



**MS Learn Online
Feature Presentation
Swallowing Difficulties in Multiple Sclerosis
Featuring Patricia Bednarik, MS, CCC-SLP, MSCS**

>>Kate Milliken: Welcome to MS Learn Online. I am Kate Milliken. Swallowing is something that we usually don't even think about, but for some people with MS, the simple act of swallowing can be a problem. Patricia Bednarik, a speech/language pathologist at the University of Pittsburgh, joins us to talk about the swallowing problems that some people with MS may experience. We think of swallowing as a simple act, yet the act of swallowing consists of multiple phases. Pat, why don't we start with what the phases are.

>>Patricia Bednarik: Okay. Well, there are many phases of swallowing. The oral preparatory stage is the stage where it's before we even get food into our mouths, and that is how food is presented, and that is where our body is actually getting ready to receive food. So, it deals with the psychological aspect of anticipation, getting ready. The saliva actually will start flowing upon looking at food, our gastric juices in our stomach will start to be produced, and we are already anticipating, hopefully with pleasure, that we are going to be eating. And this stage is very, very important, particularly for those people who may be on modified diets.

The next stage of the swallow is the oral stage of the swallow, where the food is actually brought up and put into the mouth. And this involves the chewing stage. And during this stage is where the tongue and the teeth, of course, are working together to grind up the food, mix it with saliva, break it down into smaller pieces so that it's easier to swallow. This is where the tongue needs to be able to move around, the cheeks and the lips need to have really good muscle tone, because

otherwise you will get pocketing in the cheeks. Under the tongue there may be some food that gets left on the tongue when we get ready to swallow.

The next stage, as the food moves over the back of the tongue, we are now starting to go into the next stage of the swallow, which is called the pharyngeal swallow, or the swallow of the throat. In this stage, to make it very simple, what happens in the throat part of the swallow, or the pharyngeal stage, is the food starts going over the back of the tongue down the throat. The soft palate, which has that little uvula in the back of your throat that raises up and blocks off the back of your throat so that the food doesn't come out your nose, okay, and it redirects the food down the back of your throat. At the same time the tongue is coming up and pushing against the back of your throat to help push that food down. As the food is coming down, your voice box, or your larynx is moving up and forward, and there is a structure in your throat called the epiglottis. And you can't see it from the outside, which is a good thing, but it actually is moving down over your windpipe or your trachea to help close that off so that food is not going to go in there, so the food will hit it and be deflected. Underneath the epiglottis, as everything is being pulled up and forward, your vocal cords are moving over your windpipe to close off the airway. Now, this is all going on at the same time in this pharyngeal stage. So, the food is now moving through the throat, it's getting now to the muscle that is at the top of the esophagus, and that muscle now is starting to relax. This is all happening simultaneously.

>>**Kate Milliken:** Amazing. Amazing.

>>**Patricia Bednarik:** The very last stage of the swallow is called the esophageal stage, and that stage begins as the muscle at the top of the esophagus is opening up and the food is starting to pass from the throat into the esophagus and now it is heading for the stomach. The amount of time that it takes the food to travel from the muscle at the top of the esophagus into the stomach can be anywhere from eight to 20 seconds.

>>**Kate Milliken:** So, what are the problems specifically that people with MS experience in those four stages of swallowing? Is there one stage that is bigger than the other?

>>**Patricia Bednarik:** Most of the problems we see are problems in the throat stage. Although, because of -- you can have lesions in a variety of places, you can

see problems in all the stages with the exception of the oral preparatory in MS, and we certainly have at our clinic. The problems are problems of -- in order to swallow you need really good coordination of timing, rate, respiration, pressure. Everything needs to go just right. A split second can make a difference, and you need to be able to coordinate breathing and swallowing, which is a very, very important function.

>>**Kate Milliken:** It is quite amazing that you take it for granted that it is something that is so easy and that if part of the system gets knocked off on how much it can really affect people.

