

NYCCT Dental Hygiene  
Lucidania Naranjo  
DEN-2315/OL54  
Fall 2020

# Open Educational Resources

OERs are free digital worldwide educational resources that help students, educators, and self-learner to share their idea through the internet. Can be used or reused to learn, teach, and for research materials. They are open to the public or can be restricted to the public. One of the greatest advantages of an open educational resource is that the students can access it anywhere in the world at any time, also it can be accessing the material repeatedly. Another advantage to mention is that it can be less expensive for students, especially when we as students don't understand a concept introduced in class, we can have another resource to better understand the material that takes it to the point with fewer words and better graphic and explanatory concept. However, the biggest disadvantage that an open educational resource has is it can be created by any person, which can result in inaccurate information. Another great disadvantage is the lack of financial incentives for the creator of OERs, since the creator does not receive any type of payments, they are not motivated to update it or create new ones. Also, some users can have difficulty accessing some of OERs because of internet issues, which can be slow or not compatible with the system or program that the students are using.

## 2) Topic assigned: Adrenocorticosteroids

This video explains about glucocorticoid, a hormone produces naturally by the adrenal glands. It produces an anti-inflammatory effect and has immunosuppressive properties. Glucocorticoids can be taken via exogenous sources as well, which are produced synthetically. This video also shows a normal pathway of inflammation and how glucocorticoids come into play to block the pathway of inflammation and the inflammatory mediators. Although, adrenocorticosteroids are powerful anti-inflammatory agents they are also immunosuppressant thus if taken for a longer period of time can suppress an individual's immune system making them vulnerable to getting an infection more easily. This is an important concept for us to understand because people with asthma are typically on steroids for a longer period of time and are prone to getting an infection more easily. As future dental hygienists, we have to keep in mind to consult our patient's primary care doctor to reduce the chance of infection for the patient that is on a steroid for a longer period of time.

Pharmacology- Glucocorticoids/ <https://www.youtube.com/watch?v=sSP6QrTvPlo>

## 3) Choose your own: Drugs for the treatment of Diabetes Mellitus.

This topic was very challenging as well as interesting. When we graduate as a dental hygienist, we will encounter more frequently patients with this condition as it is a very common medical condition. We as dental professionals should know in great detail about the medical

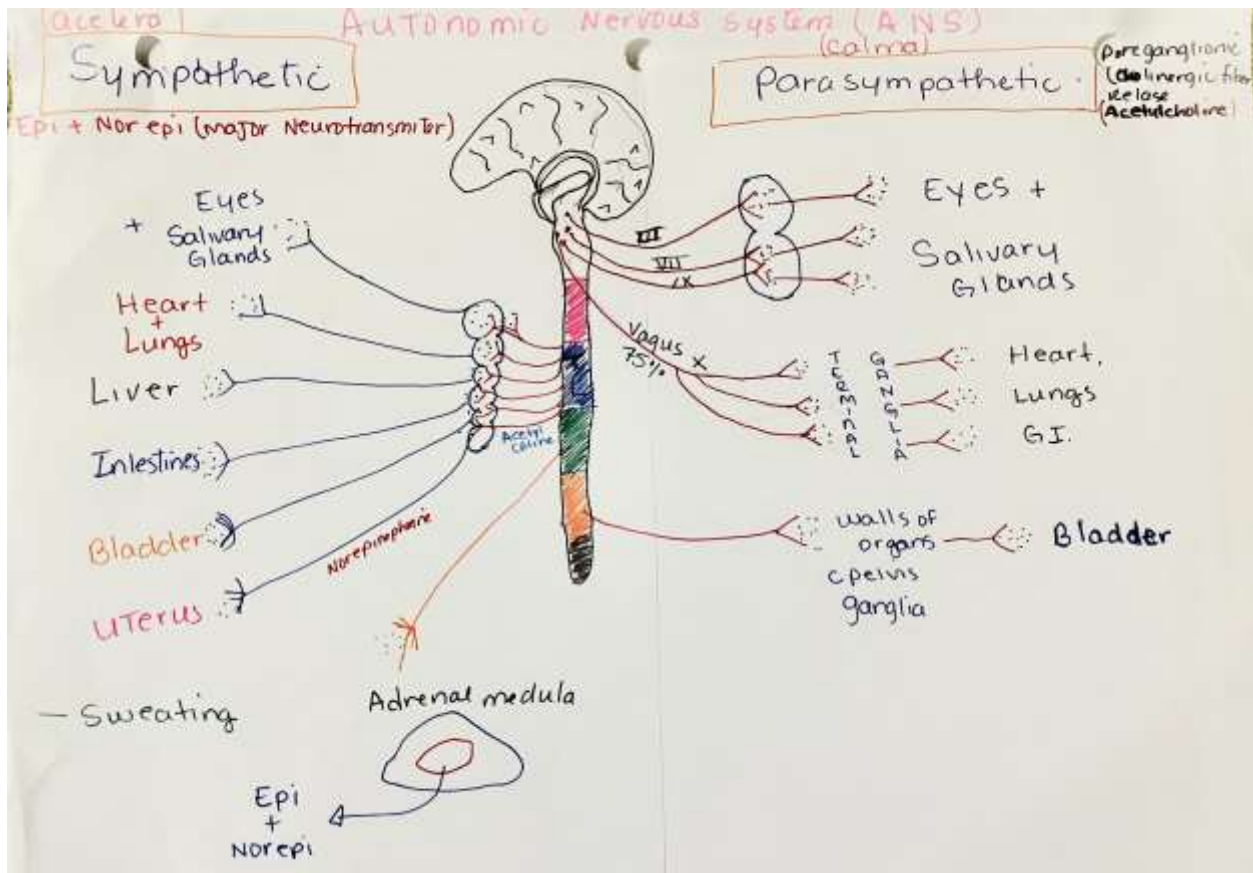
history of our patients, what type of diabetes the patient has, and what kind of diabetic medication the patient is taking. In the case of an episode of diabetes whether hypoglycemia or hyperglycemia happen, we should be aware of the type of drug we could use to treat the emergency, and how to manage this patient. Diabetes can lead to other problems such as retinopathy, neuropathy, cardiovascular disease, and periodontal disease. Also, can lower the ability to fight infection and slow down the healing process. Patients with diabetes have a higher risk of gum disease or even lose their teeth as it displays a by-relationship. Untreated gum disease can increase one's blood sugar levels and makes diabetes worse. Which can lead to other complications. This is why it is important to know how to treat diabetic patients and how to educate them about their conditions. This video showed me how diabetes mellitus type 1 and type 2 occur, what are the normal and abnormal values for glycemic control, and how insulin and glucagon hormones work. This video gave a better visual learning and an improved understanding of some concepts. Sometimes reading from the books only can be overwhelming and make us lose focus on what we are reading with so much information.

