Sources of aspirated material include food or drink, saliva or nasal secretions, or objects placed in the mouth such as gum, toys, coins or other small foreign objects. These objects are often contaminated, not only with bacteria from the oral cavity but also with whatever outside organisms they encountered before being placed in the mouth. Aspirated material can also come from the stomach, either due to vomiting or gastroesophageal reflux, (GERD.) This material is particularly dangerous because of its elevated acidity.

Factors that enhance the risk of aspiration from either source include altered level of awareness, poor trunk control, physical deformity, medications that are sedating or otherwise impact swallowing, alcohol consumption, problems with swallowing, including those associated with the aging process, and behavioral disorders which involve food seeking/stuffing or consumption of non-food items (PICA.) Recent antibiotic use or hospitalization, place of residence (such as a rehabilitation facility or a nursing home) and overall level of health can also increase the risk for bacterial infection with aspiration pneumonia. Individuals receiving enteral nutrition (tube feeding) have been determined to have a higher level of risk compared with those who eat by mouth. (2) Statistics are not readily available, but experienced field clinicians say that roughly 25% of the time the source of aspirated material comes from above and 75% of the time it comes from the GI tract.

Symptoms of aspiration include bluish discoloration of the lips or skin, coughing or gagging, discolored, foul smelling sputum that may contain blood or pus, chest pain, shortness of breath, fatigue, fever, wheezing, sweating without exertion, breath odor and difficulties with swallowing. Examination findings may reveal altered respiratory sounds, decreased oxygen saturation, elevated pulse and decreased mental awareness.

Outcomes with aspiration pneumonia can vary greatly depending on many factors, including the severity and extent of the pneumonia, the type of bacteria involved and the timeliness of treatment. Individuals who are in poor physical condition at the onset of symptoms will obviously not fare as well as those who are healthier.
Decreasing the risk of aspiration pneumonia is a task that must be relentlessly pursued from several angles. Simply helping individuals attain optimal body position during and after eating is a vital first step in the process. Specialized support and positioning both during and after a meal may be required for those who have no or poor trunk control or who have other significant bodily deformities such as a severe scoliosis. The Individual’s typical response to eating should be known and observed, particularly if they receive enteral nutrition via gastrostomy, jejunostomy or nasogastric tubes. Monitoring for decreased oxygen saturation during and immediately after eating can be a good way to detect silent aspiration. Individuals who have known or suspected swallowing disorders, food-related behavioral disorders and those whose level of awareness may be impacted by medications or other factors should be given particularly close observation and any necessary mealtime support. Individuals whose health and nutritional status are compromised should also receive specialized attention and support to decrease their vulnerability.

1. **Aspiration Pneumonia** – Symptoms, Diagnosis, Treatment of Aspiration Pneumonia.

2. **Nutrition Issues in Gastroenterology, Series #4**: Series Editor: Carol Rees Parrish, RD, MS, CNSD; Aspiration Risk & Enteral Feeding: A Clinical Approach; April 2003; Marianne Opilla, RN, Nutrition Support Clinician, Virginia Commonwealth University Health System, MCV Hospitals and Physicians, Richmond, VA.

3. **Aspiration Pneumonia**: Medline Plus; U.S. National library of Medicine NIH National Institutes of Health

Click these links for earlier articles on **The Fatal Five**, **Gastroesophageal Reflux**, **The Bowel Movement & Seizure Related Deaths**

**Why doesn’t the HRST concern itself with Aspiration?**

Actually it does, you just have to know where to look.

Ok, it is specifically mentioned once, in Item P. Nutrition. The person will have a score of 4 in this area if they have had one or more hospitalizations for aspiration within the last year. And if they had a severe occurrence Item Q may be scored due to the interventions needed to care for them following the incident. But if they have already had an aspiration event you’re already a few steps behind the 8 ball, which is not where we want you to be. In this month’s article we mentioned several of the risk factors for aspiration, including methods of eating, physical issues, behavioral problems and poor nutritional status. We want each individual’s issues in these areas identified and supported so that the chances of an aspiration event occurring are minimized to the greatest extent possible.
We’ve got you covered!

Several of the Items on the HRST cover each of the risk areas associated with aspiration. Item A. Eating identifies those who are fed via tube or have significant needs for support for safe eating. Item B. Ambulation (yes, Ambulation) tells you who needs significant support to maintain a seated position due to significant physical deformity or problems with trunk control. Item G. Self-Abuse deals with behaviors in which the person engages that place them at risk for injury, like rumination, hand-mouthing, PICA, food stuffing or any other behavior that places the person at risk of an aspiration event. Item K. Gastrointestinal identifies those who are identified as having GERD or who have behaviors that may indicate unidentified reflux. Item P. Nutrition identifies several factors, including unplanned weight loss and suspicious lab values, which may indicate that a person has issues would make them more likely to respond poorly to an aspiration event.

“There’s gold in them thar Considerations!”

Once a potential problem area is identified the problem is half managed. One of the unique features of the HRST is that once it spots trouble it generates a plethora of helpful suggestions in the form of the Service and Training Considerations. While the body of the instrument does not specifically mention aspiration, the Considerations are very sensitive to this very real and deadly threat. When a person receives a score on any of the above mentioned items that places them in the target range as having a potential for an aspiration event there are several considerations generated which are specifically designed to guide them out of harm’s way. These include assistance from appropriate professionals and training of direct caregivers in areas like positioning and seating, behavioral supports, mealtime planning, returning to oral feeding when possible and many, MANY others.

If you have concerns about a person for whom you provide services please take time to review the HRST Considerations. If you have questions about how they can help identify and support an at-risk individual our clinical support staff is available to discuss these concerns with you at your convenience. We hope you will find this a valuable resource.