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### Standardise and therapeutic approach of supplement regarding overweight

**Vishakha Singh, Rohit Maurya, Sukh Veer Singh and Jeet Lal Verma**

#### Abstract

Overweight is a common where calorie rich food supplies are plentiful and lifestyles are sedentary. It is a disorder increases risk of diseases and health problems such as heart disease, diabetes and high blood pressure. Overweight, as well as their related non-communicable diseases, are largely preventable by making the healthier choice of foods, Inclusion of dietary fibres in the diet. The main objective of the present study is to evaluate the effect of fibres present in a Fibre rich supplement. The total forty Overweight subjects male and female of age between 20-30 years were selected from PG Hostel O.U.A.T, Bhubaneswar for this study. The result shows reduction in total body weight was observed in 25-30 years female by 3.4% and found statistically significant in experimental group compared with the control group. The reduction rate in number of meals was highest 20% in 20-25 year male and lowest 4% in 20-25 year female. Also the increase in water intake was 42%, 26%, 22.22% and 42% in male of 20-25 year, female of 20-25 year, 25-30 year male and 25-30 year female respectively after 3<sup>rd</sup> month. Thus inclusion of these fibres in the regular diet is suggested to overcome Overweight and complications in human beings.

**Keywords:** Overweight, Supplement powder, Food intake, Water intake, Weight loss etc

#### Introduction

Overweight is a common where calorie rich food supplies are plentiful and lifestyles are sedentary. It is a disorder increases risk of diseases and health problems such as heart disease, diabetes and high blood pressure. It can also affect a person's bone joints, breathing, sleep, mood, and energy levels. So overweight and obesity can impact a person's entire quality of life. Overweight, as well as their related non-communicable diseases, are largely preventable by making the healthier choice of foods, Inclusion of dietary fibres in the diet, regular physical activity. Reduces the overweight and its complications like constipation, cancer etc. Dietary fibers include a number of nonstarch polysaccharide substances including cellulose, hemicellulose,  $\beta$ -glucans, mucilages, pectins, gums and lignin. These fibre components have unique chemical structures and characteristic physical properties like provides bulk/volume, viscosity, water-holding and adsorption/binding capacity. Dietary fibre are two different types Soluble and Insoluble. Soluble fibre attracts water and turns to gel during digestion and provide fullness filling of the stomach and thus reduces appetite. Here is an inverse relationship between intake of dietary fibre and weight gain and obesity, while fibre consumption is associated with increased satiety and decreased energy intake. This is related to fibres ability to add bulk and weight to the diet Fibre itself has no calories, yet provides a "Full" feeling. The main objective of the present study is to evaluate the effect of fibre present in a supplement powder of fibre rich food like wheat bran, coriander seeds, drumstick and flaxseed which contain both soluble and insoluble fibre toward curing overweight and obesity.

#### Materials & Methods

By the cross-sectional survey Data were collected about the nutrition and health status of the Over-weight patient in OUAT Hostel no - 03 and Hostel no - 06 population using a complex, multi-stage, sampling design. Interviewers conducted in-person 24-hour dietary recalls to record dietary intake data from participants. Respondents were screened on the basis of the following selection criteria: age 20-30 year (Divided into two group 20-25 and 25-30 year) Formulation of supplement powder is done by using wheat bran, coriander seeds, drumstick and flaxseed. For the experiment 40 subjects male and female of age between 20-30 years

were selected from P. G. Hostel O.U.A.T, Bhubaneswar. All were sufferer of Overweight and Obesity.

The intervention phase consisted of 12 weeks in this period the subjects were advised to continue their regular diet curtailing equalorie from their existing diet as well as 25 g of supplement powder that is 12.5 g twice a day which contain 10 g fiber content. Subjects were instructed to take supplement with lukewarm water or by mixing it with diet.

