

## The Potential Role of GLP-1 Analogues in Cardiovascular Disease Outcomes

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## ABSTRACT

Diabetes prevalence is increasing, according to the International Diabetes Federation report in 2013, 382 Millions have diabetes, and the number is expected to rise beyond 592 million by 2035, an increase of approximately 55%. Type2 Diabetes Mellitus (T2DM) is associated with Obesity, Dyslipidemia, and Hypertension. Hypertension plays a major role in the development of Cardiovascular Disease (CVD). The prevalence of hypertension is higher in people with T2DM than the general public. Macro vascular complications are still the primary cause of death in patients with T2DM.Glucagon like peptide-1 receptor agonists (GLP1-RAs) are a new class of Injectable Antidiabetes Agents (IADA) that provides blood glucose control with weight reduction ability, systolic blood pressure reduction and a noticeable improvement of lipid profile. GLP1-RAs, modes of action and the role of some GUT hormones in the regulation of glucose metabolism. I will also review landmark trials of different types of GLP1-RAs, cost effectiveness and their potential role in the protection from cardiovascular disease, including evidence on weight reduction, HBA1c reduction, systolic blood pressure control and improvement of both lipid and glycemic profiles.

Keywords: GIP-1 receptor agonist; Cardiovascular benefits; HbA1c; Weight loss; CVD trials

## SUMMARY

GLP-1 Receptor agonist was proved by the Action Control Cardiovascular Risk in Diabetes trial (ACCORD) 75% decrease death rate in patients under Exentide treatment. GLP-1 agonist t benefits are multiple regarding blood glucose control in the form of reducing Hemoglobin A 1c (HBA1c) by 1.1%-1.6%, reducing postprandial excursions, and decreasing weight [1-3]. Its benefits on CVD in the form of weight reduction 2-4 kg versus placebo and 4.8 kg versus insulin treated patients. In addition to Improve all lipid profile elements and finally reduction in syst olic blood pressure [14].GLP1RAs have a significant role in the therapeutic regimen of T2D with Obesity &/or Metabolic syndrome [4,5]. The choice among the different members of this class depends on our clinical judgment considering the cardiovascular risk assessment, the GIT tolerance, the finance and the compliance of our patient. METFORMIN – SGLT2 - GLP 1RAs....... Is a perfect

triad whenever the clinical situation necessitates the use of 3 antidiabetes agents... But which comes first..?.

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