

Complications associated with diabetes and crucial factors for the evaluation of anti-diabetic drugs

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Diabetes mellitus is a common endocrine disorder affecting more than 150 million people worldwide out of which more than one-fifth are Indians. Unfortunately, 1 out of every 4 people who has diabetes is unaware. Uncontrolled diabetes can lead to serious complications, such as blindness, kidney damage, heart disease, diabetic ketoacidosis, diabetic coma and lower-limb amputations. During pregnancy, the placenta produces hormones that interfere with insulin which may develop gestational diabetes. Insulin resistance may be developed from overweight. Diet based on the glycemic index can help to choose foods that will result in weight loss and prevention of chronic diseases including diabetes, obesity and heart diseases. Although insulin resistance is crucial to the pathogenesis of the disease, the associated atherogenic lipoprotein considerably enhances the risk. Hence there is an ongoing intense search for a medication capable of modifying the atherogenic lipid profile as well as lowering glucose. Generally, diabetes is induced by streptozotocin or alloxan in rat animal model for the evaluation of antihyperglycemic drugs. Sometimes blood glucose measurement seems to give incorrect readings. When used correctly, glucometers, the glucose measurement devices are usually accurate. But occasionally they are incorrect. Consider the factors that affect meter accuracy and the steps to resolve or prevent the problems like strip damage, code matching, amount of blood taken, testing site location and blood glucose monitor quality control tests. One should take into account these factors before the evaluation of antidiabetic drugs.

Biography

Sagar Naskar has completed both of his B. Pharm and M. Pharm degree from Jadavpur University with honours. He is pursuing his Ph.D in Pharmacy from Jadavpur University. He has 3 years of teaching and 4 years of research experience. He is the author of the book entitled as 'Basic research in free radicals and its scavengers', published by LAMBERT academic publishing. He has published 18 research articles and serving as reviewer and editorial board member for several international journals.

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