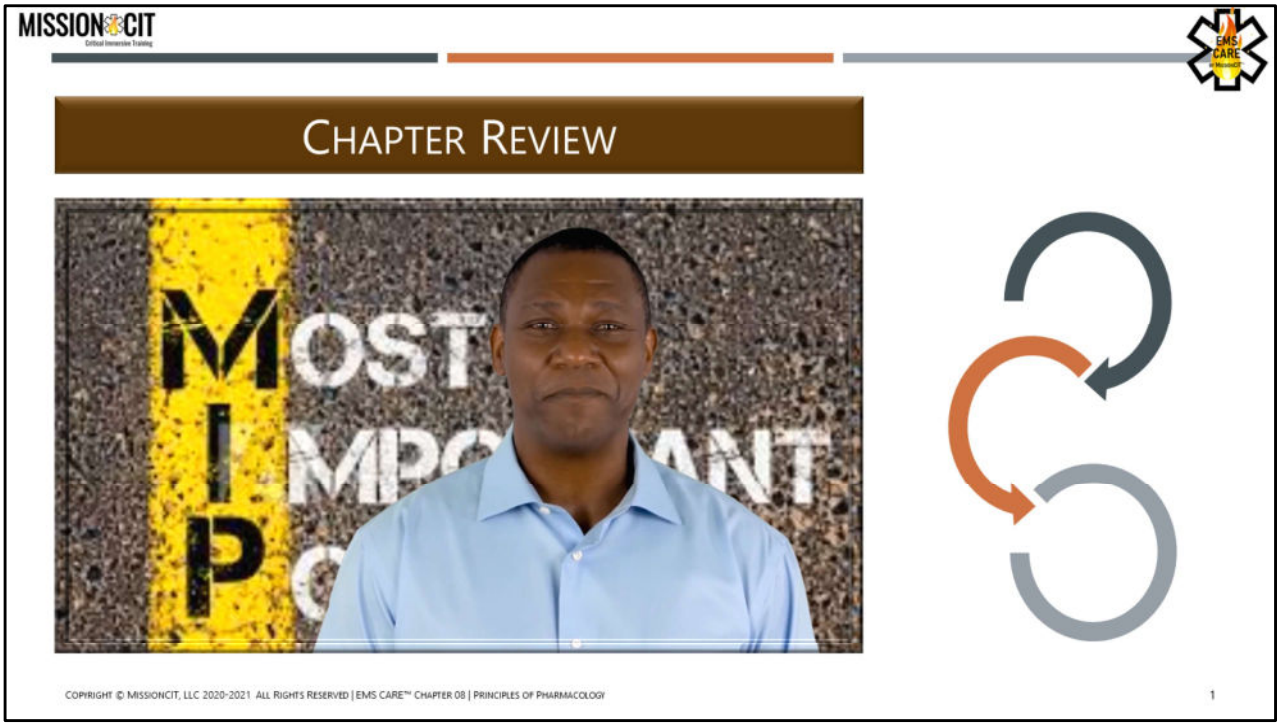
