

AMIEL-TISON NEUROLOGICAL ASSESSMENT AT TERM

Name	_____	Birth date	M	D	Y
			<input type="text"/>	<input type="text"/>	<input type="text"/>
Mother's name	_____	Gestational age (wk)	<input type="text"/>		
Chart number	_____	Sex	M	<input type="checkbox"/>	F
			<input type="checkbox"/>	<input type="checkbox"/>	

Assessments

<i>Number</i>	1	2	3	4
Date of assessment				
Day of life				
Corrected age (wk)				
Weight (g)				
Height (cm)				
Head circumference (cm)				

INSTRUCTIONS

For whom?

Term neonates within the first days of life and preterm neonates closest to the term period (between 37 and 42 weeks corrected).

How to code?

A numerical system is proposed to code the observations . Level of severity in abnormal responses is defined.

0 indicates a typical result, within normal range

1 indicates a moderately abnormal result

2 indicates a definitely abnormal result

X indicates examination results when scoring is considered inappropriate because the normal or abnormal character of the observation cannot be defined with certainty.

This coding system is not quantitative. Thus, any computation of quotient or total score is inappropriate.

Pregnancy and birth	
Single	<input type="checkbox"/>
Multiple : twin	<input type="checkbox"/>
higher.....	<input type="checkbox"/>
Vaginal delivery : cephalic	<input type="checkbox"/>
breech.....	<input type="checkbox"/>
Cesarian section planned or repeated	<input type="checkbox"/>
emergency cs	<input type="checkbox"/>
Apgar 1' <input type="text"/>	5' <input type="text"/>

Growth parameters at birth	
Weight <input type="text"/> g <input type="text"/>	centiles
Height <input type="text"/> cm <input type="text"/>	centiles
Head circumf (HC) <input type="text"/> cm <input type="text"/>	centiles
Mid arm circumf. <input type="text"/> cm <input type="text"/>	centiles

Postural deformities (acquired in utero or postnatally)	
Skull.....	<input type="checkbox"/>
Neck.....	<input type="checkbox"/>
Body axis.....	<input type="checkbox"/>
Upper limbs	<input type="checkbox"/>
Lower limbs	<input type="checkbox"/>
Describe:	

Mechanical consequences of birth process	
Caput succedaneum	<input type="checkbox"/>
Cephalohematoma.....	<input type="checkbox"/>
Severe cranial molding	<input type="checkbox"/>
Facial ecchymosis.....	<input type="checkbox"/>
Bruising from forceps (if extensive, asymmetrical or abnormally located)	<input type="checkbox"/>
Facial paralysis	<input type="checkbox"/>
Brachial plexus paralysis	<input type="checkbox"/>
Hematoma of SCM	<input type="checkbox"/>
Fracture of the clavicle.....	<input type="checkbox"/>
Other.....	<input type="checkbox"/>

Socioeconomic data	
Maternal age	<input type="text"/>
Maternal education	<input type="text"/>
Presence of the father at home	yes <input type="checkbox"/> no <input type="checkbox"/>

Parental growth parameters		
	Mother	Father
HC	<input type="text"/>	<input type="text"/>
Height	<input type="text"/>	<input type="text"/>

CRANIAL ASSESSMENT

		1	2	3	4
Head circumference	± 2SD	0	0	0	0
	> 2SD	X	X	X	X
	< 2SD	X	X	X	X
Anterior fontanelle	Normal	0	0	0	0
	Tense	X	X	X	X
Squamous sutures	Edge-to-edge	0	0	0	0
	Separated	X	X	X	X
	Overlapping	X	X	X	X
Other sutures	Edge-to-edge	0	0	0	0
	Separated	X	X	X	X
	Overlapping	X	X	X	X

NEUROSENSORY FUNCTION AND SPONTANEOUS MOTOR ACTIVITY DURING THE ASSESSMENT

Fix and track	Easy to obtain 4 times	0	0	0	0
	Difficult to obtain	1	1	1	1
	No response	2	2	2	2
Ocular signs	Absent	0	0	0	0
	Present, describe _____	X	X	X	X
Response to voice	Easy to obtain	0	0	0	0
	Difficult to obtain	1	1	1	1
	No response	2	2	2	2
Social interaction	Easy and spontaneous	0	0	0	0
	Poor and limited	1	1	1	1
	No interaction	2	2	2	2
Crying	Normal pitch, easy to calm	0	0	0	0
	Monotoneous, abnormal pitch	1	1	1	1
	Absent	2	2	2	2
Excitability	Consolable, normal sleep	0	0	0	0
	Excessive crying, insufficient sleep	1	1	1	1
	Tremors and/or clonic movements	1	1	1	1
Convulsions	Absent	0	0	0	0
	Present (1 or 2)	2	2	2	2
	Repeated for more than 30 min. Describe variety	2	2	2	2
Spontaneous motor activity	Varied, harmonious	0	0	0	0
	Insufficient, stereotyped	1	1	1	1
	Absent or barely present	2	2	2	2
	Asymmetrical (pathological side)	R L	R L	R L	R L
Spontaneous thumb abduction	Active thumb	0	0	0	0
	Inactive thumb	2	2	2	2
	Fixed thumb in adduction	2	2	2	2
	Asymmetrical (pathological side)	R L	R L	R L	R L

