

Nutritional Influence (Spirulina) of Biochemical and Obese Stress Patients

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ABSTRACT: *Spirulina platensis* is the cyanobacteria, otherwise known as blue green alga is common in fresh water bodies generally found in alkaline saline water. *Spirulina* is significantly effective not only in keeping good health but also in improving various symptoms of disease. *Spirulina* ash contained a number of inorganic and organic, sodium, potassium, phosphorus and vitamin A, Vitamin E (tocopheryl), Vitamin B12 and B6 etc. like complexes. Subject's obesity patients were 100 patients, 50 male and 50 female candidates for 45 days. Initially before start the methodology primary observation and anthropometric measurement were would be taken and WHR (waist and hip ratio), Blood pressure, Hb, hypercholesterolemia, Diabetic, PCOD, menopause, stress with obesity subjects for 100 patients age around 18 to 70 years both male and female. Subjects were divided in 2 groups according gender male female patients data. As per results they were reduced 3 kg weight and improved sleeping quality also. *Spirulina* L-Tryptophan is naturally found in animal and plant, it is very essential amino acid because its protein building block. It is very essential amino acid and body cannot make it so it must require in food. Tryptophan is important for the development and functioning of many organism of the body. After absorbing L-tryptophan from food, our bodies convert it to 5-HPT (5 hydroxytryptophane) and then to serotonin, melatonin and vitamin B6 (nicotinamide). Serotonin is a hormone that transmits signals between nerve cells. It's also causes blood vessels to narrow change in the level of serotonin in the brain can alter mood and feel like satisfaction and satiety. Melatonin is playing important part for sleep and vitamin B6 is essential for metabolism.

Keywords: Obesity; stress; Hemoglobin (Hb); Biochemical parameters; WHR (waist and Hip ratio); *Spirulina platensis*; miracology; linolenic acids; gamma-linolenic acid (GLA); tryptophan; BMI(body mass index).

INTRODUCTION: Dr. Glement Found that ganimon people often collected the blue green alga floating on the surface or lake aired it under the sun and use various preparation spirulina is significantly effective not only in keeping good health but also in improving various symptoms of disease. *Spirulina platensis* is a blue green alga which seen our necked eyes. Which widely produced and commercialized as a dietary supplement with bio and immunity modulatory functions? *Spirulina* found in pound, alkaline lack and domestic level harvesting area. *Spirulina platensis* high protein contents (62-72%), low carbohydrate (9.0-11.2%), Lipids (7.5-8.5%) of spirulina are composed essential fatty acid in the form of linoleic acids and gamma-linoleic acid (GLA). Around 4-7% GLA is the precursor of prostaglandin the master hormones that control many function of human body, chlorophyll A (0.61-1.12 %). The *Spirulina* ash contained a number of inorganic and organic, sodium (8500-99000ppm), potassium 113, phosphorus and vitamin

A, vitamin, Vitamin E (tocopheryl), Vitamin B12 and B6. Like complex. *Spirulina* had favorable effects on lipids profile immune function and antioxidant. Favorable effects of *Spirulina* Supplementation are on obesity patients.

MATERIAL AND METHODS: Initially before start the methodology primary observation and anthropometric measurement were would be taken and WHR (waist and hip ratio), Blood pressure, Hb, hypercholesterolemia, Diabetic, PCOD, menopause, stress with obesity subjects were 100 patients age around 18 to 70 years both male and female. Subjects were divided in 2 groups according gender male female patients data.

Decided 2 groups according to parameter:

1. First were non *Spirulina* supplementation subjective patients: 50 subjective obesity stressed patients each groups 25 male and 25 female were selected.

2. Second was (5 gm/per day) Spirulina supplementation subjective obesity stressed patients same 25 male and 25 female candidate were selected.

RESULTS AND DISCUSSION: In first group not change 50 subjective obesity patients were not change their weight, BMI, WHR, stress level, and biochemical changes. Other group of subjective obesity stressed patients around 45 patients got benefits. They were reduced 3 kg weight and improved sleeping quality also spirulina L- Tryptophan is naturally found in animal and plant c It very essential amino acid because its protein building block. It's very essential amino acid because body cannot make it and its must require for food. Tryptophan is important for the development and functioning of many organisms the body. After absorbing L-tryptophan from food, our bodies convert it to 5- HPT (5 hydroxytryptophane), and then to serotonin, melatonin and vitamin B6 (nicotinamide). Serotonin is a hormone that transmits signals between nerve cells. It's also causes blood vessels to narrow change in the level of serotonin in the brain can alter mood and feel like satisfaction and satiety. Melatonin is playing important part for sleep and vitamin B6 is essential for metabolism.

