

## Section on Pediatrics

# List of Assessment Tools Used in Pediatric Physical Therapy

Created by the Practice Committee 05/04

This list of assessment and evaluation tools and measures is NOT exhaustive. The Practice Committee has attempted to compile a list of the tools that are most commonly used by pediatric physical therapists. There are many other tools, as well as many Web sites, with additional information. This list should serve as a starting point for anyone seeking information on assessment and evaluation tools and measures. The Practice Committee suggests the following Web site as one source of additional information: <http://nieer.org/assessment/>. If you have additional tools or measures that you believe should be added to this list, please complete the form at the end of this document and submit it to the Section on Pediatrics at [cindysliwa@apta.org](mailto:cindysliwa@apta.org).

### Assessment Tools

#### *ALBERTA INFANT MOTOR SCALE (AIMS)*

Author: Martha C. Piper and Johanna Darrach

Purpose: To identify infants and toddlers with gross motor delay and to evaluate gross motor skill maturation over time

Age Range: Birth – 18 months

Areas Tested: Fifty-eight gross motor skill items divided among four positions: prone, supine, sitting, standing

Each item observed for the components of: weight bearing, posture, and anti-gravity movement

#### *ASSESSMENT, EVALUATION, AND PROGRAMMING SYSTEM FOR INFANTS AND CHILDREN (AEPS)*

Volume 1: Measurement for Birth to Three Years

Author: Diane Bricker

Purpose: To determine level of skill attainment, assist in the development of programmatic outcomes, goals and objectives, and monitor progress toward attainment of outcomes over time

Age Range: Developmental skill range from one to 36 months of age

Areas Tested: Two hundred twenty-eight items divided among six domains which are further divided into strands: Fine motor: reach, grasp, release, functional use; Gross motor: movement in prone and supine, balance in sitting, standing and walking, and play; Adaptive: feeding, hygiene, undressing; Cognitive: sensory causality, problem-solving, preacademic interaction with objects; Social: interaction with adults, peers, and environment; Communication: prelinguistic, expressive, receptive

Each strand is further divided into goals and objectives. Goals and objectives are assessed and are arranged hierarchically

#### *AGES & STAGES QUESTIONNAIRES (ASQ) – Second Edition*

Authors: Diane Bricker, Jane Squires

Purpose: To determine the developmental level of a child through parent report

Age Range: Four to sixty months (4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 27, 30, 33, 36, 42, 48, 54, 60)

Areas Tested: 19 questionnaires each containing thirty items covering five areas of development: -Communication

Gross motor, Fine motor, Problem solving, Personal-social

#### *AGES & STAGES QUESTIONNAIRES: Social Emotional (ASQ:SE)*

Authors: Jane Squires, Diane Bricker, and Elizabeth Twombly

Purpose: To help identify young children at risk for social emotional difficulties.

Age Range: six to sixty months (6, 12, 18, 24, 30, 36, 48, and 60)

Area Tested: Social and emotional behavior

#### *BATTELLE DEVELOPMENTAL INVENTORY (BDI)*

Authors: Newborg J, Stock JR, Wnek L., Guidubaldi J, Svinicki J.

Purpose: Judgment or performance based measure administered through structured format, interviews with caregivers or naturalistic observations. Norm referenced

Age Range: Birth to 8 years

Areas Tested: GM, FM personal-social, language and cognitive skills,

*BAYLEY INFANT NEURODEVELOPMENTAL SCREENER (BINS)*

Author: Glen P. Aylward

Purpose: To identify infants who are at risk for delays or neurological impairments

Age Range: Three to twenty-four months

Areas Tested: Seventy-two items divided among six age sets (3, 6, 9, 12, 18, 24 months) each containing 11-13 items.

