

Steps in treating type 2 diabetes

The critical steps required to achieve normal levels of blood glucose in type 2 diabetes depends on a number of factors;

- The blood sugar level at the time of diagnosis
- The severity of symptoms at the time of diagnosis
- Weight at the time of diagnosis
- The presence of other existing medical conditions such as hypertension, diseases of the heart and blood vessels, high cholesterol levels in the blood, kidney function, liver function etc
- The presence of complications

Most clinical guidelines recommend the following steps;

1. Intensive lifestyle modification focused on combined diet and physical activity for pre-diabetes
2. Use of oral glucose lowering medications with lifestyle modification and weight management programs for treating type 2 diabetes.
 - Metformin as the first line of treatment if there is no reason why the person is unable to use it (example kidney problems). The starting dosage will be decided by the clinical care team.
 - Adding a second medication if metformin is unable to bring down the blood sugar level to the desired target after 2-3 months. A second medication may also be added at the start of treatment if the clinical team consider that metformin only may not be adequate to bring down blood sugar levels at diagnosis to the desired target. When considering a second medication to add to metformin, the following options will be considered;
 - Newer versions of sulphonylureas when it is difficult to afford other glucose lowering medications. In Nigeria, this is the recommendation in the National Guidelines for preventing and treating type 2 diabetes. This is mainly due to cost considerations as most people in resource constrained settings like Nigeria may not be able to afford other more expensive options.
 - GLP-1 Receptor agonist and Sodium Glucose Co-Transporter-2 (SGLT2) Inhibitors when it is important to minimize weight gain and/or achieve weight loss
 - DPP-4, GLP-1 RAS, SGLT2 inhibitors, thiazolidones when there is need to avoid hypoglycaemia
 - A third medication may also be added if the combination of metformin and the second medication is not helping to achieve treatment targets or as part of the first line treatment. A third

medication must come from a class of glucose lowering drugs that are not in the same class of the first and second medications.

- Insulin therapy is considered when blood sugar levels at diagnosis is very high. This is usually at 16.7mmol/l (300mg/dl). Insulin may also be used when a combination of three oral glucose lowering drugs is not producing the desired treatment target.