**Losso JN et al., 2009**

According to their study, a bread incorporating fenugreek using a proprietary process was tested for its taste acceptability and its effect on carbohydrate metabolism. They developed a fenugreek bread formula that was produced in a commercial bakery by incorporating fenugreek flour into a standard wheat bread formula. Eight diet-controlled diabetic subjects were served two slices (56 g) and 5% fenugreek. Blood glucose and insulin were tested periodically over a 4-hour period after consumption. The tests were run on two occasions 1 week apart, once with the fenugreek bread and once with regular bread. The study was double-blind, and the order was randomized and balanced. Fenugreek and whole wheat bread samples were evaluated for sensory attributes and nutrient composition. There was no statistically significant difference in proximate composition, color, firmness, texture, and flavor intensity between the fenugreek and wheat bread (P > .05). The area under the curve for glucose and insulin was lower in the fenugreek condition, but only reached significance with insulin (P < .05). The fenugreek-containing bread was indistinguishable from the whole wheat bread control. Normally, fenugreek flour impacts bread quality negatively. The bread maintained fenugreek's functional property of reducing insulin resistance. Acceptable baked products can be prepared with added fenugreek, which will reduce insulin resistance and treat type 2 diabetes.

**Kassaian N et al, 2009**

According to this study, the results of 18 patients (11 consumed fenugreek in hot water and 7 in yoghurt) were studied. Findings showed that FBS, TG and VLDL-C decreased significantly (25 %, 30 % and 30.6 % respectively) after taking fenugreek seed soaked in hot water whereas there were no significantly changes in
lab parameters in cases consumed it mixed with yoghurt. BMI, Energy, Carbohydrate, Protein and fat intake remained unchanged during study. This study showed that fenugreek seeds can be used as an adjuvant in the control of type 2 diabetes mellitus in the form of soaked in hot water.

**Aune et al., 2009**

High vs. low consumption of (total) meat: RR = 1.17 for type 2 diabetes (95% CI: 0.92 to 1.48), High vs. low consumption of red meat: RR = 1.21 for type 2 diabetes (95% CI: 1.07 to 1.38), High vs. low consumption of processed meat: RR = 1.41 for diabetes (95% CI: 1.25 to 1.60). This study concluded In conclusion we found that high intakes of red meat and processed meat are risk factors for type 2 diabetes. We cannot completely rule out the possibility of residual confounding or a temporal bias, but if the association is real, meat could be added to the list of behavioural factors which can be modified to decrease type 2 diabetes risk.

**Nield et al., 2008**

Diet (diet plus exercise) associated with 31% (42%) reduction of diabetes risk over a 6-year follow-up period in subjects with IGT. Two trials which randomized 358 people to dietary treatment and control groups were identified. Longest duration of follow-up was six years. In the 6-year Da Qing IGT & Diabetes study, the incidence of type 2 diabetes in the control group was 67.7% (95% confidence interval (CI) 59.8% to 75.2%) which was reduced to 43.8% (95% CI 35.5% to 54.7%) in the diet group. Overall, the dietary intervention group had a 33% reduction in the incidence of diabetes after six years (P < 0.03). The Oslo Diet & Exercise Study (ODES) found significant (P < 0.05) reductions in insulin resistance, fasting insulin (pmol/L), fasting C-peptide (pmol/L), fasting proinsulin
(pmol/L), fasting blood glucose (mmol/L), BMI (kg/m(2)), mBP (mmHg) and fasting triglycerides (mmol/L), and a significant increase in fasting HDL cholesterol (mmol/L) and PAI-1 (U/ml) after 12 months of dietary intervention. Data on mortality, morbidity, health-related quality of life, adverse effects, costs were not reported in either study.

