Administration and Routes of Drugs and the Drug Cycle

Each route of administration has distinct advantages and disadvantages. It is important to make sure that medications are taken only by the recommended route which will result in a therapeutic effect. If it is taken or given by a route not recommended it may be ineffective, harmful, or even fatal to the patient.

The most convenient route of administration is the oral route. The oral route involves placing the drug in the mouth and swallowing it. Absorption of the medication takes place either in the stomach or small intestine into the blood stream. PO, or p.o., is the abbreviation for taking an oral medication.

Topical (TOP) is put on the skin or in the eyes and ears. TOP is usually the abbreviation for this route. Transdermal refers to the topical route but when placed on the skin it creates a systemic effect. Transdermal patches are worn on the skin and have a slow release effect.

Sublingual involves placing the drug under the tongue and allowing it slowly to disintegrate. Buccal is a little different from sublingual in the fact that the drug is place in the pocket between the cheek and the lower teeth on one side of the mouth and also allowing it to slowly disintegrate.

With the nasal route the drug would be sprayed into the nasal cavity. Inhalation involves inhaling the drug in a form of gas, liquid, or powder form. Nasogastric is for patient who cannot take oral drugs. A tube is passed from the nose through the esophagus and into the stomach.

The vaginal route is accomplished by using a cream, ointment, or suppository medication directly into the vagina. Contraceptive foams are inserted vaginally as well.

Rectal is most often in suppository form or liquids via enemas. Creams are also used rectally for hemorrhoids. Parenteral includes all routes of administration other than the oral route but commonly includes intradermal; injection directed into the dermis, subcutaneous; injection injected in the fatty layer of tissue just beneath the dermis of the skin but above the muscle, intramuscular; injected into the belly of a muscle, and intravenous; in into the vein. There are three different ways this is accomplished. First is bolus which is referred to as IV push and don over a short period of time through a port. The second is infusion and put into a large IV bag over several hours and known as IV drip. The last one is piggyback and is a little bag of drug.