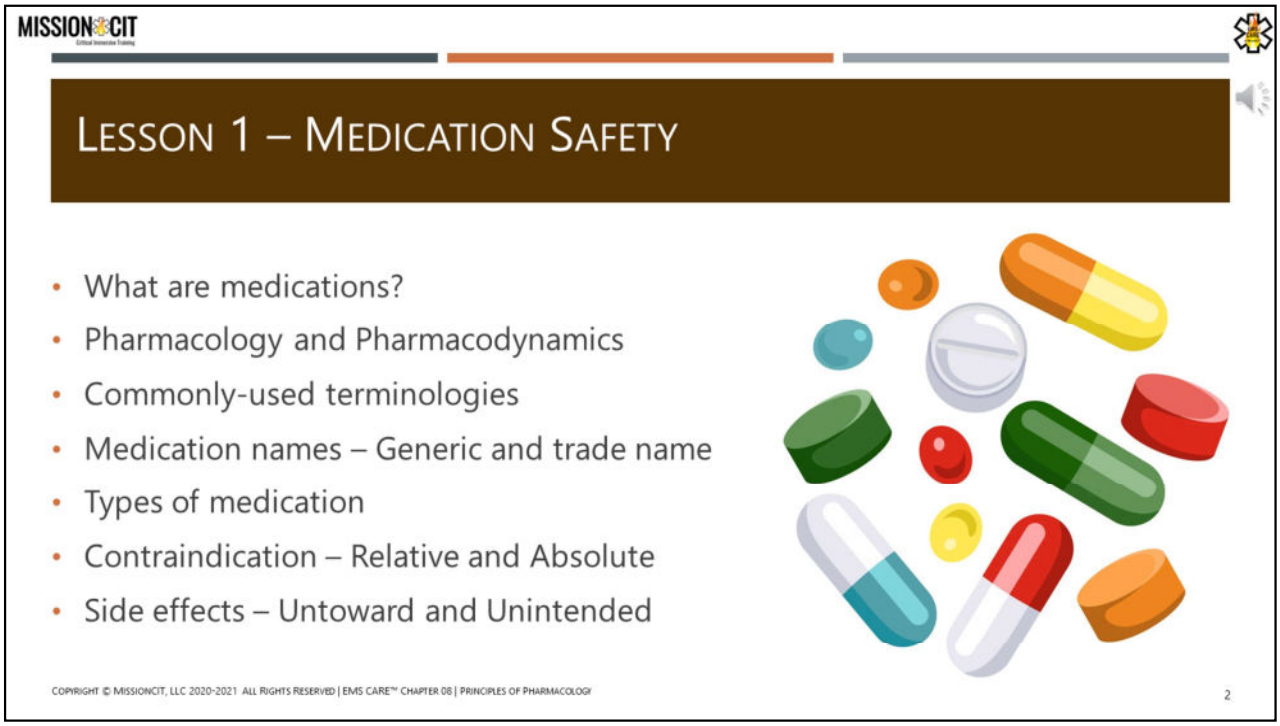


