This is a cross sectional study carried out in Kanpur. An institutional review board (IRB) approval will obtained for this study. Informed consent will be given/taken to/from all the subjects before carrying out this study. All participants sign on informed consent (model attached at end) to enter into the study. It is a prospective observational study for about 1 year. For this study patients will be recruited after calculating the sample size by sample size calculator and divided them into two groups as follows,

**Study design:**

**Group 1-** Dietary modification alone in prediabetics.

**Group 2-** Dietary modification along with fenugreek (5gm BD) in prediabetics.

To the first group i will instruct the diet schedule as dietary modification and to the second group I will give fenugreek along with dietary modification for control the slight elevated blood sugar levels i.e prediabetes and to prevent the subjects from development/conversion into diabetes.

**Study type:** Interventional parallel randomized study.

**Sample size:**

Sample size calculated by the following formula,

\[
p \geq \frac{(Z_{1-\alpha/2} + Z_{1-\beta})^2(\sigma_1^2 + \sigma_2^2)}{(\mu_1 - \mu_2)^2}
\]

\[Z_{1-\alpha/2} = 1.96\] for 95% confidence.

\[Z_{1-\beta} = 0.84\] for 80% power.
And for preliminary, estimates of $\mu_1$, $\mu_2$, $\sigma_1$ and $\sigma_2$ results Gaddam et al. Journal of Diabetes & Metabolic Disorders (2015) 14:74, have been used $\mu_1=10.2$, $\mu_2=12.0$, $\sigma_1=4.5$ and $\sigma_2=5.6$.

$n \geq 126$ each group, rounding our desired sample size is 140 in each group i.e. **280 is the total sample size.**

**Subject selection:**

The proposed study is carried out in the RAMA MEDICAL COLLEGE, RAMA University Kanpur U.P. The research protocol and the informed consent will be reviewed and approved by the Institutional Ethics Committee of RAMA MEDICAL COLLEGE, RAMA University Kanpur U.P.
Selection criteria
Inclusion criteria:

- Both sexes, Age group between 20 to 50 years.
- Subjects of familial history and sedentary life style.
- Persons with BMI between 25-29.9
- Persons with HbA1c in range between 5.7%-6.4%
- Subjects like Obese, abnormal lipid profile.
- Patients who are willing to give written informed consent to participate in the study.

Exclusion criteria:

- All diabetics.
- Those who were taking drugs that could alter glucose tolerance.
- Persons with abnormal lipid profile.
- Those who had a history of cancer or any major illness of the liver, kidney and nervous system.
- Pregnant women, breast feeding or planning a pregnancy during the course of the study were excluded from the study.
- Those who were having habit of smoking, chewing tobacco and alcohol.
- Familial histories such as congestive heart failure, renal failure, jaundice and genetic abnormalities.
- Patients who are not willing to give written informed consent to participate in the study.

Data collection:

Written informed consent will obtained from the established prediabetics and collect the blood samples as predetermined volumes to evaluate the glucose levels. This is all after the getting of approval from institutional ethical/review board.
**Investigations:**

*HbA1c, Glucose Tolerance Test (GTT), OGTT, fasting blood glucose, serum levels of insulin, assessment of insulin resistance, lipid profile, BMI, waist circumstances.*

**Materials and Methods:**

The use of Fenugreek has been limited by its bitter taste and pungent odor. Isolation of biologically active components or production of a debitterized extract, which would allow greater use of the plant, has been investigated\(^\text{19}\). Debitterized, defatted and deodorized Fenugreek fiber with vitamins, minerals and amino acids will get supplied (single batch) by pharmaceutical companies from Kanpur. The compound is in the form of a fine powder usually. Fenugreek powder (debitterized and processed) 5 g twice a day, will be given to the subjects along with 200 ml of water half an hour before meals and they were asked to follow the same dosage regime up to the end of study. The number of Fenugreek packs supplied to and returned by the subjects at the follow-up visit will be noted to calculate the compliance.