Author, year, title, journal	N=	Description of subjects	Results	Pertinent discussions	Limitations	Summary
Li-Xin N, Li Y, Pan H, et al., 2011 Curcuminoids exert glucose-lowering effect in type 2 diabetes by decreasing serum free fatty acids, Molecular Nutrition and Food Research	100	Overweight/ obese type 2 diabetic patients (BMI ≥ 24.0; fasting blood glucose ≥ 7.0 mmol/L) were separated into two groups in which n = 50 received a placebo and n= 50 received a 300mg supplement of curcumin per day for 3 months	Curcuminoids supplementation significantly decreased fasting blood glucose ($P < 0.01$) and insulin resistance index ($P < 0.01$) in type 2 diabetic patients. Curcuminoids also led to a significant decrease in serum total FFAs ($P < 0.001$).	The findings of this paper suggest that there is a glucose-lowering effect of the active components of turmeric, curcumin, in type 2 diabetes. These benefits can be contributed to the effects this phytochemical have on lowering serum FFA's levels.	The diets of these patients was not evaluated or altered throughout the study however, the consumption of different food compounds such as flavonoids and other phytochemicals	After studying 100 overweight/ type 2 diabetic individuals who consumed either a placebo or 300 mg curcumin supplement for 3 months, researchers found that those who received a consistent supplementation of curcumin had decreased blood glucose levels, and improved insulin resistance.

Ghorbani Z, Hekmatdoost A, Parvin M., 2014 Ant-Hyperglycemic and Insulin Sensitizer Effects of Turmeric and Its Principal Constituent Curcumin, International Journal of Endocrinology and Metabolism	240	Subjects who fell under the category of prediabetic were instructed to take three capsules a day of either a placebo or curcumin (250mg/day) for a total of 9 months	The curcumin-treated group showed a better overall function of beta cells ($P < 0.001$) when compared with the placebo group.	Curcumin intervention in prediabetic populations significantly lowered the number of prediabetic individuals who eventually developed type 2 diabetes. The treatment appeared to improve overall function of beta cells, with very minor adverse effects.	The dosage given to patients typically isn't accessible or reasonable which may limit the use of this protocol for a typical prediabetic patient.	After studying 240 prediabetic patients it was found that when compared to a placebo treated group, those patients who received a curcumin supplement for 9 months had better overall function of pancreatic beta cells.
Shehzad A, Gauhar R, Lee Y; 2012 Curcumin and Inflammatory diseases. Journal of School of Life	Review	Review; extensive research and observational studies.	Observational studies have shown that continuous inflammation can activate the immune system	The findings of this paper reveal curcumin' benefits related to its anti-inflammatory and antioxidant properties	Although curcumin is a non-toxic natural anti-inflammatory compound that has been already administered in phase II	According to data obtained in clinical trials and *in vitro and in vivo* researches, the study is able to shows that

Sciences, BioFactors.			for long durations causing the progression of chronic diseases. Curcumin the active ingredient in turmeric has shown the capability to inhibit inflammatory cell proliferation, invasion, and angiogenesis. Also, evidence has shown inhibition of some enzymes that support and encourage inflammation such as protein kinases, and cytokines.	. Based of the available pharmacological data obtained from clinical trials, *in vitro* and *in vivo* research, an opportunity exists to translate curcumin into clinics for the prevention of inflammatory diseases in the future.	and III clinical trials, additional human studies are required in order to validate the clinical use of curcumin for treating inflammatory diseases.	curcumin may be associated with the suppression of inflammatory cytokines and enzymes. Also, transcription factors, some cells survival, invasion, and angiogenesis. Because curcumin has chemical properties that reduce inflammation, the occurrence of chronic diseases can be prevented by increasing its consumption.

The Efficacy of Turmeric and Inflammatory Diseases

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Over the past few decades, spices available in plants and other sources of nature have been used as medicines for the prevention of inflammation. Turmeric (curcuma longa) and its' main active ingredient curcumin, have a long history of use as a treatment for inflammatory conditions in China and Southeast Asia. Numerous studies regarding turmeric have shown a great potential in reducing chronic inflammation due to its' strong anti-oxidation and anti-inflammatory activities. In vitro and invivo studies, especially clinical trials, indicate turmeric may be a potential therapeutic agent in treating diseases related to inflammation like obesity, diabetes, irritable bowel syndrome, and rheumatoid arthritis.

The prevalence of obesity continues to rise, therefore several studies on how curcumin may diminish possible complications have been conducted. Research demonstrates a direct interaction between curcumin and white adipose tissue, which suppresses chronic inflammation. The presence of dietary curcumin revealed stimulation of the expression of adiponectin, known as the most anti-inflammatory agent secreted by adipocytes, slowed body weight gain, and suppression of chronic low-grade inflammation. In a similar study closely observing lipid profile parameters, it was found that curcumin supplementation led to a significant reduction in serum triglyceride concentrations as well.