Thank you Missah. Now it's time to have a review of the lessons we have seen so far. Medicines come in different forms for different purposes. They are also various administration routes, depending on the rate of absorption required for the patient based Remember, with all medicines, understand your local and state protocols. If there is any question about how to proceed, check with ALS or Medical Control. Good Studying.

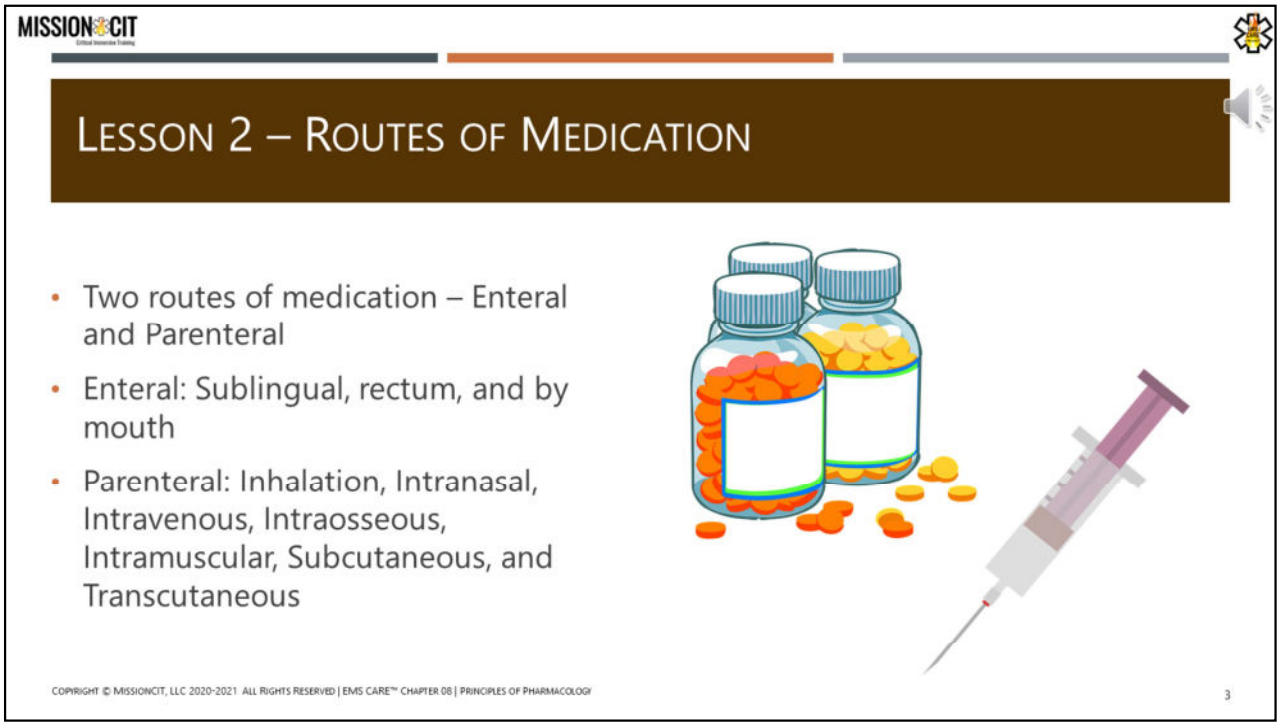


Medications are substances used to treat conditions, prevent diseases, and relieve pain and symptoms.
Next, Pharmacology is the science of drugs while pharmacodynamics is the process by which medications work on the body.
Following this, we looked at different terminologies. To recap, agonist binds itself to a compound and activates it, antagonist dampens the biological response of a medication, dose is the measured quantity of a medicine, action is the impact of drug on a body, indication is the use of drug to treat a condition,

contraindication is a reason to withhold treatment, and finally, side effect is the outcome of a drug.
Moving on, you can know a lot about a medicine from its name. Broadly speaking, you have generic names which are medicines not associated with a specific manufacturer and trade names where a medicine is association with a specific manufacturer. Your best example is acetaminophen, which is its generic name, while Tylenol, is its trade name.
Besides generic and trade names, you can identify the type of medicine too with its name. Some of the common medication types include prescription drugs, over the counter medications, recreational drugs, herbal remedies, enhancement drugs, and vitamin supplements.
In addition, you must know which two medications should never be given together as they can be harmful for patients. This is called contraindication and there are two types. In relative contraindication, you can give two contrasting medications when benefits outweigh the risks, while in the second type called absolute, you must never administer contradicting medications, as it can be detrimental for a patient.
The last topic in this lesson is side-effect, which is the unwanted or unexpected effect of medicine. Again, this can be of two types and they are – unintended and

untoward. Unintended side effects occur due to the pharmacological properties of the drug, while untoward side effects, are due to improper dosage or administration.

With this, we come to the end of lesson 1 and in the next lesson, we'll touch on the routes of medication.