Items are categorized into four "conceptual areas of ability": Basic neurological functions/intactness: tone, reflexes,

abnormal signs: Receptive functions: visual, auditory, verbal: Expressive functions: gross motor, fine motor,

vocalizations: Cognitive processes; memory, problem solving, object permanence, attention

*BAYLEY SCALES OF INFANT DEVELOPMENT-II*

Author: Nancy Bayley

Purpose: To identify developmental delay and to monitor a child's developmental progress

Age Range: One to 42 months

Areas Tested: Consists of three scales: Mental: cognition, object permanence, memory, manipulation, problem solving, verbal communication, and comprehension; Motor: gross and fine motor development/ skill acquisition;

Behavior: qualitative aspects of child's behavior during administration of mental and motor scale

**BERG BALANCE TEST**

Authors:

Purpose: Measures balance during movement activities

Age Range: 5 years and older

Areas Tested: 14 items including common movement activities such as picking an object up from the floor, walking and turning

**Bruininks-Oseretsky Test of Motor Proficiency (BOTMP)[**

Author: Robert Bruininks, ---Oseretsky

Purpose: Developmental motor skills

Age Range: 4.5 –14.5 years

Areas Tested: Balance, strength, coordination, running speed and agility, upper limb coordination (ball skills), dexterity, fine motor control, visual-motor

**CANADIAN OCCUPATIONAL PERFORMANCE MEASURE**

Author: Mary Law

Purpose: To detect changes in parent or child's self-perception of performance over time..

Age Range: Any

Areas Tested: Satisfaction and disability rating of daily activities and routines, which are, identified by the child and family as important part of daily life

**CHILD HEALTH QUESTIONNAIRE (CHQ)**

Author: Landgraf

Purpose: Measures physical and psychosocial health concepts

Age Range: 2 months – 17 years

Areas Tested: Judgment based quality of life instrument, completed by parent or child.

**CHILD HEALTH ASSESSMENT QUESTIONNAIRE (CHAQ)**

Author: Len

Purpose: Judgment based quality of life measure; developed primarily for children with arthritis but has been used for children with other physical disabilities

Age Range: Any age

.Areas Tested: Performance of activities of daily living and assistance required.

*THE CAPUTE SCALES: CAT/CLAMS*

Author: Arnold J. Capute

Purpose: To quantify delay in language and problem solving

Age Range: One to 36 months

Areas Tested: Cognitive Adaptive Test (CAT): visual-motor skills, problem solving

Clinical Linguistic and Auditory Milestone Scale (CLAMS): receptive and expressive language

*THE CAROLINA CURRICULUM FOR INFANTS AND TODDLERS WITH SPECIAL NEEDS, SECOND EDITION (CCITSN)*

Authors: Nancy M. Johnson-Martin, Kenneth G. Jens, Susan M. Attermeier, and Bonnie J. Hacker

Purpose: Curriculum based assessment used to determine approximate developmental level of children and programming strategies

Age Range: Birth to twenty-four month developmental range

Areas Tested: Three hundred fifty-nine items and curricula content covering twenty-six areas of development (sequences) divided among five developmental domains: -Cognition-Communication-Social/adaptation-Fine motor-Gross motor

*CAROLINA CURRICULUM FOR PRESCHOOLERS WITH SPECIAL NEEDS (CCPSN)*

Authors: Nancy M. Johnson-Martin, Susan M. Attermeier, and Bonnie Hacker

Purpose: Curriculum based assessment used to determine approximate developmental level of children and programming strategies

Age Range: Two and five years developmentally

Areas Tested: Five hundred and eighteen items and curriculum content covering twenty-five sequences divided among five domains of development: - Cognition- Communication- Social Adaptation- Fine Motor- Gross Motor

*DENVER-II*

Author: William K. Frankenburg, Josiah Dodds, Phillip Archer, Beverly Bresnick, Patrick Maschka, Norman Edelman, and Howard Shapiro

Purpose: To detect potential developmental problems in young children and monitor children at-risk for developmental problems

