EXCRETION OF DRUGS

INTRODUCTION

Excretion of drugs decreases it's duration of action. This in turn decreases the toxicity. Drugs may be excreted in an active or inactive form. The various routes through which drugs can be eliminated are:

Kidneys

Drugs may be eliminated through the kidney by:

1. Passive glomerular filtration- most of the drugs are eliminated by this mechanism.
2. Active tubular secretion- eg: Penicillin.
3. Passive tubular reabsorption- passive diffusion of drugs can occur in either direction.

In case of renal damage, Excretion of drug is decreased and so the toxicity is Increased.

Lungs

Drugs like volatile general anaesthetic, alcohol and paraldehyde are excreted through lungs.

Skin

Heavy metals like arsenic and mercury are excreted through skin.

Intestine

Purgative like Senna and cascara are absorbed in small intestine and later get excreted in large intestine.

Bile

Drugs like diphenylhydantoin and phenolphthalein are excreted into small intestine through bile. These drugs may be absorbed again, carried to the liver and again excreted into small intestine through the bile. This process is called as "entero hepatic circulation" prolongs the duration of action of such drugs.

Milk

Milk is more acidic than plasma and hence basic drugs like pethidine are eliminated through it.

Saliva

Drugs like iodide and metallic salts are excreted through saliva. Lead is eliminated through saliva and it's deposition produces black lining of teeth(burtonian line).