Basics of Elimination Kinetics

1. What are the two basic elimination rate patterns seen?
   1. Why are they important?

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# Rates of Elimination

This is better described under the heading of pharmacokinetic modelling, but one key idea might be useful: *order of elimination.*

Rates of elimination (*and rates of reaction generally*) as established empirically, and two basic behaviours are commonly observed:

1. Rate of elimination is constant. This is a zero-order kinetic equation. (*because it depends on C to the power zero*)
2. Rate of elimination is directly proportional to the concentration of the drug in question. This is a first-order kinetic equation.

Drugs showing first-order kinetics are easier to dose safely; as their dose increases, their elimination increases to match meaning that a steady state will be reached.

In contrast, zero-order substances will accumulate once the rate of administration exceeds the fixed rate of elimination.