Age Range: One week to six years, six months of age

Areas Tested: One hundred twenty-five items divided among four areas of function: Personal-social: behavior, caring for self: Fine motor-adaptive: eye-hand coordination, manipulation of small objects, problem solving Language: hearing, speaking, understanding: Gross motor: sitting, walking, jumping. Also, five subjective "Test Behavior" items assessing overall test behavior

*DEVELOPMENTAL PROGRAMMING FOR INFANTS AND YOUNG CHILDREN - REVISED (DPIYC)*

Author: D. Sue Schafer, Martha S. Moersch, and Diane B. D'Eugenio

Purpose: To describe the developmental status of a child with a disability and assist with program planning and implementation

Age Range: Early Intervention Developmental Profile (EIDP): 0-36 months

Areas Tested: The EIDP has 299 items divided into six areas of development  
Cognition-Gross Motor- Fine Motor- Language-Social-emotional-Self-care

*DEVEREUX EARLY CHILDHOOD ASSESSMENT PROGRAM (DECA)*

Author: P. A. LeBuffe, & J. A. Naglieri

Age Range: Ages 2-5 years

Purpose : To measure resilience in preschool children. Resilience is defined as the ability to recover from or adjust to misfortune or change.

Areas Tested: The tool therefore addresses the child's social emotional development

*EARLY INTERVENTION DEVELOPMENTAL PROFILE (EDP)*

Authors: Schafer SD, Moersch MS

Purpose: Developmental screening tool

Age Range: Birth – 3

Areas Tested: Cognition, gross motor, language, perceptual / fine motor, self-care, social/emotional

*ENERGY EXPENDITURE INDEX (EEI)*

Authors: Rose

Purpose: Measure of endurance

Age Range: 3 years and older

Areas Tested: Calculation of heart rate, distance walked and time, Working HR – Resting Heart Rate/ Speed

*ERHARDT DEVELOPMENTAL PREHENSION ASSESSMENT (EDPA) - Second Edition*

Author: Rhonda P. Erhardt

Purpose: To describe the quality of both right and left arm and hand prehension patterns for treatment planning

Age Range: Birth - 15 months

Areas Tested: Three hundred forty-one items divided into three sections: 1. Positional-reflexive: involuntary arm-hand patterns; 2. Cognitively directed: voluntary movements of approach, grasp, manipulation, and release  
3. Pre-writing skills: pencil grasp and drawing

*FUNCTIONAL OUTCOMES ASSESSMENT GRID (FOAG)*

Author: Phillipa H. Campbell

Purpose: To assist team in developing and implementing functional outcomes for children with disabilities

Age Range: No specific age range. Individualized based on desired outcomes thus age is not a factor

Areas Tested: Six functional outcome areas associated with four disability categories (physical, sensory, special health care needs, and other): Caring for self, Communication, Learning and problem solving, Mobility, Play and leisure skills, Socialization. Performance areas delineated within each outcome area. Performance areas: posture and alignment against gravity, movement patterns, movement of body in space, secondary physical disabilities. Performance areas are further divided into performance components with items such as weight shifting, muscle tone, oral-motor control, transitional movements and movement patterns, etc.

*FUNCTIONAL INDEPENDENCE MEASURE FOR CHILDREN (WeeFIM)*

Authors: Carl Granger, Susan Braun, Kim Griswood, Nancy Heyer, Margaret McCabe, Michael Msau, and Byron Hamilton

Purpose: To determine the severity of a child's disability, the measurement of caregiver assistance needed in the Performance of functional activities, and outcomes of rehabilitation

Age Range: Children without disabilities: 6 months to 8 years; Children with developmental disabilities: 6 months to 12 years; Children with developmental disabilities and mental ages less than 7 years

Areas Tested: Eighteen items grouped into two major categories of function, motor, and cognition that are divided into six domains divided into subdomains: Motor, Self-care: eating, grooming, bathing, dressing, toileting, Sphincter control: bladder and bowel management, Transfers: chair, wheelchair, toilet, tub, shower, Locomotion: wheelchair/crawl, stairs, Cognitive -Communication: comprehension, expression, Social cognition: social interaction, problem solving, memory