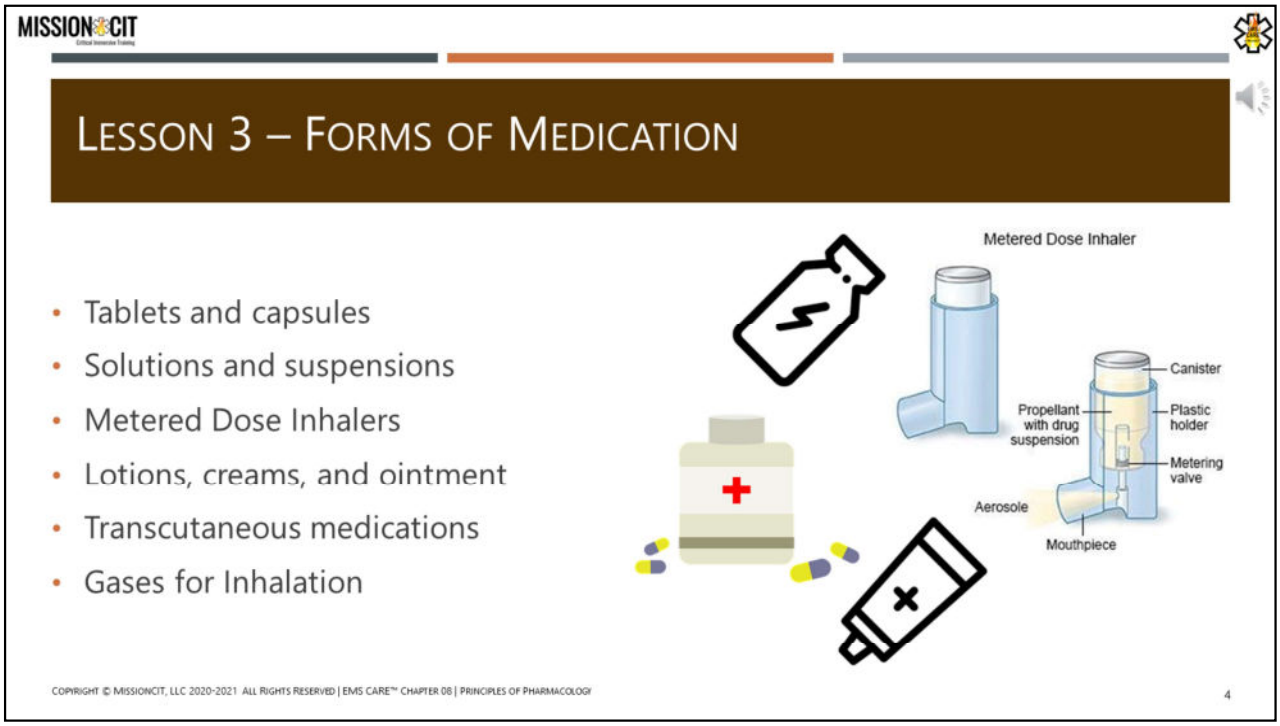


Well, in the last lesson, we talked about medications, terminologies, and side-effects and this chapter is all about the different routes of medication.

First off, there are two types of routes through which medicines are administered, and they are enteral and parenteral. As the name suggests, enteral routes go through the digestive system while the parenteral routes go through other means.

That said, there are three enteral routes and they are sublingual, by rectum, and by mouth. Out of these, the first two have a fast rate of absorption while the third is

slow.
Moving to the parenteral routes, there are seven types. Out of these, the fastest are inhalation and intranasal, while the slowest are subcutaneous and transcutaneous. The remaining three, namely, intravenous, intraosseous, and intramuscular, have moderate rates of absorption. We will talk more about these medication routes in Lesson 4.



Welcome to the chapter review of the third lesson, which is, forms of medication.

Earlier, we saw that medicines are of different types and there are different routes to administer them. Putting both together, we can conclude that the form of a medication determines the way it should be administered.

That's why we will look at the different forms of medications now.

The first form of medication, and also the most popular one, is tablets and capsules. Generally speaking, tablets