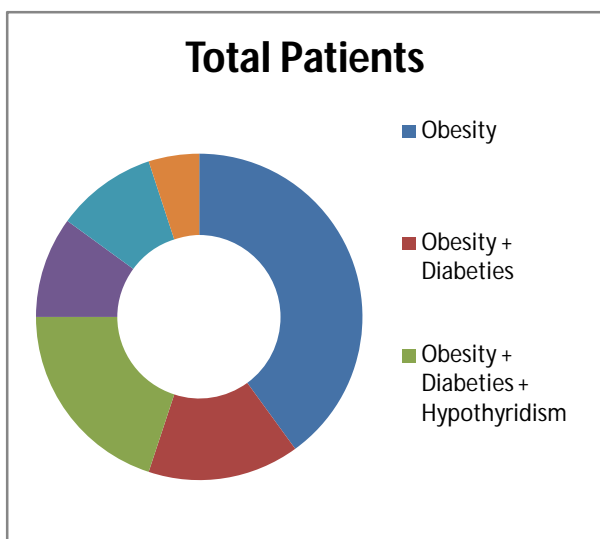


Figure 1: Total stress obesity patients with other disease.

So its reduced the hunger pain reduces stress and provides the satisfaction of meals so the patients pitied have suppress and give relaxation to body. Spirulina supplementation they lose weight, control all disease and solve their lifestyle and health related issues. Breathless ness, joint pain, hunger pain, nervous system problem menstrual cycle related problem weight related problem, lethargicness, stress lack of sleeping etc.

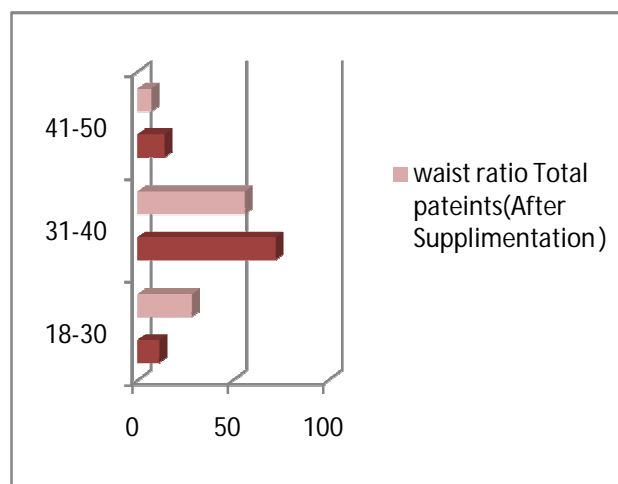


Figure 2: Waist ratio of total patients.

If the anthropometric measurement was considered then 50% subjective obesity patients were control in <25 BMI overweight categories 25 percent subjective obesity grade Ist patients were improved < 30 BMI, 12 percent control in <35 subjective obesity patients 8 percent outcome in <40 comes out which was higher than >50.

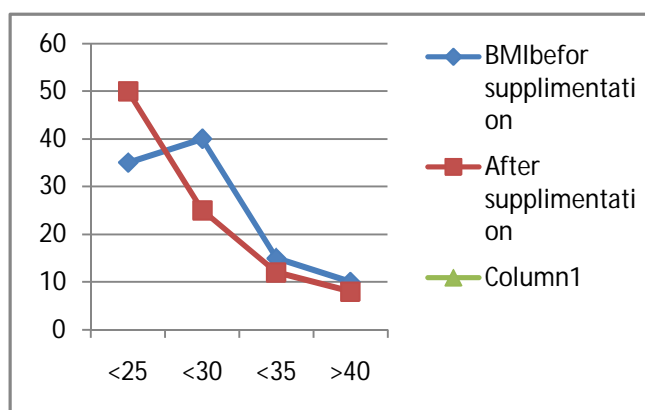


Figure 3: Before and after supplementation of spirulina with stress obesity patients.

Before and after Waist and Hip Ratio: In average standard waist circumference should be female subjective 0.9 and male 0.8 results was around 37percent female subjective obesity patients <1 and 13 females were <1.5, subjective 40 male in <1 and 10 percent male was in <1.5 after supplementation.

CONCLUSION: The presence of vitamin E (tocophyrol), antioxidant tryptophan in spirulina platensis reduces stress level and weight of subjective patients. WHR also improved after supplementation. Around 37 percent female subjective obesity patients <1 and 13 females were <1.5, subjective 40 male in <1 and 10 percent male was in <1.5 after supplementation.

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