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See <https://www.mmnp-journal.org/articles/mmnp/pdf/2011/06/mmnp201166p227.pdf>  
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**Abstract:** Pharmacokinetics is an excellent way to introduce biomathematical modeling at the sophomore level. Students have the opportunity to develop a mathematical model of a biological phenomenon to which they all can relate. Exploring pharmacokinetics takes students through the necessary stages of mathematical modeling: determining the goals of the model, deciphering between the biological aspects to include in the model, defining the assumptions of the model, and finally, building, analyzing, using, and refining the model to answer questions and test hypotheses. Readily accessible data allows students to use the model to test hypotheses that are meaningful to them on an individual level. Students make interdisciplinary connections between this model and their previous personal, mathematical, and other classroom experiences. By beginning with simple model involving the half-life of a drug, students take advantage of their mathematical abilities to explore the biology. They can then use the new knowledge gained from analyzing the simple model to create more complicated models, thus gaining mathematical and modeling maturity through improving the biological accuracy of the model. Through this experiences, students actually get to do applied mathematics, and they take ownership of the model.

**Keywords:** pharmacokinetics, dynamical systems, biomathematics, math models