*FUNCTIONAL INDEPENDENCE MEASURE (FIM)*

Authors: Dodds, Heinemann

Purpose: Measures mobility in the home and community environment & ability to perform ADLs

Age Range: 7 years through adulthood

Areas Tested: Performance in self-care, sphincter control, transfers, locomotion, communication and social cognition

*FUNCTIONAL REACH TEST (FRT)*

Authors:

Purpose: Measure of anticipatory standing balance when reaching

Age Range: 4 years and older

Areas Tested: Measurement of the distance that the child can reach forward from a stationary standing position

*REVISED GESELL AND AMATRUDA DEVELOPMENTAL AND NEUROLOGIC EXAMINATION*

Author: H. Knobloch, F. Stevens, A.F. Malone (1987)

Purpose: It is a norm-referenced test identifying minor deviations in the areas of development and it is used to determine developmental status.

Age Range: 4 weeks to 36 months

Areas Tested: 5 areas of development-gross motor-fine motor-language-personal/social-adaptive

*GROSS MOTOR FUNCTION MEASURE (GMFM)*

Authors: Dianne Russell, Peter Rosenbaum, Carolyn Gowland, Susan Hardy, Mary Lane, Nancy Plews, Heather McGavin, David Cadman, and Sheila Jarvis

Purpose: To evaluate change in gross motor function in children with cerebral palsy, describe a child's current level of motor function, and determine treatment goals

Age Range: No specific age range is recommended by the authors, however, the test has been validated on children between 5 months and 16 years. Seems best suited for children two to five years

Areas Tested: Eighty-eight items of gross motor function divided into five dimensions: -Lying and rolling-Sitting Crawling and kneeling-Standing-Walking, running, and jumping. Items were selected to represent those typically performed by children by age five

#### HEALTH UTILITIES INDEX – MARK 3 (HUI-3)

Author: William Furlong

Purpose: Measures children's functional health status; can compute cardinal utility value to represent Health Related Quality of Life

Age Range: Any age

Areas Tested: Questionnaire completed by caregiver in eight domains: Ambulation, Dexterity, Speech, Vision, Hearing, Cognition, Emotion, and Pain

#### *INSIDE THE HAWAII EARLY LEARNING PROFILE (Inside-HELP)*

Author: Stephanie Parks

Purpose: To provide definitions and guidelines for administration and scoring of skills and serve as a reference for all the HELP curriculum and assessment materials

Age Range: Birth to 36 months

Areas Tested: Six hundred eighty-five skills divided among 40 developmentally sequenced conceptual strands covering seven domains-Regulatory/sensory organization: sensory processing. Cognition: symbolic play, imitation, sound awareness, spatial relationships, concepts, discrimination. Language: receptive, expressive. Gross motor: weight bearing, mobility and transitional movements, reflexes and reactions, advanced postural control. Fine motor: visual tracking, grasp, reach, voluntary release, midline skills, spatial perception, manipulative prehension. Social- emotional: attachment/separation, development of self, emotional expression, learning rules, social interactions. Self- help: oral motor development, dressing, independent feeding, sleep patterns, grooming and hygiene, toileting, household independence

#### *HOME OBSERVATION FOR MEASUREMENT OF THE ENVIRONMENT (HOME)*

Author: Bettye M. Caldwell and Robert H. Bradley

Purpose: A screening tool to identify the quality and quantity of social, emotional and cognitive supports available to the child in the home environment

Age Range: Infant and toddlers version birth to three

Areas Tested; Infant and toddlers version: forty-five items clustered into six subscales: Parental responsiveness Acceptance of child-Organization of the environment-Play materials-Parental involvement with the child Variety of stimulation.

#### *INFANT TODDLER DEVELOPMENTAL ASSESSMENT (IDA)-PROVENCE PROFILE*

Author: Sally Provence, Joanna Erikson, Susan Vater, and Saro Palmeri

Purpose: To determine a performance age range and a descriptive summary of a child's developmental competencies

Age Range: Birth - 3 years

Areas Tested: Six phase process of evaluation with phase four a developmental assessment (Provence Profile).