Gillies et al., 2007

Diet reduced diabetes risk in subjects with impaired glucose tolerance (Hazard Ratio: 0.63; 95%CI: 0.49 to 0.92). 21 trials met the inclusion criteria, of which 17, with 8084 participants with impaired glucose tolerance, reported results in enough detail for inclusion in the meta-analyses. From the meta-analyses the pooled hazard ratios were 0.51 (95% confidence interval 0.44 to 0.60) for lifestyle interventions v standard advice, 0.70 (0.62 to 0.79) for oral diabetes drugs v control, 0.44 (0.28 to 0.69) for orlistat v control, and 0.32 (0.03 to 3.07) for the herbal remedy jiangtangbushen recipe v standard diabetes advice. These correspond to numbers needed to treat for benefit (NNTB) and harm (NNTH) of 6.4 for lifestyle (95% credible interval, NNTB 5.0 to NNTB 8.4), 10.8 for oral diabetes drugs (NNTB 8.1 to NNTB 15.0), 5.4 for orlistat (NNTB 4.1 to NNTB 7.6), and 4.0 for jiangtangbushen (NNTH 16.9 to NNTB 24.8).

Yates et al., 2007

This study states Diet and exercise lowered diabetes risk in subjects with prediabetes by 42%-63%. They summerised the majority of studies identified for this review used interventions that encouraged dietary and physical activity to initiate and maintain weight loss in individuals with IGT. Analysis of these studies found that the independent effect of physical activity in reducing the risk of type 2
diabetes in individuals with prediabetes is equivocal. Furthermore, given the limited evidence, no definite conclusion can be drawn either as to the amount of physical activity needed to reduce the risk of diabetes in individuals with prediabetes or the effectiveness of a single component physical activity intervention compared with more conventional multi-component interventions.

**De Munter et al., 2007**

As per this study two servings per day of whole grain, 21% (95%CI: 13% to 28%) diabetes risk reduction. High fiber intake reduced diabetes risk (RR: 0.67; 95%CI: 0.62 to 0.72). Whole grain intake is inversely associated with risk of type 2 diabetes, and this association is stronger for bran than for germ. Findings from this prospective cohort study consistently support increasing whole grain consumption for the prevention of type 2 diabetes.

**Schulze et al., 2007**

This study states high magnesium intake reduced diabetes risk (RR: 0.77, 95%: 0.72 to 0.84). During 176 117 person-years of follow-up, we observed 844 incident cases of type 2 diabetes in the European Prospective Investigation in to Cancer and Nutrition-Potsdam. Higher cereal fiber intake was inversely associated with diabetes risk (RR for extreme quintiles, 0.72 [95% confidence interval [CI], 0.56-0.93]), while fruit fiber (0.89 [95% CI, 0.70-1.13]) and vegetable fiber (0.93 [95% CI, 0.74-1.17]) were not significantly associated. Meta-analyses showed a reduced diabetes risk with higher cereal fiber intake (RR for extreme categories, 0.67 [95% CI, 0.62-0.72]), but no significant associations for fruit (0.96 [95% CI, 0.88-1.04]) and vegetable fiber (1.04 [95% CI, 0.94-1.15]). Magnesium intake was not related to diabetes risk in the European Prospective Investigation In to Cancer
and Nutrition-Potsdam (RR for extreme quintiles, 0.99 [95% CI, 0.78-1.26]); however, meta-analysis showed a significant inverse association (RR for extreme categories, 0.77 [95% CI, 0.72-0.84]).

**Odegaard et al., 2006**

According to this study positive association between consumption of trans fatty acids and risk of clinically confirmed type 2 diabetes (p < 0.0004) in age- and energy adjusted analyses, but not when adjusting for other risk factors. All current evidence on the topic of TFAs, insulin resistance, and type 2 diabetes is summarized and interpreted. Although there is some support from observational and experimental studies for the hypothesis that high intakes of TFAs may increase the risk for type 2 diabetes, inconsistencies across studies and methodological problems make it premature to draw definitive conclusions at this time. More experimental research in humans is needed to further address this question.

**Yamaoka et al., 2005**

Their 1-year incidence of diabetes in diet group was reduced by 50% (RR: 0.55; 95%CI: 0.44 to 0.69). Lifestyle education intervention reduced 2-h plasma glucose by 0.84 m.mol/l (95% CI 0.39-1.29) compared with the control group. The 1-year incidence of diabetes was reduced by approximately 50% (RR 0.55, 95% CI 0.44-0.69) compared with the control group. Results were stable and little changed if data were analyzed by subgroups or other statistical models. Funnel plots revealed no selection bias. Lifestyle education was effective for reducing both 2-h plasma glucose and RR in high-risk individuals and may be a useful tool in preventing diabetes.