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Can Therapies That Target the Incretin System Improve Our Ability to Treat Type 2 Diabetes?

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Type 2 diabetes poses a major health challenge among African Americans. Older therapies are associated with shortcomings such as hypoglycemia and/or weight gain. In recent years the "incretin system" has become understood as offering great promise for drug development. Two drug classes—namely, the injectable glucagon-like peptide 1 (GLP-1) receptor agonists, which produce pharmacological GLP receptor activity, and the oral dipeptidyl peptidase-4 (DPP-4) inhibitors, which raise levels of endogenously produced GLP-1 and glucose-dependent insulinotropic polypeptide (GIP) by preventing enzymatic degradation-have been available for several years. These drugs can be given as monotherapy or added to other antidiabetic drugs to lower blood glucose with very low risk of hypoglycemia without weight gain. In fact, GLP-1 receptor agonists may induce clinically significant reductions in weight and systolic blood pressure, as well as improve indices of B-cell function. Although transient nausea occurs in some patients with GLP-1 receptor agonists, these agents are generally well tolerated, and the available clinical data are encouraging. Clinical experience shows that these treatments are acceptable to patients.

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Keywords

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