Assessment items are grouped by age sets and the number of items varies at each age set and within each domain

Phase One: Referral and Preinterview Data Gathering. Phase Two: Initial Parent Interview.

Phase Three: Health Review. Phase Four -The Provence Profile: Developmental Observation and Assessment: Eight developmental domains divided between two categories: -Motor, Language, and Cognitive / Adaptive Competencies- Gross Motor-Fine Motor-Relationship to Inanimate Objects-Language/Communication-Self - Help-Feelings, Social Adaptation, and Personality Traits-Relationship to Persons-Emotions & Feeling States-Coping Behavior. Phase Five: Integration and Synthesis. Phase Six: Share Findings, Completion, and Report

#### *INFANT DEVELOPMENTAL SCREENING SCALE (IDSS)*

Author: W. Jane Proctor

Purpose: To assess developmental status of newborns

Age Range: Normal and at-risk infants between 38-42 weeks gestational age; can also be used sequentially on infants from 32 to 40 weeks gestational age.

Areas Tested: Twenty-four items divided into two groups-Behavioral: habituation, attention/interaction, motor responses, physiological system, abnormal posture or movements-Reflexes: rooting, suck, hand grasp, toe grasp, Babinski, ankle clonus, positive support, walk, placing, crawl, ATNR, Moro

#### *INFANT MOTOR SCREEN (IMS)*

Author: Robert E. Nickel

Purpose: To determine the neuromotor status of infants prematurely born

Age Range: Four to 16 months corrected age

Areas Tested: Twenty-five items adapted from the Milani-Comparetti and the Movement Assessment of Infants Muscle tone-Primitive reflexes-Automatic responses-Symmetry

#### *INFANT NEUROLOGICAL INTERNATIONAL BATTERY (INFANIB)*

Authors: Patricia H. Ellison

Purpose: To distinguish infants with normal neuromotor function from those with abnormal findings and to predict need for follow-up treatment

Age Range: One to eighteen month old at risk infants and toddlers, especially those born premature

Areas Tested: Twenty items divided into five content domains: -Spasticity: TLR, ATNR, hands open/closed Vestibular function: parachute, body rotative.-Head and trunk control: pull to sit, body derotative, sitting, prone posture. -French angles: scarf sign, heel-to-ear, popliteal angle, hip abduction. -Legs: foot grasp, positive support reaction, dorsiflexion

#### *INFANT/TODDLER SYMPTOM CHECKLIST: A Screening Tool for Parents (ITS)*

Author: Georgia A. DeGangi, Susan Poisson, Ruth Z. Sickel, and Andrea Santman Wiener

Purpose: To identify infants at risk for sensory integrative disorders, attentional deficits, and emotional or behavioral problems

Age Range: Seven - 30 months

Areas Tested: Five age specific checklists (7-9, 10-12, 13-18, 19-24, 25-30) containing information on nine domains. self-regulation: fussy-difficult behaviors such as crying, difficulty with transitions- sleep patterns: difficulty falling asleep, attention:, difficulty initiating and shifting attention-eating, feeding dressing or bathing: gagging, vomiting, food preferences, behavior problems during feeding-dressing, bathing, touch: tactile hypersensitivities, intolerance in being confined-movement: activity level, motor planning difficulties, balance, postural insecurity listening, language and sound: hyposensitivity to sound, language problems-looking and sight: sensitivity to light, visual distractibility-attachment/emotional functioning: gaze aversion, mood deregulation, flat affect, separation problems. There is also a general screening version.

