³ like blood vessels and

metabolic disorders.

Regular exercise and foodstuff ingestion, both have precise and reciprocally interacting behaviors. Deficient in the physical movement by now is a universal fitness risk and common, speedily growing dilemma. To achieve and receive the paramount outcome in preventing and curing to diseases, strategies and guiding principles practically to be familiar with critical position among balance diet and physical activity.⁴

Life style transforms have major relation with health and nutritional status. Whereas values of life, enhanced food availability, increases mental work, decreases physical activity have momentous harmful effects.¹

Weight constancy needs balance between energy inputs, energy outputs. Simply means that to eat less and exercise more would seem to be straight forward. Several life approaches manipulated, for to sustain energy balance over the long period. Excess utilization of sugar sweetened beverages, sweets and processed foods make difficult to do so, but balanced utilization of whole grains, fruits and vegetables make it easier and smoother. In addition the period of sleep may also influence energy spending and utilization.⁵

Living approach and behavior, physical activity and doing, sleep duration and pattern, balance diet and nutritional, alcohol intake and smoking are attention-grabbing approaches.

Height and weight measured for body mass index (BMI) and other parameters were evaluated by questionnaire. Numerous life manner changes are connected individually for weight, utilization of specific foods and beverages, physical activity and smoking behavior. All these links should be balance in energy intake and energy expenditure.²

Physically powerful constructive relations present among the amount of intake of starches, refined grains, processed foods, vegetables, nuts, fruits, whole grains.⁶ The direct relations with weight

gain, increase intake of foods and inverse relations with weight gain, decreasing the overall amount of energy consumed.⁷

Diminished physical activities are independently related to long term gain in weight. Whereas Person may attain a new steady state of weight, within months after change in regular physical exercise or diet pattern or life style.⁸

Decrease or change in sleep duration and pattern is also concordant with obesity and overweight. Low weight gain among people, have sound sleep for 6-8 hours and high among people, sleep less than 6 or more than 8 hours.⁹

Balanced diet and life approach have a key impact on the physical condition of personality and can facilitate to restore to health mainly due to metabolic conditions. Fast transform of diet forms and living styles, which convey significant adjustment in general health. Balance between the energy consumption and energy expenditure has been conveying underneath, ever-evolving proposals for good health. According to new concepts, balanced diet and lifestyle pattern are key weapons, to cure from cardiovascular disease.¹⁰

This item is place of interest for such key factors which influence fitness problems and can be avoided by non-pharmacological measures in relation to diet and life style.

MATERIAL AND METHODS

This study included 210 volunteers in which 137 were male and 73 were female aged between 25-60 years residing and associated mostly with PC-SIR. Study were started between March to May 2012, information of recruited participants' collected. After one year from March to June, 2013, same patients re-examined and data collected.

After primary data collection, counseling done with volunteers and advice them avoid to consuming high cholesterol foods, high calorie beverages, sugar and sugar-sweetened related food products, processed and junk foods. They were advised and encouraged to adopt prudent dietary

intake like fruits, green vegetables, legumes, whole grains, fish and white meat. Along dietary advice they were asked to do daily at least for 30 minutes regular and active exercise and minimized to sitting activities like TV watching, sleeping more than 08 hours daily.

During the study period, we were in touch with volunteers and after every three months we called them on mobile, and motivate and encourage them.

The Reason for reexamining the volunteers second time was to see the change that was brought in them after balanced diet and lifestyle modification. After one year it was seen that patients who were obese reduced their weight with watchful eating habits and by exercising as after the first visit. It was advised to them regarding the change in diet and lifestyle importance of fresh fruits and vegetables plus decreasing the intake of sugar

and fats in diet.

