

# **Insulin resistance: Reading**

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- [J Clin Med Res.](#) 2017 Oct;9(10):821-825. doi: 10.14740/jocmr3144w. Epub 2017 Sep 1.

- **The Low-Dose (7.5 mg/day) Pioglitazone Therapy.**

- [Yanai H, Adachi H.](#)

- **Abstract**

- **Pioglitazone is one of thiazolidinedione derivatives, which stimulates nuclear peroxisome proliferator-activated receptor gamma and improves glucose and lipid metabolism and insulin sensitivity. A recent systematic review and meta-analysis showed that pioglitazone therapy was associated with a lower risk of major adverse cardiovascular events in patients with pre-diabetes and diabetes. Further, in a cohort study of patients with type 2 diabetes, pioglitazone therapy was associated with a statistically significant decrease in the risk of all-cause mortality. Despite these beneficial effects, the meta-analysis showed that pioglitazone therapy had higher risks of heart failure, bone fractures, edema and weight gain. To find out the efficacy and safety of the low-dose (7.5 mg/day) pioglitazone therapy, we reviewed the dose-response of pioglitazone on favorable effects and adverse effects due to pioglitazone, by searching the reports on effects of daily dose of 7.5 mg and/or 15 mg and/or 30 mg of pioglitazone. The low-dose pioglitazone therapy may show the same degree of improvements in glucose and lipid metabolism, fatty liver, insulin resistance, and adiponectin as the standard- and high-dose pioglitazone therapy. Furthermore, the low-dose pioglitazone therapy may also show less adverse effects on weight gain, edema and heart failure as compared with the standard- and high-dose pioglitazone therapy.**