

# DySMA

Monitoring of swallowing function in children with spinal muscular atrophy (0-24 months)

Patient: _____	Examiner: _____						
Date of birth: <table border="1" style="display: inline-table; width: 100px; height: 20px; vertical-align: middle;"><tr><td style="width: 33%;"></td><td style="width: 33%;"></td><td style="width: 33%;"></td></tr></table>				Examination date: <table border="1" style="display: inline-table; width: 100px; height: 20px; vertical-align: middle;"><tr><td style="width: 33%;"></td><td style="width: 33%;"></td><td style="width: 33%;"></td></tr></table>			
Child's predominant condition during examination: <input type="checkbox"/> sleeping/dozing <input type="checkbox"/> awake/active <input type="checkbox"/> crying/restless							

## Advice on implementation

Users: Speech-language pathologists, physiotherapists, pediatric neurologists (or comparable).  
Does not replace clinical or instrumental swallowing examination.

### Part I: PATIENT HISTORY

- Ask questions to the parents
- Frame of reference: current status/ last 14 days

### Part II: EXAMINATION

- Transfer from other daily examinations possible (e.g., weak voice when crying or view of the palate during blood sampling)

#### Materials needed:

- Pen light, toys to stimulate mouth opening (e.g., O-Ball, rattle toy)

## Advice on scoring

- Only evaluable if complete. Retest required for missing observations.
- Maximum point value is given per item block

### For item block 1, "Type of nutrition"

- Tick only the most demanding type of food. E.g., child is breastfed and eats chunky porridge =5.
- If oral food intake is not possible (0 or 1), item blocks 2-6 = 0 (continue from item block 7).
- If partial oral feeding is used, check 2. E.g. child is being tube fed and eats porridge = 2.

4			
3			
2			1 <small>max 7</small>
X			
0			

  

NEIN		JA	
0	1		
0	1		
0	1		
0	1	0	X
0	1		

### For item blocks 2-10

- Add up and enter points per item block

X	0	
X	0	
1	X	
X	0	3

## I HISTORY (current status/ last 14 days)

<b>1</b>	<b>Type of nutrition</b> How is the child currently being fed?	Oral	Family food (incl. solid food)	7	max 7
			Soft family food (easy to chew)	6	
			Porridge with bits or very soft bite-sized food (finger food)	5	
			Porridge (pureed food) without bits	4	
			Exclusively breastfed/bottle-fed	3	
		Partially tube-fed	Partial oral feeding	2	
		Tube-fed	Smallest amounts for oral stimulation	1	
	No oral feeding	0			
If necessary, ask about diets and give examples. Note the advice on scoring this item block above!					

		NO	YES		
<b>2</b>	<b>Jaw strength and stability</b> How are jaw strength and stability already developed?	Bites off food	0	1	max 4
		Chews food	0	1	
		Drinks from an open cup	0	1	
		Drinks from a straw	0	1	
In this question, the point values for YES and NO are inverse to the following questions.					

		No YES		
<b>3 Compensation</b> Are special adjustments required when eating?	Adapted posture (e.g., lying flat, elevated)	1	0	max 3
	Thickening of liquids (e.g., water, milk)	1	0	
	Aids required (e.g., special nipple, syringe)	1	0	
From here, the point value for YES and NO changes and remains constant.				
<b>4 Choking</b> Does the child choke when eating? How does choking manifest itself?	Chokes when eating	1	0	max 4
	Coughs frequently during/after eating	1	0	
	Apneas/oxygen desaturation during food intake	1	0	
	Intervention required (pick up, suction)	1	0	
Choking is not always manifested by coughing. Ask specifically about apnea/extended breathing pauses.				
<b>5 Eating behavior</b> Is the child's eating behavior abnormal? Are the parents concerned?	Extremely picky eater	1	0	max 3
	Refuses oral food intake regularly	1	0	
	Parental concern regarding food intake	1	0	
Parental concern relates to challenging eating habits, the amount of food, or weight gain.				
<b>6 Fatigue</b> Does the child manage to eat the amount of food it needs? Does it exhaust prematurely?	Exhausted when eating	1	0	max 2
	Eats very slowly/takes a long time for a meal	1	0	
<b>7 Vomiting</b> Does the child vomit?	(forceful) Vomiting food or tube feedings	1	0	max 1
Vomiting independent of infections.				
<b>8 Secretion management</b> How is secretion management?	Increased secretion/mucus	1	0	max 4
	Chokes on saliva/secretion	1	0	
	Wet breath sounds/wet vocal quality	1	0	
	Oral suction of saliva/secretion required	1	0	
If necessary, simulate or paraphrase wet breathing and wet vocal sound.				

**SUBTOTAL HISTORY (max 28)**

## II EXAMINATION

		No YES		
<b>9 Strength/breathing</b> Observe throughout the investigation	Weak voice	1	0	max 3
	Weak cough	1	0	
	Significant paradoxical rib cage prolapse/paradoxical breathing	1	0	
<b>10 Intraoral examination</b> Watch the tongue with the pen light for at least 5 seconds.	Significant tongue fasciculations	1	0	max 4
	Noticeably high/narrow palate	1	0	
	Reduced maximum jaw opening	1	0	
	Mouth is mostly open/mouth breathing	1	0	
Tongue fasciculations are involuntary contractions of tongue muscle fibers not seen in normal development.				

**SUBTOTAL EXAMINATION (max 7)**

**TOTAL: HISTORY + EXAMINATION (max 35)**