Diabetes Mellitus type 1 and type 2: [https://www.youtube.com/watch?v=Y53V7IBn\\_zM](https://www.youtube.com/watch?v=Y53V7IBn_zM)

#### **4) Create your own: Autonomic Drugs.**

One of the topics that were very challenging for me was Autonomic Drugs and the understanding of how the autonomic nervous system works. It is important for us to understand the concept of how the nervous system works normal physiology. As we live in a diverse community, many people may be taking autonomic drugs that can interact with dental drugs for example local anesthetic. It is essential for us to know the seriousness behind a drug-drug interaction which can be fatal. The sympathetic and parasympathetic nervous systems are part of the autonomic nervous system, it is part of the peripheral nervous system. The peripheral nervous system arises out of the central nervous system, which is the brain and spinal cord. The peripheral nervous system is divided into two parts: somatic which controls our voluntary functions, and autonomic which controls the involuntary functions of the internal organs and glands.

This picture I drew, helped me to understand how the autonomic nervous system works, and how the sympathetic and parasympathetic nervous system releases the neurotransmitters to the effector organs. The autonomic system is unique because it has two kinds of neurons that synapse or come together in an autonomic ganglion. Therefore, this system has a preganglionic and postganglionic neuron. The sympathetic nervous system is known as the fight or flight system, while the parasympathetic is known as the rest and digest. In the sympathetic nervous system, the preganglionic neuron is made up of cholinergic fibers and releases the neurotransmitter acetylcholine. While its postganglionic neurons are made up of adrenergic fibers and release the neurotransmitter norepinephrine/epinephrine. The parasympathetic nervous system is slightly different because its preganglionic neurons and postganglionic neurons both release the neurotransmitter acetylcholine. it is made up of cholinergic fibers. It was challenging for me to understand, and I have to try other methods to learn. I am the type of person that likes to see and draw instead of only reading. I made this picture for better understanding.



## 5) Conclusion

I was amazed that there were many resources available online to learn about many subjects. But we have to be very careful in which one to choose because not every OER out there will provide us with the right information we are looking for. There are some relevant and also unreliable information. In my opinion, it will be an excellent idea to include OERs in our daily learnings, it is an excellent resource. Especially for second language students, it would be an attractive way to explain some topics related to pharmacology so that it is better understood. Many times, because of shortness of time our teachers explain a certain topic, but it is not fully understood by many students and sometimes students are intimidated into asking questions that they will feel it is a silly question. An OER containing a flow chart or with pictures would be one of the most effective ways to better understand the topic. I think having an OER suggested by our professor or also making our own OER is more understandable for us and it will help us understand any topic related to our required academic learning. Also, could be beneficial for others if we share with our classmates.

**Resources:**

armandohasudungan. "Pharmacology - Glucocorticoids." *YouTube*, YouTube, 27 July 2013, [www.youtube.com/watch?v=sSP6QrTvPlo](http://www.youtube.com/watch?v=sSP6QrTvPlo). Date accessed Dec 19, 2020.

SimpleNursing. "Diabetes Mellitus (Type 1 & Type 2) for Nursing & NCLEX." *YouTube*, YouTube, 21 Aug. 2019, [www.youtube.com/watch?v=Y53V7IBn\\_zM](http://www.youtube.com/watch?v=Y53V7IBn_zM). Date accessed Dec 20, 2020