

What Is The DMS Clinic?

- **DMS Clinic is a Speech Pathology Intervention Program that was researched and developed over more than ten years, with special focus on developing the diagnostic tools that would capture the subtleties that relate to decline in the non-institutional setting.**
 - The program was developed for those patients who return to home with risks of complications and instability due to the compounding risk factors associated with fragile recovery. Avoiding repeat hospitalization with stabilization is the goal.
 - The program includes Speech-Language-Voice-Cognition-Dysphagia Evaluation and Swallowing Instrumentation. Being comprehensive saves lives!
 - Collaboration with the Patient, Caregiver, and Physician assures that the patient can be managed with appropriate interventions for increased stability and optimum recovery regardless of the setting in which they reside.
 - The cognitive system's function is paramount to lowering risks, and the DMS Speech Pathologist focuses on the functional probability that the patient can be in charge of any/all aspects of their own recovery, and plans accordingly.
 - The DMS Comprehensive Diagnostic protocol consists of tools that were developed to capture the subtleties associated with complications often seen in a patient attempting to recover at home, in assisted living, or independent living.
 - The DMS Clinic patient has been to an average of 6 physicians or therapists, often being treated for multiple symptoms that align with an oral or pharyngeal stage dysphagia diagnosis.
 - Dysphagia is caused by something else that is happening in the body, so it is our job to figure out what is going on, and to help the patient manage safely!

How Can We Be Sure That our Outcomes Will Improve?

- **Patent stability when returning to the home, assisted living or independent living community relies on a complex coordination of patient abilities, symptoms, and functional processes to reduces the risk of returning to the hospital. Evaluating and managing dysphagia is key to reducing risk, whether you have been in the hospital recently, have had pneumonia or congestion, have a hip fracture or knee replacement, or are simply not feeling well enough to live the life you have previously been enjoying.**
 - 78% of all patients that return to hospital for avoidable causes, do so with 5 diagnosis- 4 of which are caused by, or cause dysphagia: (Coleman et al, 2004, Teno et al, 2009) **Congestive heart failure** (causes dysphagia); **Respiratory infection** (caused by dysphagia or causes dysphagia); **UTI** (research notes a patient with UTI and dysphagia increase risk of re-hospitalization); **Sepsis**; **Electrolyte imbalance** (research- EI and dysphagia = increased risk of re-hospitalization).

In order to swallow safely and effectively, there are five bodily systems that must work in coordination. When any of these systems do not work appropriately, the patient has dysphagia, and their risk for repeat illness or even returning to the hospital increases.

- The muscular system chews and moves the food/liquid through the mouth and into the pharynx to be swallowed.
- The neurological system sends signals to the brain that there is something in the mouth or pharynx that needs to trigger a swallow.
- The cognitive systems interpret the signals and put a series of nerves and muscles into action in order to transit the food into the esophagus, in addition to the cognitive process of safety function, decision-making, and memory skills.
- The respiratory system is alerted. To protect the airway, three levels of protections function, (true and false vocal cords and epiglottis), in order to allow the food/liquid to pass over an otherwise open airway on the way to the esophagus.
- The gastrointestinal system passes the food into the stomach. We see 70-80% of our compromised dysphagia patients exhibiting reflux. In the patient living at home, the reflux alone can cause significant complications when undiagnosed and either untreated or under-treated. We work with your physician to address this issue.

Who is DMS?



- **Speech Pathology Specialists** who treat all areas of HHC Patient needs, including Speech-Language-Voice-Dysphagia
- **Experts** in Dysphagia Management since 1992
- **The Nations Leader** in Comprehensive Dysphagia Management and Swallowing Instrumentation in more than 30 states

DMS Clinic Evaluations



- Protocols based on evidence-based research and patient outcome statistics
- Proven track record for patient-friendly, CMS compliant, and medical necessity-driven eval/tx documentation
- Functional, practical and effective diagnosis and treatment of dysphagia and its related complications

What Does the Typical Patient Look Like Who Needs The DMS Clinic?