During questionnaires, information recorded related to diet, lifestyle, smoking habits, sleeping pattern, psychological state, physical activity, general health problems, job nature and measured the BMI. The physical activity were defined as with a sitting job with no recreational activity or less than 30 minutes per day or standing job with recreational activity.^{11,12}

Information were collected related to quantity and quality / nature of diet , fruits, vegetables, meats, legumes, herb, pickle and drinks / juices' using by research participant members.¹³

Parameters

1. Body mass index (BMI)
2. General health status (problems)
3. Physical activity (exercise)

Observation No. 1. Body mass index (BMI)

Month of Observation	Body Mass Index (BMI) in Range		
	Less Than 24.99	Between 25 to 29.99	More Than 30
March to May 2012	57	142	11
March to June 2013	73	108	29

Observation No. 2. General health status (problems)

Month of Observation	General Health Status (Problem)						
	Sleep Disturbance	Depression	Mood Variation	GIT Complain	Blood Pressure	Diabetes	No Complain
March to May 2012	32	28	54	24	8	6	58
March to June 2013	21	16	40	18	7	6	102

Observation No. 3. Physical activity (exercise)

Month of Observation	Physical Activity (Exercise)			
	Active Regular	Irregular	Occasionally	No Exercise
March to May 2012	10	23	86	91
March to June 2013	28	59	49	74

RESULTS

The study indicates that a vast majority of people don't take part in active physical activity .Only 13.33 % were seen to be involved in some sort of high physical activity

Diet and body weight

Diet and weight has association. Regularly high carbohydrate diets, high cholesterol diet consumption per day were results in weight gain. Also weight gain was observed with decreased

consumption of vegetables, whole grains, fruits, nuts or yogurt in daily routine diet.

DISCUSSION

The current study discloses that many factors are associated with weight gain. Consumption of low fat and low carbohydrate and high fiber diets does not increase weight. Less physical movement and smoking habits as well as long time television watching are also likely to augment the weight. Physically powerful positive relations were observed with change in weight gain, with consumption of starch, refined grains and processed foods.

Modification in physical movement is related to changes in weight. Probability related to persons weight within months, to achieve a low steady state of weight by increase regular physical activity, balanced diet and life style habit.¹³ Obesity can be defined as excess accumulation of body fat, due to imbalance between supply of dietary calories and expenditure of calories by physical movement.¹⁴ Atherosclerosis results in progressive endothelial dysfunction and deposition in large arteries and also at the level of microcirculation, a major risk factor for cardiovascular disease.^{15,16}

CONCLUSIONS

Healthy balanced diet begins with learning how to 'eat smart' and remain fit. Your food choice can reduce the risk of illness especially cardiovascular and metabolic disorders. Whereas active regular physical exercise reduces the cardiovascular and metabolic disorders as well as CNS problems like sleep disturbance, depression and Mood variation.

The reduced physical activity and smoking habits as well as television watching are likely to increase weight. Furthermore beverages, refined grains, processed foods & starch intake are also culprits in weight gain.

Regular physical activity and balance diet, maintain our weight. For to look smart and to remain physically, mentally and cardio-vascularly fit, reg-

ular performance of exercise at least for 30 minutes at one time per day.¹⁸

In short strike a balance in our life & diet; eat more whole grains, enjoy healthy fats, put proteins in perspective, add calcium and vitamin D fill up on fruits and vegetables, and limit sugar and salt. Plan a healthy diet.¹⁷ Adequate rest & sleep are also important; need to be follow & is useful.

RECOMMENDATIONS AND SUGGESTIONS

Self energy and self motivation play an important role, to keep the health normal. Unavailability of facilities and healthy environment for safe exercise places near to the residential colonies.

There is lack of administrative & political will for well being of common man. Government need to focus betterment of people at large; seminars; Sympsiums & Discussion need to arranged for small as well as big cities; Incentives may be provided for them as well. This will go a long way in disseminating knowledge. Reputed persons with integrity are needed for the betterment of the people of pakistan.

