

# Early Turner Syndrome Feeding Experiences

By Heather Lam, Speech-Language Pathology Trainee  
Heather\_lam@med.unc.edu



## Background

Turner Syndrome is a genetic disorder of the X-chromosome characterized by short stature and incomplete or absent sexual maturation at puberty. Other common phenotype traits include a high, arched palate, micrognathia, and increased risk for gastrointestinal disorders. Infants with Turner Syndrome often have difficulty feeding with both milk and table foods. Current literature documents feeding disorders at a rate of 74% within this population, with difficulty coordinating the suck and swallow sequence and developing adequate chewing skills (Mathieson, Reilly, & Skuse, 1992). Few studies have been conducted, however, and data on large sample sizes is still needed.

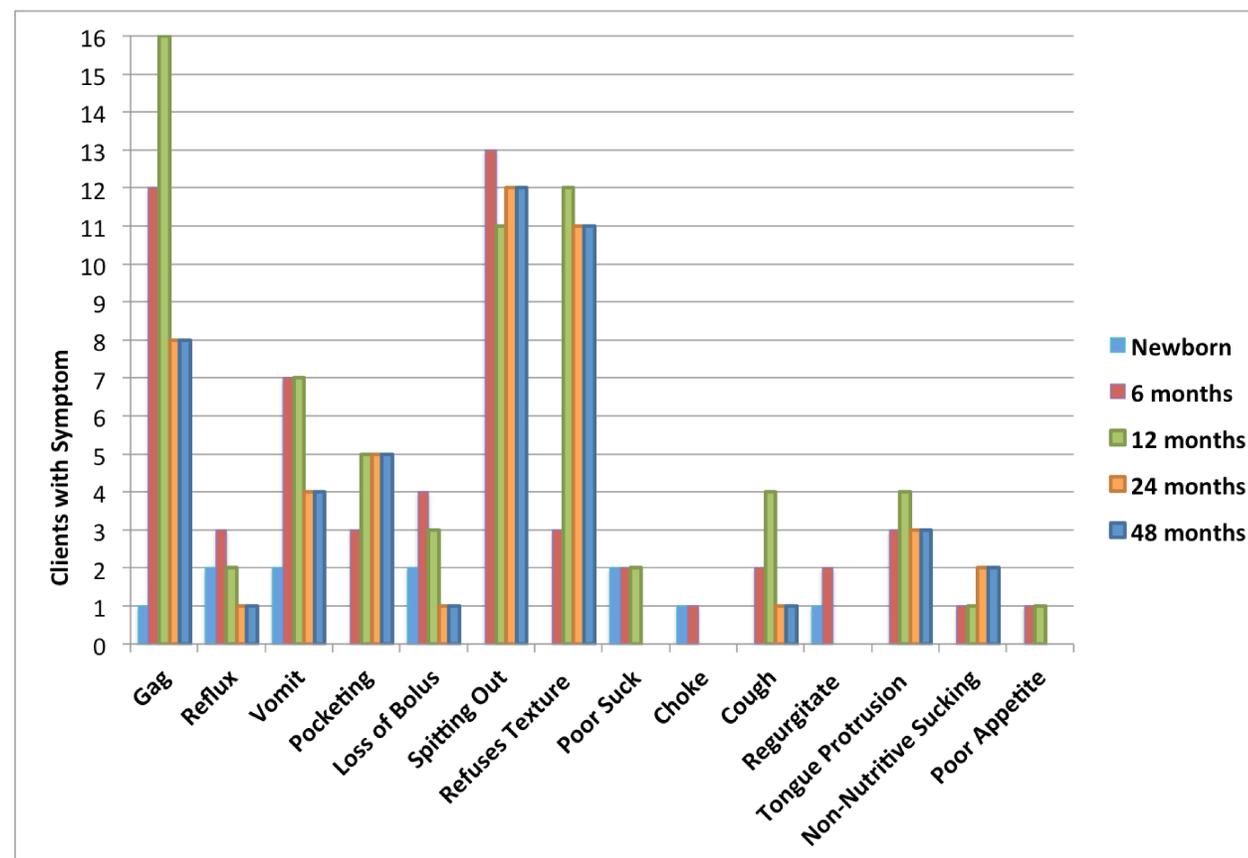
## Research Questions

How common are early feeding disorders in girls with Turner Syndrome? When do these difficulties occur, and what characterizes trouble with feeding?

## Methods

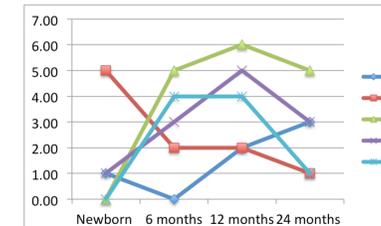
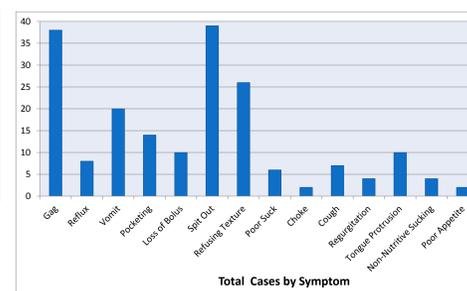
The present study utilizes a longitudinal, cross-sectional design with data from clients of the Turner Syndrome clinic at the Carolina Institute of Developmental Disabilities through the University of North Carolina from 2010 through 2013. Information was gathered via parent questionnaire, clinical observation and interviewing, and the *Schedule for Oral-Motor Assessment (SOMA)* from families of infants with Turner Syndrome (n=41) at the ages of newborn, six months, 12 months, 24 months, and 48 months. The rates of feeding difficulty and symptoms/behaviors present at evaluation are presented from each age group.

## Results



Gagging, reflux, vomiting, pocketing or holding food in the mouth, loss of the bolus anteriorly, spitting food out, refusal of certain textures, poor suck, choking, coughing, regurgitation, tongue protrusion, non-nutritive sucking, and poor appetite were reported or observed within the study. Although not every client was seen for all five appointments across the age range, participants who were seen for each of the first four time slots are presented below along with the instances of each symptom across the ages studies.

	Number of Participants	Mean Age (months)	Feeding Difficulty (n=2)	Mean Symptoms per Child
Newborn	8	1.63	25.00%	1.34
6 months	22	6.5	59.09% (n=13)	2.77
12 months	28	11.82	39.00% (n=11)	2.43
24 months	23	22.39	47.83% (n=11)	2.09
48 months	7	48.00	0.00% (n=0)	0.86



## Discussion

These results add quantitative data to the body of literature on feeding disorders of infants with Turner Syndrome. Future studies may focus on treatment options, effects of early feeding on global development after infancy, and how feeding difficulties influence caregivers and the family system.

## References

- Frias, J.L. & Davenport, M.L. (2003). Health supervision for children with turner syndrome. *PEDIATRICS* 111(3), 692-702. DOI: 10.1542/peds.111.3.692.
- Mathisen, B., Reilly, S., Skuse, D. (1992). Oral-motor dysfunction and feeding disorders of infants with turner syndrome. *Developmental medicine and child neurology*, 34(2), 141-9.
- Starke, M., Wikland, K. A., & Moller, A. (2003). Parents' descriptions of development and problems associated with infants with Turner syndrome: A retrospective study. *Journal of Paediatric Child health* 39, 293-298.

## Acknowledgments

The student author recognizes and appreciates the supervision and mentorship of Margaret DeRamus, M.S., CCC-SLP and Debbie Reinhartsen, Ph.D., CCC-SLP throughout the LEND Traineeship. **Thank you!**