

# Gastro-Retentive Drug Delivery System for Advanced Delivery System: Overview

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**Abstract:** *The main goal of an oral controlled drug delivery system is to maximise bioavailability, which should be predictable and repeatable, by administering medications over extended periods of time. Patients choose this approach for a number of reasons, including as affordability, ease of transportation, efficacy, perceived safety, and patient acceptability. The gastrointestinal system's variety results in several physiological limitations for oral delivery. Additionally, a number of variables alter along the gastrointestinal system, all of which affect how well drugs are absorbed. The most crucial factors are surface area, pH, commensal bacteria, gastrointestinal transit time, and enzyme activity. An ideal medication delivery system should have two basic characteristics: one, it should be a single dose for the duration of the therapy, and two, the active medicine should be delivered directly to the site of action. To provide drug delivery systems that, by releasing the medicine in a regulated and predictable way, may reduce side effects, dosage frequency, and changes in plasma drug concentration while remaining in the stomach for an extended amount of time and maintaining active plasma drug concentration. One of the special characteristics of the system is the gastroretentive drug delivery mechanism (GRDDS). New medication delivery techniques continue to spark interest even though oral controlled release dose forms are the most often manufactured. Drugs are rapidly removed from the systemic circulation due to their short half-life and ease of absorption from the GI tract. For these medications to have sufficient therapeutic effectiveness, frequent dosing is required.*

**Keywords:** gastroretentive drug delivery mechanism