# Discussion: Pharmacokinetics and Pharmacodynamics

As an advanced practice nurse assisting physicians in the diagnosis and treatment of disorders, it is important to not only understand the impact of disorders on the body, but also the impact of drug treatments on the body. The relationships between drugs and the body can be described by pharmacokinetics and pharmacodynamics.  
Pharmacokinetics describes what the body does to the drug through absorption, distribution, metabolism, and excretion, whereas pharmacodynamics describes what the drug does to the body.

When selecting drugs and determining dosages for patients, it is essential to consider individual patient factors that might impact the patient’s pharmacokinetic and pharmacodynamic processes. These patient factors include genetics, gender, ethnicity, age, behavior (i.e., diet, nutrition, smoking, alcohol, illicit drug abuse), and/or pathophysiological changes due to disease.

For this Discussion, you reflect on a case from your past clinical experiences and consider how a patient’s pharmacokinetic and pharmacodynamic processes may alter his or her response to a drug.

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##### To Prepare

* Consider the principles of pharmacokinetics and pharmacodynamics.
* Reflect on your experiences, observations, and/or clinical practices from the last 5 years and think about how pharmacokinetic and pharmacodynamic factors altered his or her anticipated response to a drug.
* Consider factors that might have influenced the patient’s pharmacokinetic and pharmacodynamic processes, such as genetics (including pharmacogenetics), gender, ethnicity, age, behavior, and/or possible pathophysiological changes due to disease.
* Think about a personalized plan of care based on these influencing factors and patient history in your case study.

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**Post** a description of the patient case from your experiences, observations, and/or clinical practice from the last 5 years. Then, describe factors that might have influenced pharmacokinetic and pharmacodynamic processes of the patient you identified. Finally, explain details of the personalized plan of care that you would develop based on influencing factors and patient history in your case. Be specific and provide examples.

**\*\*NOTE: Please create and discuss an experience pertaining to a mental health patient case.\*\***