- **The patient that is at risk for return to hospital comes in all diagnostic profiles, however in understanding Dysphagia and Cognitive Decline, one can look at statistics:**
 - Dysphagia affects:
 - >30% of CVA Patients
 - 52%-82% Parkinson's Patients
 - 84% of Alzheimer's Patients
 - >40% of adults aged 65 and older
 - >60% of Recently Institutionalized Patients
 - >16,500,000 US senior citizens require care for dysphagia as of the year 2010
 - Identifying patients at risk for dysphagia early is vital in recognizing oropharyngeal dysphagia as a major geriatric syndrome (Clave et al, 2004, Ekberg, O, 2002)
- Add to that list by talking about patients with diagnoses that, when ill managed, can quickly compound into high dysphagia risk and significantly affect outcomes such as:
 - Diabetes
 - Post head and neck surgery, including post trach/vent
 - Post cardiac event including surgery
 - Hip Fracture and/or replacement or knee replacement
 - COPD, CHF and Asthma
 - Gastro-Esophageal Reflux Disease - GERD
- It is difficult to rehabilitate a person's dysphagia related to any of the four other systems without managing the reflux if it is present. This is a big issue for patients at home.
 - Conversely, it is impossible to have reflux into the pharynx/larynx and not have dysphagia, as it is a significant risk for suffering from complications of dysphagia.
- The patient with any one of the five systems of dysphagia impaired is at increased risk for aspiration, choking, dehydration, malnutrition, increase in respiratory ailments and more!

What Does It Feel Like To Have Dysphagia? An Exercise for the Caregiver

- 1) There is a simple exercise you can do in order to see what it feels like to have dysphagia. The following items are needed: Big birthday balloon and long clown balloon, milkshake straw, regular straw, coffee straw, Hershey's Kisses (2), peanut butter or cheese cracker, water or juice (4 oz), and pair of glasses.
- 2) Take a small sip of your water. Notice how you have to hold your breath for one to two seconds in order to transit the liquid through the mouth, down into the pharynx, and swallow? This happens with every single swallow, hundreds of times through a meal. It can be fatiguing for those with respiratory compromise and weakness. This activity is an attempt to show you how hard it can be.
- 3) Blow up the big balloon and let the air out. This is a healthy lung that expands and contracts. This ease of expansion and contraction allows for breathing to proceed with little effort.
- 4) Blow up the clown balloon and let the air out. This is a COPD or Pneumonia lung that is very difficult to expand and contract. Since it takes holding your breath to swallow, this compromises the swallow when a person who has to put this much effort into holding their breath has to do it repeatedly to eat!
- 5) Now breathe in and out through your mouth to mimic a non-compromised lung with easy breathing.
- 6) Breathe through the milkshake straw for 1 min - This is a lung with congestion. Does it feel claustrophobic? That is the word that often is expressed with this exercise.
- 7) Breathe through the regular straw for 1 min - this is a lung that has CHF or COPD & more congestion. Folks say they become anxious with this exercise as air seems very difficult to move into the lungs.
- 8) Breathe through the coffee straw for a few seconds - this is a lung with active pneumonia. This is incredibly difficult. Notice how your upright position may help move the air because of gravity?
- 9) Take the Kiss and bite off the tip. Place the flat kiss under one side of your tongue. Continue to hold it down for the following exercises to mimic one-sided weakness or paralysis of the tongue and mouth.
 - a) Take a sip of juice or water using the straw. Notice how hard it is to move the liquid?
 - b) Take a sip of juice or water using a cup. This becomes even more difficult to swallow without being able to use your tongue or one side of your mouth.
 - c) Take a bit of a peanut butter or cheese cracker. Try to move the food to the back of your mouth, all the while holding down the Kiss under your tongue to mimic weakness/paralysis
 - d) Follow the bite with a sip to clear the mouth, holding the Kiss under your tongue.
 - e) Place a piece of scotch tape over one side of your glasses. Now attempt to take a bite of your cheese or peanut butter cracker while holding down the Kiss under your tongue. Notice how your frame of reference, depth perception, and ability to visualize your surroundings affect your eating skills? The patient with visual disturbance is at a great disadvantage for control.

THIS is only a small part of how dysphagia feels! We can help!