PASSIVE MUSCLE TONE

		1		2		3		4		
		R	L	R	L	R	L	R	L	
UPPER LIMBS	Recoil	Quick, reproducible		0	0	0	0	0	0	
		Slow, not reproducible		1	1	1	1	1	1	
		Absent		2	2	2	2	2	2	
	Scarf	Elbow does not reach midline		0	0	0	0	0	0	
		Elbow slightly passes midline		1	1	1	1	1	1	
		No resistance		2	2	2	2	2	2	
LOWER LIMBS	Recoil *	Quick, reproducible		0	0	0	0	0	0	
		Slow, not reproducible		1	1	1	1	1	1	
		Absent		2	2	2	2	2	2	
			Value of the angle							
	Popliteal angle*	70 - 90°		0	0	0	0	0	0	0
		100 - 120°		1	1	1	1	1	1	1
130° or more		2	2	2	2	2	2	2		
		* No coding in cases of breech delivery								
RIGHT-LEFT COMPARISONS	Asymmetry	Absent or not categorized		0	0	0	0	0	0	
		Right side more relaxed		X	X	X	X	X	X	
		Left side more relaxed		X	X	X	X	X	X	
BODY AXIS	Ventral incurvation (flexion)	Moderate, easy to obtain		0	0	0	0	0	0	
		Absent or minimal		1	1	1	1	1	1	
		Unlimited		2	2	2	2	2	2	
	Dorsal incurvation (extension)	Absent to moderate		0	0	0	0	0	0	
		Opisthotonos (excessive)		2	2	2	2	2	2	
	Comparison of curvatures	Flexion ≥ extension		0	0	0	0	0	0	
Flexion < extension		1	1	1	1	1	1			
Flexion & extension unlimited		2	2	2	2	2	2			

AXIAL MOTOR ACTIVITY (active tone)

Righting reaction (Lower limbs + trunk)	Present, complete or not		0	0	0	0
	Excessive with arching		1	1	1	1
	Absent		2	2	2	2
Raise to sit (neck flexor muscles →head forward)	Easy, in the axis		0	0	0	0
	Muscle activity but no passage		1	1	1	1
	No response		2	2	2	2
Reverse maneuver (neck extensor muscles →head backward)	Easy, in the axis		0	0	0	0
	Brisk, excessive response		1	1	1	1
	No response		2	2	2	2

PRIMITIVE REFLEXES

		1	2	3	4
Non nutritive sucking	Rythmic movements, efficient	0	0	0	0
	Few movements, inefficient	1	1	1	1
	No movements	2	2	2	2
Palmar grasp	Strong finger flexion	0	0	0	0
	Weak, short duration	1	1	1	1
	Absent	2	2	2	2
	Asymmetrical (pathological side)	R L	R L	R L	R L
Automatic walking	A few steps, easy to obtain	0	0	0	0
	Difficult to obtain or absent (no concern if isolated finding)	X	X	X	X
Moro reflex**	Brisk, with opening of the hands	0	0	0	0
	Incomplete	1	1	1	1
	Absent	2	2	2	2
	Asymmetrical (pathological side)	R L	R L	R L	R L
Asymmetric tonic neck reflex (ATNR)	Absent	X	X	X	X
	Present	X	X	X	X

** to assess only when other primitive reflexes are asymmetrical or absent

PALATE AND TONGUE

High arched palate	Absent	0	0	0	0
	Present	2	2	2	2
Fasciculations of tongue (peripheral, at rest)	Absent	0	0	0	0
	Present	2	2	2	2

ADAPTABILITY TO MANIPULATIONS DURING ASSESSMENT

Stability	Excellent	0	0	0	0
	Transient changes	1	1	1	1
	Severe destabilisation	2	2	2	2

FEEDING AUTONOMY

Term newborn	Immediate, easy	0	0	0	0
	Incomplete	1	1	1	1
	Absent until day 7	2	2	2	2
Preterm infant close to term	Present, easy	0	0	0	0
	Incomplete	1	1	1	1
	Absent	2	2	2	2

MEDICAL STATUS AT THE TIME OF ASSESSMENT

		1	2	3	4
Term neonate (within the first week)	Assisted ventilation	X	X	X	X
	Anticonvulsant drugs	X	X	X	X
	Phototherapy	X	X	X	X
	Other	X	X	X	X
Preterm infant at the time of examination Persisting extraneurological pathology	Cardiac problems	X	X	X	X
	Respiratory problems	X	X	X	X
	Digestive problems	X	X	X	X
	Retinopathy	X	X	X	X
	Other (describe)	X	X	X	X

UNFAVORABLE CIRCUMSTANCES AT THE TIME OF EXAMINATION

Condition(s)	Has just been fed	X	X	X	X
	Too hungry	X	X	X	X
	Noisy environment	X	X	X	X
	Other (describe) _____	X	X	X	X

COMPLEMENTARY INVESTIGATIONS

	Date	Results
Cranial ultrasound		
CT-Scan or MRI		
CSF		
Optic fundi		
EEG		
BAER		
Other		

