



NYSDOH Clinical Practice Guideline: Motor Disorders

Table 1: Developmental Motor Milestones

Age	Gross Motor	Fine Motor
Birth–6 wks.	<ul style="list-style-type: none">▪ early reflexes present	<ul style="list-style-type: none">▪ grabs adult fingers with tight-fisted hands
6 wk–4 mos.	<ul style="list-style-type: none">▪ holds head erect▪ turns from back to side	<ul style="list-style-type: none">▪ holds a rattle▪ reaches for dangling object with both hands
4–8 mos.	<ul style="list-style-type: none">▪ early reflexes fading▪ can hold head steady▪ rolls from back to stomach▪ sits alone	<ul style="list-style-type: none">▪ picks up cube▪ bangs toys together▪ uses thumb and forefinger grasp
8–12 mos.	<ul style="list-style-type: none">▪ crawls on hands and knees▪ stands alone▪ walks with help	<ul style="list-style-type: none">▪ stacks two cubes▪ releases hold on objects▪ uses pincer grasp▪ can hold a crayon
12–18 mos.	<ul style="list-style-type: none">▪ throws ball▪ crawls or climbs up stairs▪ lowers self from standing▪ walks alone	<ul style="list-style-type: none">▪ turns knobs▪ pushes, pulls, pokes toys▪ turns pages in hardbound books
18–24 mos.	<ul style="list-style-type: none">▪ stands up from stooping▪ climbs onto chairs▪ stands on one foot▪ rides big toy cars▪ kicks ball	<ul style="list-style-type: none">▪ scribbles with crayon▪ completes simple puzzles
24–29 mos.	<ul style="list-style-type: none">▪ walks down steps with alternating feet▪ runs, jumps with two feet	<ul style="list-style-type: none">▪ strings beads▪ scribbles are more controlled
29–36 mos.	<ul style="list-style-type: none">▪ jumps in place▪ rides tricycle	<ul style="list-style-type: none">▪ uses scissors

Adapted from: Geralis 1991



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Table 4: Milestones Relevant to Normal Feeding		
Age / Food	Oral-motor skill	Motor skills
<i>Birth-4 months</i> Liquid	<ul style="list-style-type: none"> ▪ Suckle on nipple 	<ul style="list-style-type: none"> ▪ Head control acquired
<i>4-6 months</i> Purees	<ul style="list-style-type: none"> ▪ Suckle off spoon ▪ Progress from suckle to suck 	<ul style="list-style-type: none"> ▪ Sitting balance ▪ Hands to midline ▪ Hand-to-mouth play
<i>6-9 months</i> Purees Soft chewables	<ul style="list-style-type: none"> ▪ Assisted cup drinking ▪ Vertical munching ▪ Limited lateral tongue movements 	<ul style="list-style-type: none"> ▪ Reach, pincer grasp ▪ Assists with spoon ▪ Finger feeding begins
<i>9-12 months</i> Ground soft foods Lumpy purees	<ul style="list-style-type: none"> ▪ Increased independent cup drinking 	<ul style="list-style-type: none"> ▪ Refines pincer grasp ▪ Finger feeding ▪ Grasps spoon with hand
<i>12-18 months</i> All textures	<ul style="list-style-type: none"> ▪ Lateral tongue action ▪ Diagonal chew ▪ Straw drinking 	<ul style="list-style-type: none"> ▪ More independent feeding ▪ Scoops food, brings to mouth
<i>18-24 months</i> Chewable food	<ul style="list-style-type: none"> ▪ Rotary chewing 	<ul style="list-style-type: none"> ▪ Independence increases
<i>24+ months</i> Tougher solids	<ul style="list-style-type: none"> ▪ Increase in mature chewing 	<ul style="list-style-type: none"> ▪ Total self-feeding ▪ Cup drinking, open cup ▪ Increased use of fork

Smit, A. B., Hand, L., Freilinger, J. J., Bernthal, J. E., & Bird, A. (1990). The Iowa Articulation Norms Project and its Nebraska replication. *Journal of Speech and Hearing Disorders*, 55, 779-798.

*Recommended ages of acquisition (years;months) for phonemes and clusters,
based generally on 90% levels of acquisition*

Phoneme	Females	Males	Word-Initial Clusters	Females	Males
/m/	3;0	3;0	/tw kw/	4;0	5;6
/n/	3;6	3;0	/sp st sk/	7;0-9;0	7;0-9;0
/-ŋ/	7;0-9;0	7;0-9;0	/sm sn/	7;0-9;0	7;0-9;0
/h-/	3;0	3;0	/sw/	7;0-9;0	7;0-9;0
/w-/	3;0	3;0	/sl/	7;0-9;0	7;0-9;0
/j-/	4;0	5;0	/pl bl kl gl fl/	5;6	6;0
/p/	3;0	3;0	/pr br tr dr kr gr fr/	8;0	8;0
/b/	3;0	3;0	/θr/	9;0	9;0
/t/	4;0	3;6	/skw/	7;0-9;0	7;0-9;0
/d/	3;0	3;6	/spl/	7;0-9;0	7;0-9;0
/k/	3;6	3;6	/spr str skr/	7;0-9;0	7;0-9;0
/g/	3;6	4;0			
/f/ /f-/	3;6	3;6			
/-f/	5;6	5;6			
/v/	5;6	5;6			
/θ/	6;0	8;0			
/ð-/	4;6	7;0			
/s/	7;0-9;0	7;0-9;0			
/z/	7;0-9;0	7;0-9;0			
/ʃ/	6;0	7;0			
/tʃ/	6;0	7;0			
/dʒ/	6;0	7;0			
/l/ /l-/	5;0	6;0			
/-l/	6;0	7;0			
/r/ /r-/	8;0	8;0			
/-ə/	8;0	8;0			