

# A Review on Controlled and Sustained Release System

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**Abstract:** Oral sustained and controlled release drug delivery systems are developed to maintain stable therapeutic drug levels, minimize dose frequency, and enhance patient compliance. These systems rely on appropriate drug selection, considering solubility, stability, partition coefficient, absorption, metabolism, and biological half-life. Release mechanisms include diffusion, dissolution, ion-exchange, osmotic systems, and water-penetration control. Natural, biodegradable, and synthetic polymers play a crucial role in achieving predictable and prolonged drug release. SR/CR systems ultimately improve therapeutic efficiency, reduce side effects, and optimize treatment outcomes.

**Keywords:** Oral drug delivery, Sustained release, Controlled release, Diffusion, Dissolution, Polymers

