

Pulsatile Drug Delivery System for Chronopharmacological Disorders

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Abstract : Pulsatile systems are gaining a lot of interest as they deliver the drug at the right site of action at the right time and in the right amount, thus providing spatial and temporal delivery thus increasing patient compliance. These systems are designed according to the circadian rhythm of the body. Chronotherapeutics is the discipline concerned with the delivery of drugs according to inherent activities of a disease over a certain period of time. It is becoming increasingly more evident that the specific time that patients take their medication may be even more significant than was recognized in the past. The tradition of prescribing medication at evenly spaced time intervals throughout the day, in an attempt to maintain constant drug levels throughout a 24-hour period, may be changing as researcher's report that some medications may work better if their administration is coordinated with day-night patterns and biological rhythms. The potential benefits of chronotherapeutics have been demonstrated in the management of a number of diseases. In particular, there is a great deal of interest in how chronotherapy can particularly benefit patients suffering from allergic rhinitis, rheumatoid arthritis and related disorders, asthma, cancer, cardiovascular diseases, and peptic ulcer disease.

Keywords : pulsatile drug delivery, chronotherapeutics, circadian rhythm, asthma, chronobiology

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