



ADDITIONAL DOSAGE ROUTES: INTRAARTICULAR

Understanding the knee joint physiology and its impact on drug PK after intraarticular (IA) injection is critical for developing new drugs aiming to cure rheumatoid arthritis (RA) and other specific diseases affecting human joints.



The model can simulate a variety of dosage forms including:

- ✓ Solution
- ✓ Suspension
- ✓ Controlled Release

Mechanistic PBPK models describing the joint tissue concentration time course following IA administration of a drug molecule in GastroPlus® is a powerful tool to facilitate the development of new therapeutics and improve current practices by better understanding the impact of disease on drug distribution within the joint.

Some of the mechanism considered in the model include dissolution in the IA fluid, diffusion in cartilage, and uptake into the systemic circulation through the sinobial membrane.



Utilize validated PBBM models

Mechanistic, physiologically-based models are provided for each tissue, for different species.



Customize in GastroPlus®

As with other GastroPlus modules, there is no equation or code writing required.



Optimize your models

Load measured *in vivo* PK data, for local tissues, to optimize and validate your models.



Leverage PBPK delivery models

PBPK delivery models, including the Population Simulator and Parameter Sensitivity Analysis, can be utilized.



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Interested in collaborating?



Email us! info@simulations-plus.com