In Situ Gelling Systems for Drug Delivery

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In situ gelling systems are polymeric formulations that are in sol forms before entering in the body, but change to gel forms under the physiological conditions. The sol-gel transition depends on one or a combination of different stimuli, like pH change, temperature modulation, solvent exchange, ultra violet irradiation and the presence of specific ions or molecules. Drug delivery systems having such properties can be widely used for sustained delivery vehicle preparation of the bioactive molecules. Some important advantages of these smart systems are ease of application and reduced frequency of administration, as well as protection of drug from environmental conditions.

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Development of polymeric in situ gels for controlled release of various drugs provides a number of advantages over conventional dosage forms. Some important advantages of these smart systems are ease of application and reduced frequency of administration, as well as protection of the drug from environmental conditions.

Implication for health policy/practice/research/medical education:

Development of polymeric in situ gels for controlled release of various drugs provides a number of advantages over conventional dosage forms. Some important advantages of these smart systems are ease of application and reduced frequency of administration, as well as protection of the drug from environmental conditions.
by physicians and patients. These systems offer successful controlled drug release and increase patient compliance.

References