#### *LEG LENGTH DISCREPANCY TAPE MEASURE*

Authors: Staheli

Purpose: Measure of leg length

Age Range: Any age

Areas Tested: Tape measurement from ASIS to medial malleoli

#### *MANUAL MUSCLE TEST (MMT)*

Purpose: Measure of muscle strength

Age Range: 4-5 years and older

Areas Tested: Contraction of muscles and if strong enough, application of manual resistance to the muscle contractions; Strength judged on ordinal scale

#### *MILANI-COMPARETTI MOTOR DEVELOPMENT SCREENING TEST, Third Edition (MC)*

Author: A. Milani-Comparetti and E.A. Gidoni, Wayne Stuberger, Project Director for revised edition

Purpose: To identify motor dysfunction in infants by systematically examining the integration of primitive reflexes and the emergence of volitional movement against gravity

Age Range: Birth to two years

Areas Tested: Twenty-seven items divided into two groups: Spontaneous motor behaviors: locomotion, sitting, standing; Evoked responses: equilibrium reactions, protective extension reactions, righting reactions, primitive

reflexes.

*MEADE MOVEMENT CHECKLIST (MMCL)*

Author: Vicki Meade

Purpose: To screen infants for neuromotor delays

Age Range: Four to 6 months

Areas Tested: Flexor and extensor control is observed in six positions or transitional movements: - Sitting on lap: awareness to the surroundings-Prone: orientation of infant's body; tolerance of position- Rolling to back position of head, shoulder, pelvis, and hips- Supine: infant's alertness to self and external stimulus- Sitting: position of head, shoulders, pelvis, and hips- Standing: weight bearing through body; tolerance to position-Ventral suspension: lifting of the head and active movement of legs throughout hips/pelvis

*MODIFIED ASHWORTH SCALE (MAS)*

Authors: Bohannon RW. Smith MB.

Purpose: Measure of resistance to passive movement associated with spasticity

Age Range: 4-5 years and older

Areas Tested: Passive movement of a limb (usually the leg) through range while judging the resistance to the movement; resistance judged on ordinal scale

*MOVEMENT ASSESSMENT OF INFANTS (MAI)*

Author: Lynnette S. Chandler, Mary S. Andrews, and Marcia W. Swanson

Purpose: To identify motor dysfunction in infants, especially those considered at-risk and monitor the effects of physical therapy on infants whose motor behaviors is at or below one year of age

Age Range: Birth to 12 months

Areas Tested: Sixty-five items within four areas of neuromotor functioning: -Muscle tone: anti-gravity postures, resistance to passive stretch, and consistency-Reflexes: relative presence or absence of primitive reflexes- Automatic reactions: righting, equilibrium, and protective-Volitional movement: gross and fine motor behaviors, hearing and vision.

*NATURALISTIC OBSERVATION OF NEWBORN BEHAVIOR (NONB)*

Author: Heidelise Als

Purpose: To develop a profile of the infants' physiological and behavioral responses to environmental demands and caregiving

Age Range: Neonates to four weeks post term

Areas Tested: Ninety-one behaviors based on the conceptual framework underlying the Assessment of Preterm Infant Behavior (APIB) - Autonomic: respiration, color, tremors, and twitch- Visceral: gagging, burp, spit up, and sounds - Motor: tone, posture, gross motor flexion or extension, upper and lower extremity movement State-related (attention related behaviors): eye movement, facial expressions, and gross body movements

*NEUROLOGICAL ASSESSMENT OF THE PRETERM AND FULL-TERM NEW BORN INFANT(NAPFI)*

Author: Lilly Dubowitz and Victor Dubowitz

Purpose: To document status of the nervous system in infants, document neurological maturation and/or change in infants

Age Range: Full term infants up to the third day of life and preterm infants who are medically stable and can tolerate handling up to term gestation age

Areas Tested: Thirty-three items divided into four categories: Habituation: visual and auditory stimuli Movement and tone: posture, tone of limbs, trunk and neck, abnormal movements Reflexes: tendon reflexes, primitive reflexes, Neurobehavioral characteristics: selected items from *Neonatal Behavioral Assessment Scale*

