Matric number:17/mhs01/255

Drug metabolism is the

Metabolic breakdown of drugs by   
living organisms, usually through   
specialized enzymatic systems.   
More generally, xenobiotic   
metabolism (from the Greek   
xenos "stranger" and biotic   
"related to living beings) is the   
set of metabolic pathways that  
modify the chemical structure of   
xenobiotics, which (are

compounds foreign to

organism's normal biochemistry,   
such as any drug or poison.   
These pathways are a form of   
biotransformation present in all  
major groups of organisms, and  
are considered to be of ancient   
origin.

FACTORS AFFECTING DRUG METABOLISM

The duration and intensity of

pharmacological action of most

lipophilic drugs are determined by the rate they are metabolized to inactive products. The

Cytochrome P450

monooxygenas system is the

most important pathway in this   
regard. In general, anything that   
increases the rate of metabolism   
(e.g., enzyme induction) of (   
pharmacologically active  
metabolite will decreases the   
duration and intensity of the drug   
action. The opposite is also true   
(e.g., enzyme inhibition).   
However, in cases where an  
enzyme is responsible for   
metabolizing a pro-drug into a  
drug, enzyme induction can  
speed up this conversion and  
increase drug levels, potentially  
causing toxicity.

Various physiological and

pathological factors can also   
affect drug metabolism.   
Physiological factors that can  
influence drug metabolism   
include age, individual variation   
(e.g., pharmacogenetics),   
enterohepatic circulation,   
nutrition, intestinal flora, or sex   
differences.

In general, drugs are metabolized   
more slowly in fetal, neonatal and

elderly humans and animalss than in adults.