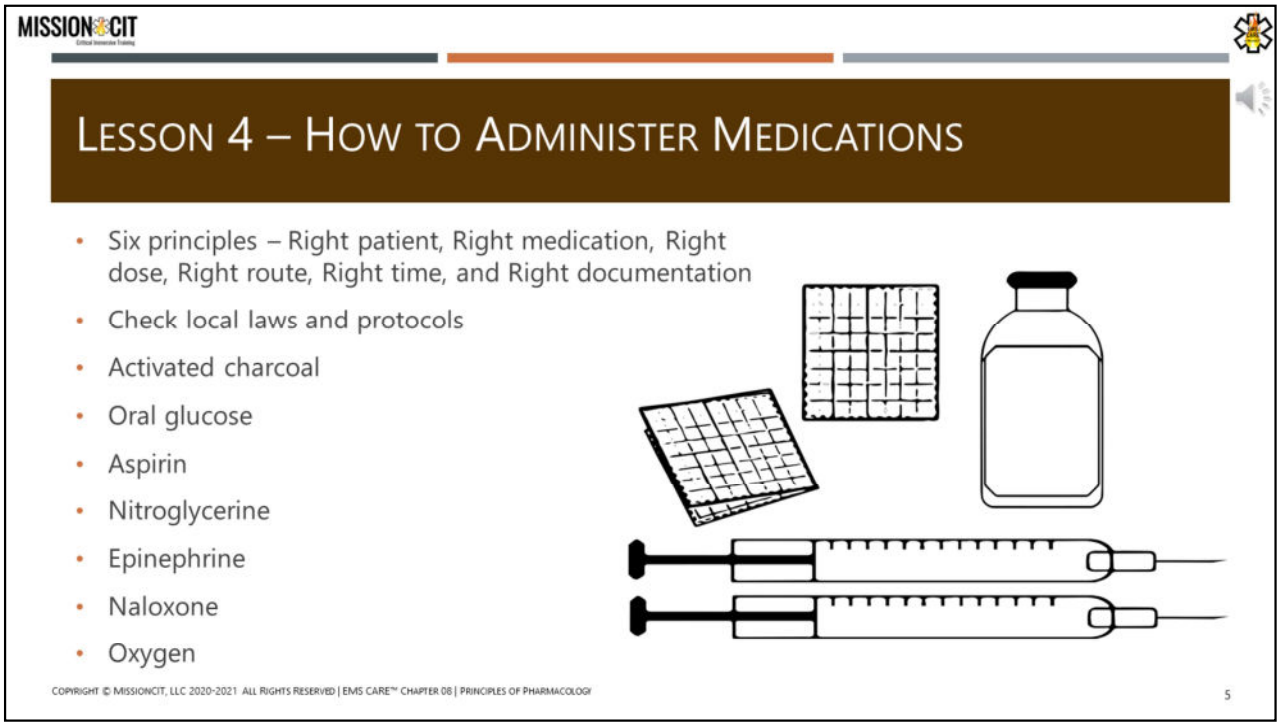
contain a combination of the medicine and other substances, so it has a longer shelf life, while, capsules are gels, filled with the medication. Hence, they don't have a long shelf life.

The next form of medication is solutions and suspensions. A key difference between the two is that solutions are a liquid mixture of substances that can't be separated, while suspensions, are a combination of substances that don't mix well together. This means, you'll have to shake suspensions before administering them.

Moving on, metered dose inhalers send medicines through the mouth, so they reach the lungs directly, whereas, lotions, creams, and ointments are applied on the skin to treat a particular area.

Next, we'll talk about transcutaneous medications that are absorbed by the skin, and finally, we have gases for inhalation, where oxygen is administered through a nasal cannula.

With this, we come to the end of this lesson and in the next, we will see how to administer medication.



Moving on to the fourth lesson now. And here, we will talk about the different ways to administer medication.

Generally speaking, there are six principles or rights you must know, and they are: right patient, right medication, right dose, right route, right time, and right documentation.

With these in mind, you'll have to administer medication. There are three situations where you will have to use these principles and they are: peer-assisted medication, where you administer medication to yourself or to your partner as a precaution, patient-

assisted medications, where you help a patient to administer medication, and lastly, is EMT-administered medication, where you administer medication to a patient who is unable to follow instructions.

Now, before you administer, make sure to check the state laws and local protocols, as these vary widely between states and organizations.

Next, let's briefly touch on the different ways to administer different medications. The first is oral medication, and this requires little training, as it is commonly used. As an EMT, activated charcoal is a common oral medication you will administer to handle poisonings and overdose, This is administered as a suspension via a suspension which needs to be shaken vigorously over several minutes in order to blend the liquid appropriately and dissolve the charcoal briquette that has formed at the bottom of the bottle. The patient must then drink the liquid from the suspension bottle.

The next kind of medication you may give is oral glucose. Apply the glucose gel on the membrane between the cheek and gum for fast absorption.

The next common medication you will administer is aspirin to prevent heart attacks. But never give it to children, and to patients who are hypersensitive to

aspirin.

The fourth common medication you will assist in providing is nitroglycerin to relieve angina pain, and the best route for this medication is sublingual.