*NEUROBEHAVIORAL ASSESSMENT OF PRETERM INFANT (NAPI)*

Author: Anneliese Korner and Valerie Thom

Purpose: To assess neurobehavioral status of prematurely born infants, to monitor effects of intervention, and to document individual differences

Age Range: Thirty-two to 37 weeks conceptual age

Areas Tested: Seventy-one items divided into seven clusters: -Motor development and vigor-Scarf sign-Popliteal angle- Alertness and orientation-Irritability-Vigor of cry-Percent sleep

*NEONATAL BEHAVIORAL ASSESSMENT SCALE (NBAS)*

Author: T. Berry Brazelton and J. Kevin Nugent

Purpose: To assess and describe infant's interactions and behaviors within the context of a dynamic relationship with a caregiver. Results provide information regarding infant's ability to handle stressors and self-organize.

Originally designed to study individual differences in neonates that contribute to infant-caregiver interactions and for studying group differences among infants.

Age Range: Full term neonates 37 to 48 weeks post-conceptual age. Supplemental items are provided to test infants born less than 37 weeks

Areas Tested: Twenty-eight behavioral and eighteen elicited items that provide information in five packages: Habituation: response decrement -Motor-Oral: reflexes of the feet, rooting, sucking, glabella-Truncal: undressing and moderate handling such as pull to sit, grasp-Vestibular: maximal handling and stimulating items (TNR, Moro) -Social-Interactive: state dependent orientation items. There are also nine supplemental (optional items), five of which were devised by AIs and one devised by Horowitz to be used with babies born premature

*NEUROLOGICAL EXAM OF THE FULL TERM INFANT*

Author: Heinz Prechtl

Purpose: To diagnose infants with neurological abnormality and predict future neurological problems. A screening test is also available which can be used to determine the need for further testing in low risk infants.

Age Range: Full term and preterm infants 38-42 weeks gestation

Areas Tested: Twelve summary items that include primitive reflexes and responses. Posture: symmetry, opisthonus-Eyes: reaction to light, reflexes-Power and passive movements: tone, range of motion, recall, muscular consistency-Spontaneous and voluntary movements: head control, tremors, clonus-State

*NEONATAL NEUROBEHAVIORAL EXAMINATION (NNE)*

Author: Andrew Morgan, Vera Koch, Vicki Lee, and Jean Aldag

Purpose: To determine neurobehavioral status of infants

Age Range: Thirty-two-42 weeks post conceptional age

Areas Tested: Twenty-seven items divided into three sections each having nine items-Tone and motor patterns-Primitive reflexes-Behavioral responses

*NEONATAL ORAL MOTOR ASSESSMENT SCALE (NOMAS)*

Author: Murray A. Braun and Marjorie M. Palmer

Purpose: To screen for oral motor dysfunction in the neonate, distinguish infants with normal sucking from those with disorganization, identify infants with poor feeding abilities, and distinguish inefficient from efficient feeders

Age Range: Neonate to three months of age

Areas Tested: Twenty-six items divided into two categories, jaw movements and tongue movements: -Rate-Rhythmicity-Consistency of degree of jaw excursion-Direction, range of motion, timing of tongue movement Tongue configuration

*NINE MINUTE WALK TEST* (Screening tool)

Authors:

Purpose: Endurance

Age Range: 5 years and older

Areas Tested: Distance walked in nine minutes. Subtest from a full fitness battery of the Health-Related Fitness Test.

*OBSERVATIONAL GAIT SCALE (OGS)*

Authors: Mackey

Purpose: Structured scale to rate gait parameters from video recordings

Age Range: 6-21 years

Areas Tested: Seven sections rated: Knee mid-stance; Initial foot contact; Foot contact mid-stance; Heel rise; Hind foot; Base of support; Assistive devices

*ORAL MOTOR/FEEDING RATING SCALE*

Author: Judy Michaels Jelm

Purpose: To document oral motor/feeding patterns and feeding function

Age Range: One year through adulthood

Areas Tested: Two major areas of oral motor/feeding behavior: Oral motor/feeding patterns lip/cheek movement, tongue movement, jaw movement Related areas of feeding function: self-feeding, adaptive feeding equipment, diet adaptation, position, sensitivity, food retention, swallowing, oral-facial structures

