Health Trends

April 2023

Virginia Department of
Behavioral Health &
Developmental Services

**Office of Health & Safety
Network Supports**

Choking Risk Among Individuals with IDD

Individuals with any type of central nervous system/brain disorder (neurodevelopmental disorder) are high risk for choking.

Some central nervous system/brain disorders include:

- Intellectual Disorders
- Autism Spectrum Disorder
- Attention-Deficit/Hyperactivity Disorder
- Learning Disorders
- Motor and Tic Disorders
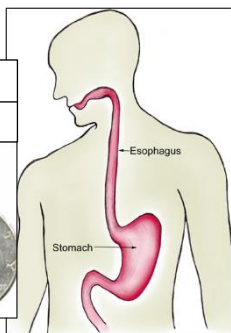- Other Disorders (congenital syndromes such as Down syndrome, Prader Willi, etc.(4).

Other factors and health conditions which increase choking risk are:

- Missing or loose teeth.
- Structural abnormalities of the mouth or throat.
- Difficulty moving tongue up, down, right, left.
- Muscle weakness in the face, mouth, or neck.
- Cleft lip/palate or high-arched palate.
- Pica (obsessive eating or mouthing of non-food items).
- High-risk choking behaviors (obsessive eating or food stuffing).
- Psychotropic medications, pain medications and muscle relaxants.
- Medications which cause dry mouth and muscle weakness (1).

Esophagus Size and Choking Risk

- The esophagus is the muscular tube foods and liquids passes through from the throat to the stomach when eating and drinking.
- The size and diameter of the esophagus changes as an individual grows.
- Certain foods, if swallowed whole, can completely or partially block the esophagus causing an individual to choke (3).

Foods which Increase Choking Risk

- Peanut butter/nut butter (creamy or chunky).
- Peanut butter/nut butter on bread.
- Hotdogs.
- Popcorn.
- Bananas.
- Hard nuts.
- Whole fruits.
- Hard candy.
- Sausage links.
- Marshmallows.
- Hard boiled eggs.
- Chicken on the bone.
- Thick chewy bread, white bread, bagels, pizza, etc
- Whole, raw vegetables.
- Dry meats (ground beef served without sauce, gravy).
- Dry, crumbly foods (cornbread or rice served without butter, jelly, sauce, etc.)
- Foods with 2 or more textures (a thin liquid and a solid component) Example: Crunchy cereal and thin mil

Diameter of the Esophagus					
Child	Age 15	Age 18	Adult		
17.9mm (0.7 in.)	19.5mm (0.75 in.)	21.21mm (0.835 in.)	24.26mm (0.955 in.)	26.49mm (1.043 in.)	30.61mm (1.205 in.)

App of the Month

The 'Choking' app is designed to help a person who is choking. It is designed to help a person in a situation in which food or another object is obstructing their airway. It has two primary features: (1) Broadcast a recorded help message from the user's phone. Can be played in 11 different languages. (2) Sends a pre-written text message with location information to first responders. Additional helpful information on how to handle different types of choking situations. (App of the Month is not endorsed by DBHDS Office of Integrated Health-Health Supports Network. User accepts full responsibility for utilization of app).

References
1. Manduchi, B., Walshe, M., Burke, E., Carroll, R., McCallion, P., & McCarron, M. (2021). Prevalence and risk factors of choking in older adults with intellectual disability: Results from a national cross-sectional study. *Journal Of Intellectual & Developmental Disability*, 46(2), 126–137.
2. Munoz-Núñez, M., Laguna, L. & T´arrega, A. (2023, January). What is the food like that people choke on? A study on food bolus physical properties under different in vitro oral capacities. *Food Research International*, 165(112474), 1-10.
3. Viswanatha, B. & Gest, T. R. (2015, July). Esophagus Anatomy. *Medscape*, 1-6.
4. Weiss, K. and Lachlan, K., (2020, September). CHD4 Neurodevelopmental Disorder. *U.S. National Library of Medicine* (NIH).

ABA Snippets …

ABC data collection is a method of collecting behavior data. From the perspective of the person collecting the data: when a **B**ehavior is observed, it is noted on a data sheet. The person collecting the data should then think about what occurred directly before the **B**ehavior, (this is known as the **A**ntecedent); what happened directly after the **B**ehavior (this is known as the **C**onsequence) and record those as well. Antecedents always come before behaviors, but it is difficult to identify the A until you observe the B.

For example:

- Keith is working with Mick at My Cloud Day Support.
- It is lunch time and Keith observes Mick "screaming."
- Keith records Mick's behavior on the ABC data sheet in the **B**ehavior column.
- Keith observes what happens after Mick's screaming. Charlie asked Mick if he needed help (This is the **C**).
- Keith writes, "staff talked to/ offered help" in the **C**onsequences column.
- Next, Keith recalls that Bill took Mick's soda before Mick screamed (This is the **A**).
- Keith writes, "A peer took his drink" in the **A**ntecedent column.

MJ's ABC Data Sheet		
Antecedent	**B**ehavior	**C**onsequence
A peer took his drink	Screaming	Staff talked to/ offered help

ABC data sheets are organized to show the relationships between antecedents, behaviors, and consequences. ABC data should lead to a hypothesized function of behavior, which is a data supported guess as to why a behavior is happening. In this case Mick might have screamed as a way of asking for help. In many cases, once the behaviorist is confident in the hypothesized function, ABC data collection may no longer be necessary. Caregivers can be instructed or trained in less time-intensive data collection methods such as counting (frequency) or timing (duration) target behaviors.

If you have any questions about this article or other behavioral question, please contact Brain Phelps at: brian.phelps@dbhds.virginia.gov

References: Cooper, J.O., Heron, T.E., & Heward, W.L. (2020). Applied behavior analysis: third edition. (p.4, pp.40-41, pp.55-58, pp. 641-643) Pearson Education, Inc.

The Fatal Seven for Caregivers Individuals with Intellectual and Developmental Disabilities
FREE Training Tuesday, April 11, 2023, between 1:00 pm – 3:00 pm
Registration link: **https://dbhds-virginia-gov.zoomgov.com/meeting/register/vJItdO2sqTMsE9EWVZzMsPje6GxWeudZxHM**

DEHYDRATION   FALLS   SEIZURES   CONSTIPATION   SKIN INTEGRITY   SEPSIS   ASPIRATION

The 4th Annual DD Statewide Nursing Conference will be held in Petersburg VA., October 2023!
The Conference is sponsored by the Office of Integrated Health - Come and meet the OIH Team!
Hot Topics of Interest - Informative Guest Speakers - More Information to Come!

Stay up to date on the latest news at DBHDS by joining the Constant Contact ListServs
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The ARC of Virginia hosted an event with DOJ for their members to hear an update on Virginia's compliance with the Settlement Agreement. You can view the slides and listen to the recording on the ARC of Virginia website.