

A Review on Sustained Release Tablet

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Abstract: Recently, extended-release pharmaceutical products have emerged as invaluable tools in medical practice, presenting a myriad of tangible and perceived benefits to patients. Sustained release offers a promising avenue to mitigate the side effects of drugs by preventing fluctuations in therapeutic drug concentrations within the body. In the contemporary landscape, the scarcity of new drugs from research and development, coupled with the rising issue of resistance, especially with antibiotics, necessitates a shift in operational strategies. This shift involves optimizing existing drugs to enhance efficacy through slight modifications in drug delivery methods.

Sustained release not only serves as a means to address drug resistance but also holds the potential to minimize the adverse effects of medications by regulating the therapeutic concentration of the drug in the body. The release mechanisms in such systems encompass both dissolution-controlled and diffusion-controlled processes. Improper formulation of drugs may result in rapid drug release, leading to the onset of toxic concentrations upon oral administration.

This article provides fundamental insights into sustained-release formulations, encompassing various types of such formulations.

Keywords: integral to this discussion include matrix tablets, sustained-release polymers, patient convenience, compliance, and the specific drugs Diclofenac, Alprazolam, Aceclofenac, and Progesterone

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