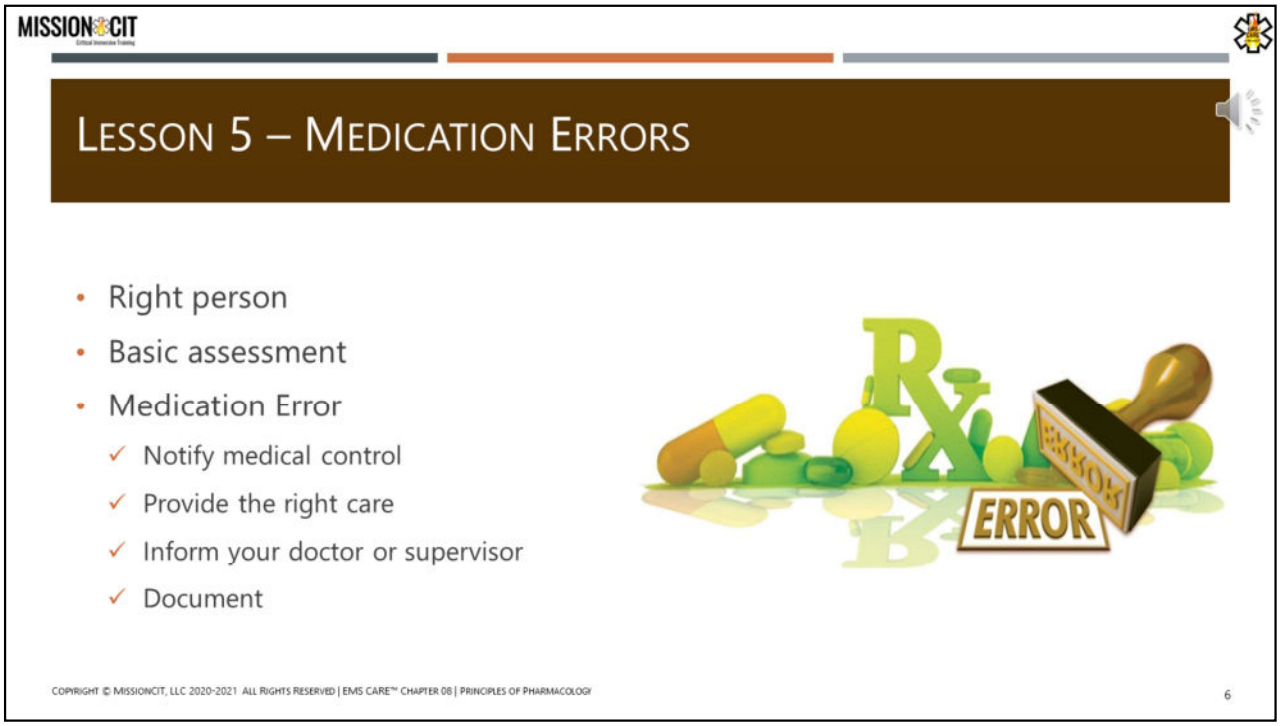
The next medication we will talk about epinephrine. It is also called as adrenaline and must be given to patients who are experiencing life-threatening conditions such as anaphylaxis, cardiac arrest, allergic conditions, and asthma.

Most times, this medication is delivered through an auto-injector as it automatically delivers a preset amount, typically 0.3 mg. Since this is a critical drug, many local protocols don't allow EMTs to deliver them without supervision and they are only allowed to assist in the administration of epinephrine. Make sure to check these protocols.

Besides these medications, you will also have to administer naloxone through the nose to reverse the effects of opioid overdose.

Lastly, you may assist in the administration of oxygen through the nasal cannula, and sometimes, even ,liquid or powdered medications through metered dose inhalers.

next lesson is the last one where we will talk about medication errors and how to handle them.



Now, we have come to the last lesson, which is, medication errors.

Before you administer any medication, do a basic assessment of the patient. Check if you're dealing with the right person, and learn, as much as possible about this patient. Make a note of the medications being taken currently, allergies, and all other pertinent information, so you can administer the right medications.

Despite your best intentions and knowledge, if you think you've made a mistake, notify medical control immediately. In the meantime, provide the appropriate

patient care, talk to your medical supervisor or doctor, and document everything honestly, to give the doctor the best chance to rectify the error.
We have come to the end of this chapter on Pharmacology. This is followed by the quiz. Thank you and happy testing