

## EFFECT OF ISAPGUL ON SERUM LIPIDS

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**ABSTRACT:** *Ingestion of 10 gm. of Isapgul daily for a period of one month decreased the total serum cholesterol level by 9.6% and Triglyceride level by 8.6%.*

### INTRODUCTION

There has been substantial recent interest in the health benefits to accompany the ingestion of dietary fiber. Dietary fibers have been suggested as being protective for a wide variety of diseases including Cancer of the colon, diverticulitis, diabetes and atherosclerotic cardiovascular diseases<sup>1-4</sup>. The dietary fiber hypothesis of Burkitt and Trowell<sup>1</sup> suggests that the decrease in fiber content of modern diet due to the use of refined flour has been associated with an increased incidence of disease in industrialized population.

Isapgul is known to increase the stool production<sup>5</sup> and is commonly used as a natural laxative. But rare studies have been conducted on its hypolipidaemic property<sup>6</sup>. To study the property of Isapgul, the present study was undertaken.

### MATERIAL AND METHODS

Fourteen normal healthy volunteers were taken in to the study. Isapgul was then ingested in a dose of 10 gms daily for a period of one month. Twelve hour fasting blood samples were obtained before and

after the intervention. The dose was mixed with glassful of water or milk (200 ml) and then taken by the volunteers. Serum Cholesterol and triglyceride were estimated by the method of Carr and Dreckter<sup>7</sup> and Forster and Dumm<sup>8</sup> respectively.

### RESULTS AND DISCUSSIONS

Ingestion of 10 gm of Isapgul daily for a period of one month decreased the total Serum Cholesterol and Triglyceride level from  $171.3 \pm 18.7$  mg/ dl to  $154.8 \pm 28.1$  mg/dl and  $164.3 \pm 25.4$  mg/dl to  $150.2 \pm 28.9$  mg/dl, respectively, e.g. there was 9.6% and 8.6% fall in the total Serum Cholesterol and Triglyceride levels respectively. Table I shows the changes found in Serum lipids during the study. Out of 14 cases 10 cases showed the fall in cholesterol level from 10 mg/dl to 39 mg/dl and one case showed increased in cholesterol level by 10 mg/dl, whereas there was almost no change in cholesterol level of three cases. Triglyceride levels fell from 15 mg/dl to 49 mg/dl in 11 cases, whereas there was increase in these levels in two cases from 21 mg/dl to 48 mg/dl and almost no change in one case.

**TABLE – I**

**Effect of Isapgul on Serum Lipids  
(Mean ± SD)**

	<b>Total Cholesterol mg/dl</b>	<b>Triglyceride mg/dl</b>
Before treatment	171.3 ± 18.7	164.3 ± 25.4
After treatment	154.8 ± 28.1	150.2 ± 28.9
Percent decreased	9.6%	8.6%

Our results that a dose of 10 gm Isapgul for a period of one month daily decreased the total serum cholesterol level by 9.6% and Triglyceride level by 8.6%. Nakamura et al (1982) have shown that a dose of 12 gm Isapgul for a period of 5 weeks caused reduction of total serum cholesterol by

14.4% and moderate changes in Triglyceride levels, which is little different then our results. A long term and lipoprotein fractions study may throw more light in understanding the difference and the effect of this type of water soluble fibre.

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