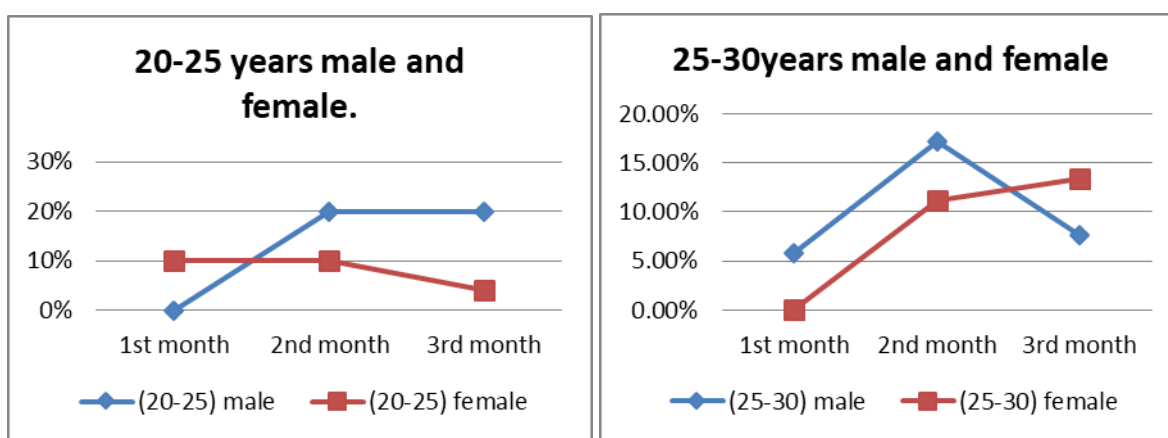
**Result and Findings**

Maximum reduction in total body weight was observed in 25-30 years female by 3.4% and found statistically significant in experimental group compared with the control group. The reduction rate in number of meals was highest 20% in 20-25 year male and lowest 4% in 20-25 year female. The water intake is also increase after intervention, 42%, 26%, 22.22% and 42% in male of 20-25 year, female of 20-25 year, 25-30 year male and 25-30 year female respectively after 3<sup>rd</sup> month.

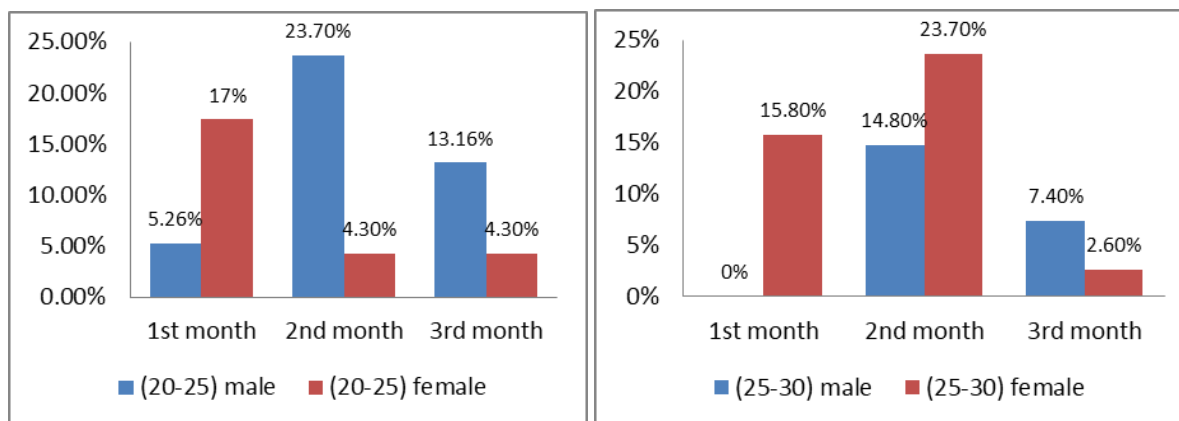
**Table 1:** Changes in body Weight after supplementation

Age	Control group				Experimental group				Final Change	% decrease
	Initial	After 3 month	Final Change	% Change	Initial	After 1 month	After 2 month	After 3 month		
20-25 year male	61.8	62	0	0.00%	66.4	67.5	66.5	66.15	0.25	0.38%
25-30 year male	68.4	88.3	0.1	0.14%	68.8	68.8	68	68	0.75	1.00%
20-25 year female	57.8	57.4	0.4	0.70%	56.2	56	55.45	54.45	1.75	3.11%
25-30 year female	60.2	60.2	0	0	58.8	57.5	57.2	56.5	2	3.40%

significantly higher ( $P < 0.022$ )



**Fig 1(a) (b):** Percent Reduction rate in number of meals



**Fig 2(a) (b):** Increase Rate of water intake in different month

**Conclusion & Recommendations**

Contribution of soluble and insoluble fibre have direct relation to Weight. Consumption of fibres present in supplement powder is found very effective to reduce appetite, number of meal and thus decrease body weight. Thus inclusion of these fibres in the regular diet is suggested to control the Overweight and obesity.

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