>>**Patricia Bednarik:** Absolutely, absolutely. And the concern that we have when it comes to swallowing problems is that many of us have had this experience about when something goes down the wrong pipe and you swallow it and actually food is either penetration the airway or it actually goes into the airway, and what our body naturally does is because the lungs are very unhappy when anything gets in the airway is we cough, and we cough sometimes very violently and prolonged, and our face gets red. And that is actually a very good thing. That is what I want to see if somebody is having a problem, because the alternative to that is something that we call silent aspiration for which there are no symptoms, where the food actually enters the airway and may go into the lungs and the person does not cough at all.

>>**Kate Milliken:** So, how can some of these issues be treated?

>>**Patricia Bednarik:** They can be treated -- the first thing, before we look at treatment, we have to look at doing a really good diagnostic eval. We usually recommend for all people to go and do either a modified barium swallow study, which involves going into an x-ray suite and actually looking at the swallow on moving video. So, you mix barium in with different consistencies of food, thin, thick, liquids, pudding, like puree, and then some type of a solid, and we feed somebody and we actually watch them chew and swallow on a moving x-ray to see where the food goes, how the food goes, if it's getting caught up. And then we also try doing different types of techniques, maneuvers, these sorts of things, to see if we can help facilitate the food to go down into the esophagus and stomach.

>>**Kate Milliken:** So, you use these measures to determine what best treatment for people to have. So, what are some of the treatments that you might suggest?

>>**Patricia Bednarik:** One of the first things that I start with with people is their positioning, okay. How we position ourselves has everything to do with -- if you recall, I said respiration and swallowing, breathing and swallowing are a big thing. And so how the pelvis sits in the chair actually stabilizes the rest of the muscles for the diaphragm and the muscles for both speech and swallowing.

>>**Kate Milliken:** Sure.

>>**Patricia Bednarik:** So, when somebody is sitting in a chair, for example, a wheelchair, I want to make sure they are not slumped to the side, they're not slumped back, and certainly I don't want to see them slumped over. One of the things I always ask people is how do you take your medicines? And I am particularly watching for those folks who take their pills with the old dump and swallow, where they're throwing their head back. People need to remember when you throw your head back you are opening up your airway. When we do CPR, that's what we do is we pull the person's head back.

>>**Kate Milliken:** Right. It's more dangerous that way.

>>**Patricia Bednarik:** That's right. It's actually more dangerous to throw your head back to take your pills.

>>**Kate Milliken:** Right.

>>**Patricia Bednarik:** Okay. So, another thing that we may do is we may have somebody, for example, sit in a certain position or posture. So, they may do better if they turn their head to the side and swallow; they may do better if they tuck their chin down and swallow.

>>**Kate Milliken:** The Heimlich maneuver, which is something that is kind of the universal therapy for everybody.

>>**Patricia Bednarik:** Yes.

>>**Kate Milliken:** Is that something that is used for people with MS?

>>**Patricia Bednarik:** The Heimlich maneuver is used for everybody, and I'm a big believer that everybody should know the Heimlich maneuver and CPR.

>>**Kate Milliken:** So, Pat, how do MS patients manage some of their swallowing issues?

>>**Patricia Bednarik:** Well, I think there are some very practical ways of managing swallowing problems. One of the things is, what I tell people is, be very conscious of the foods that give you difficulty and avoid those things. The other thing is in the clinical setting, when we do an evaluation, we may suggest that you change or modify certain consistencies. So, for example, we may suggest you avoid hard meats, okay. Another thing that people can do is be aware of their environment. If it is very busy and very loud and people have a hard time concentrating, and they need to concentrate on their swallow, or they need to use a technique when they eat, they may need to find a quieter place to do their eating.

Other recommendations that I give is that if people want to participate in a meal but yet they don't have the physical stamina to do an entire meal, but they want to enjoy participating with their family is to take their nutrition at other times that is quieter, where they have a little more time. But then just take part of the meal with the family so it's slower, they can pace themselves, but yet they can still enjoy the ambience of being in the group.

>>**Kate Milliken:** Pat, thank you so much for such an informative look at swallowing. I definitely will never see it again in the same way.

>>**Patricia Bednarik:** You're welcome.

>>**Kate Milliken:** We invite you to check out the program on speech problems that Ms. Bednarik also participated in. Finally, if you would like to learn about other MS symptoms or to get more information on living with MS, go to www.nationalmssociety.org. This is Kate Milliken for MS Learn Online. Thank you for joining us.