

Review on Implantable Drug Delivery System

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Abstract: *In the past, medications were commonly given orally in the form of liquids or powders. However, to address the challenges associated with oral drug administration, alternative dosage forms were developed. Over time, the need arose for drug delivery systems capable of providing a consistent release of medication directly to the site of action. This led to the creation of drug delivery technologies aimed at enhancing the therapeutic effects of drugs while making them safer, more effective, and reliable. Implantable drug delivery systems (IDDS) are one such innovation currently used in treatment. These systems offer several key benefits, including targeted and steady drug release, reduced dosage requirements, fewer side effects, and improved treatment outcomes. Thanks to advancements in sustained release formulations, medications that once required multiple daily doses can now be administered weekly or even annually. Early studies have demonstrated that these systems are more effective than traditional treatment methods. Nonetheless, a major drawback is their high-cost relative to their benefits, which limits their widespread adoption. Furthermore, many newly developed implants are still in early stages and need thorough clinical testing before they can be used routinely in healthcare settings*

Keywords: Implantable drug delivery system, stents, pumps, transdermal patches, drug delivery systems, recent technologies