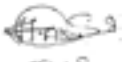
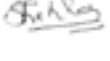
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REFERENCES

1. World Health Organization. **Report of joint WHO / FAO expert consultation.** Diet, nutrition and the prevention of chronic diseases. Geneva; WHO 2003.
2. World Health Organization. **Keeping fit for life: meeting the nutritional needs of older persons.** Geneva Switzerland: WHO, 2002.
3. MacAulay J, Newxsome R. **Solving the obesity conundrum.** Food technology. 2004;58:1-6.
4. US Department of Health and Human Services. **Healthy people 2010: understanding and improving health. 2nd ed.** Washington, DC: US Government Printing Office, 2000. Available from <http://www.health.gov/healthypeople>.
5. Roberts SB. **Regulation of energy intake in relation to metabolic state and nutritional status.** Eur J Clin Nutr. 2000;54(suppl):S64-9.
6. Tucker KL. **Dietary intake and bone status with aging.** Curr Pharm Des. 2003;9:2687-704.
7. Lichenstein AH, Kennedy E, Barrier P, Ernst ND, Grundy

- SM, Leveille GA, et al. **Dietary fat consumption and health.** *Nutr Rev.* 1998;56(5Pt 2):S3-19;discussion S19-28.
8. The health eating index. United States Department of Agriculture. **Center for Nutrition Policy and Promotion.** Available from <http://www.cnpp.usda.gov>.
 9. National Center for Health Statistics. **Health Statistics.** Health, United States, 2004. Hyattsville, MD: National Center for Health Statistics, 2004.
 10. Robert HE. **Preventive Cardiology by Lifestyle Intervention: Opportunity and/or Challenge?** Presidential Address at the 2005 American Heart Association Scientific Sessions. *Circulation.* 2006;113:2657-61.
 11. Sergeant LA, Khaw KT, Bingham S, Day NE, Luben RN, Oakes S, et al. **Cigarette smoking and glycemia: the EPIC - Norfolk study.** European prospective investigation into cancer. *Int J Epidemiol.* 2001;30(3):547-4.
 12. Wareham NJ, Jakes RW, Rennie KL, Shuit J, Hennings S, Day NW. **Validity and repeatability of a simple index derived from the short physical activity questionnaire used in the European prospective investigation into cancer and nutrition (EPIC) study.** *Public health Nutr.* 2003;6(4):407-13.
 13. Welch AA, Mctaggart A, Mulligan AA, Luben R, Walker N, Khaw Kt, et al. **DINER (Data into nutrients for Epidemiological Research) -a new data entry program for nutritional analysis in the EPIC – Norfolk cohort and the 7day diary method.** *Public Health Nutr.* 2001;4(6):1253-65.
 14. Mozaffarian D, Hao T, Rimm EB, Willett WC, Hu FB. **Changes in diet and lifestyle and long-term weight gain in women and men.** *N Engl J Med.* 2011;364:2392-404.
 15. Woodhouse R. **Obesity in art: a brief overview.** *Front Horn. Res.* 2008;36:271-86.
 16. Bagi Z, Fehr A, Cassutto J. **Microvascular responsiveness in obesity: Implications for therapeutic intervention.** *Br J Pharmacol.* 2012;165(3):544-60.
 17. Barton M, Baretella O, Meyer MR. **Obesity and risk of vascular disease: importance of endothelial dependent vasoconstriction.** *Br J Pharmacol.* 2012;165(3):591-602.
 18. Kenneth RM. **Gastrointestinal Disorders.** In, Stephen J M, Maxine AP, Michael WR. (eds), *Current medical diagnosis and treatment*, 51 (ED). The McGraw Hill Companies, USA. 2012;15:546-639.

AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Dr. Sirajul Haque	Main Author	
2	Dr. Shehla Basit	Co-Author	
3	Dr. Ramesh Kumar	Co-Author	
4	Dr. Tabussam Zehra	Co-Author	
5	Dr. Nazir Ahmad Solangi	Co-Author	