Forms of Drugs

Before a drug can receive final approval by the Food and Drug Administration, the drug company must clearly state in what form or forms the drug will be manufactured. Many drugs on the market today come in multiple forms. For example you can get Benadryl in a liquid form, in a pill form, in cream, and in an injectable form which would of course be something that you could only get from visiting your healthcare provider.

The most widely used and most easily administered form is in tablets. They can come scored so the user can break them into smaller portion. They have an array of sizes, shapes, and colors. An effervescent tablet is one that is dissolved in a glass of water before being swallowed. An example of that would be Alka-Seltzer. The old saying is “Plop Plop Fizz Fizz... Oh What a Relief it is!” What a great commercial from times past.

A capsule can come as a soft, one-piece gelatin shell with the liquid drug inside, and then there is the hard shell manufactured in two pieces that fit together with the powdered or granular drug inside. When you unleash a capsule that holds the granules you may have a scattered mess because they go everywhere kind of like dropping a bag of rice on the floor.

In ointment you have lanolin or petroleum as the main ingredient added to water. Ointments are absorbed into the area to which they are applied. They are very greasy and can sometimes stain your clothes.

Creams and Lotions fall into this topical category. They are both non-greasy and come in either a tube or bottle. With cream the main ingredient is water and then the lanolin or petroleum. Lotions are a water base and are absorbed into the skin and exert a local effect.

Powder is exactly what it says it is. It is finely ground. Powdered drugs can be found within capsules or they can also be place in glass vials where they must be reconstituted with sterile water before they can be injected. If it is an oral medication that needs to be mixed with water to achieve the liquid effect then it can be administered by mouth. Powders can be inhaled into the lungs with the help of a special inhalation device. An example of that would be for a patient with breathing issues and needing a breathing treatment via an inhaler.

In liquids there are several avenues; solutions elixirs, syrups, tinctures which are solutions that contain the drug in a water and alcohol base. They are never taken internally. Another one is liquid sprays, foams and mousses. Solutions in which the drug form remains separate from the base are emulsions and gels. They never need to be shaken prior to administration because they do not settle in the bottom. On the other hand there are suspensions and they do need to be shaken very well before being given. They settle to the bottom of the container and separate. The fun thing with liquids is on the oral side they come in several different flavors. The most popular flavors are bubblegum, cherry, and grape. Some odd flavors are pineapple, watermelon, coconut, and licorice. Whatever trips your trigger?
We have the dreaded suppositories. They can be injected either rectal or vaginally and are composed of a solid base of glycerin or cocoa butter that contains the drug.

The patch is placed transdermally on the skin. They contain drugs, and are applied to the skin and release small amounts of drug over a long period of time. They are used to treat chronic conditions such as severe pain, the urge to smoke for those trying to quit, and to prevent angina attacks in patients with heart disease.

There are some unusually odd ones of pellets, beads, wafers, inserts, and devices. An example of these would be a T-shaped device called Mirena which is inserted into the uterus to prevent pregnancy.

The last one we are going to talk about is gas form. This would be reserved for anesthesia. It would be used during surgery cases to anesthetize the patient and keep them from feeling any pain.

Drug forms have evolved over the years. In the 80s Tylenol capsules were contaminated with cyanide which caused an outbreak of panic. Now Tylenol manufactures it’s product in tablet or caplet form to prevent that from ever happening again. The industry is every changing.