

Metformin



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METFORMIN Metformin Metformin is an approved drug for the treatment of diabetes mellitus in particular it is used for the treatment of type 2 diabetes. This diabetes is also referred to as non-insulin dependent diabetes. It may be prescribed by physicians for other conditions which includes the prescription of the drug to people who have an increased susceptibility for the development of type 2 diabetes. Furthermore, it is also prescribed for a few gynecological conditions which include polycystic ovarian syndrome as well as for the regularization of the menstrual cycle. But the widest indication of the drug is for the treatment of type 2 diabetes. The drug is given to control the blood glucose levels of patients in the normal range so that the proper bodily functions are retained and the problems of the nervous system; cardiovascular system and the renal system are avoided in the diabetic patients. The drug has an added benefit since it has been proved that the drug does not result in reduction of the blood glucose level below normal and the patient does not experience episodes of hypoglycemia. It also does not lead to increased weight in the patient who takes this drug. This is the reason that it is preferably prescribed to the diabetic patients. The drug works via various mechanisms which include increasing the sensitivity of the cells towards their response to insulin by increasing the uptake of glucose by the cells. It further promotes the intracellular metabolism of the glucose as well. Furthermore, it leads to a reduction in the amount of hepatic glucose as well as renal glucose that is released into the bloodstream by means of reducing the amount of its production in these organs. In a similar manner, it also reduces the absorption of glucose from the intestines. The main side effects of the drug include gastrointestinal problems. These include diarrhea, vomiting, nausea as well as feeling of uneasiness in the abdomen. It has also

been proven that metformin causes a decrease in the absorption of vitamin B12 by the intestine and hence it can lead to reduction in its levels. The gastrointestinal symptoms generally subside. Thus, it has been seen that the drug does not lead to very serious side effects. The main complication of metformin which calls for immediate withdrawal of the drug is increase in the amount of lactic acid in the blood which leads to condition referred to as lactic acidosis. The patient may complain of being lethargic and present with excessive urge to sleep at all times. He may also have ache in his muscles and problems in breathing and loss of the regular pattern of the heartbeat. This may be accompanied with complains of the gastrointestinal system. These presentations are mainly seen in patients who suffer from pathological conditions of the liver and the kidney. At the same time, increased alcohol consumption as well problems of the cardiovascular system are other causes for leading to lactic acidosis. Therefore, metformin is not indicated and not advised for patients who suffer from hepatic, renal and cardiac pathologies as well as alcoholics. References Drugs & Medications – Metformin Oral. WebMD. Web 4th April 2011. <http://www.webmd.com/drugs/mono-7061-METFORMIN+-+ORAL.aspx?drugid=11285&drugname=metformin+Oral&source=1> Katzung, Bertram G. Basic & Clinical Pharmacology. New York: McGraw-Hill, 2007.