*Pediatric Quality of Life Inventory (PEDI QL)*

Author: James W. Varni

Purpose: To measure health related quality of life

Age Range: 2-18

Areas Tested: The generic core scale consists of 23 items measuring the core dimensions of health from the World Health Organization, physical, emotional, and social functioning, as well as school functioning. The test contains child self-report forms for children 5 and older and parent proxy forms for children 2-18 years of age. Disease-Specific Modules are available for children with asthma, rheumatology, diabetes, cancer, and cardiac conditions.

*PEABODY DEVELOPMENTAL MOTOR SCALES SECOND EDITION*

Author: M. Rhonda Folio and Rebecca R. Fewell

Purpose: To determine level of motor skill acquisition, detect small changes in motor development in children with known motor delays or disabilities, and assist in programming for children with disabilities

Age Range: One through eighty-three months

Areas Tested: Two hundred forty-nine items divided into two scales which are further divided into subtests

Gross Motor Scale: one hundred fifty-one items divided among three subtests: -Reflexes: primitive, automatic reactions- Stationary: static, dynamic--Locomotion: walk, run, jump, hop-Object manipulation: ball handling

Fine Motor Scale: ninety eight items divided among two subtests :Grasping: basic reach, grasp patterns, hand use: -

Visual-motor integration: visual perceptual skills paired with motor, eye hand coordination

*PEDIATRIC EVALUATION OF DISABILITY INVENTORY (PEDI)*

Authors: Stephen M. Haley, Wendy J. Coster, Larry H. Ludlow, Jane T. Haltiwarger, and Peter J. Andrellas

Purpose: To determine functional capabilities and performance, monitor progress in functional skill performance, and evaluate therapeutic or rehabilitative program outcome in children with disabilities

Age Range: Six months to seven years, six months

Areas Tested: Two hundred seventy-one items divided into three subtests in the Functional Skill Scale:-Self care: eating, grooming, dressing, bathing, toileting-Mobility: transfers, indoors and outdoors mobility-Social function: communication, social interaction, household and community tasks.Also environmental modification and amount of caregiver assistance is systematically recorded in Modification Scale and Caregiver Assistance Scale

*PEDIATRIC CLINICAL TEST OF SENSORY INTERACTION FOR BALANCE (P-CTSIB)*

Authors: Crowe, Luyt, Westcott,

Purpose: Measures sensory system effects on stationary standing postural control (balance)

Age Range: 4-10 years

Areas Tested: Six conditions: Standing on floor with eyes open, eyes closed, and with dome (eyes open, but vision stabilized); Standing on foam with eyes open, eyes closed, and with dome (eyes open, but vision stabilized)

*INFANT/TODDLER SENSORY PROFILE*

Author: Winnie Dunn

Purpose: Provides a standard method for measuring an infant's sensory processing with the child's daily life performance.

Age Range: Birth to 36 months

Areas Tested: sensory systems

*SCALES OF INDEPENDENT BEHAVIOR-REVISED (SIB-R)*

Authors: Robert H. Bruininks, Richard W. Woodcock, Richard F. Weatherman, and Bradley K. Hill

Purpose: To measure functional independence and adaptive functioning in school, home, employment, and community settings

Age Range: Three months - 90+ years

Areas Tested: Adaptive Behavior Full Scale contains two hundred fifty-nine items divided into fourteen subscales which are organized into four clusters: -Motor skills: gross, fine-Social interaction and communication skills:

social interaction, language comprehension and expression-**Personal living skills:** eating and meal preparation, toileting, dressing, personal self-care, domestic skills- **Community living skills:** time and punctuality, money and value, work skills, home/community orientation-**Screening Forms:** -Short Form: forty selected items from the 14 subscales-**Early Development Form:** forty items from developmental areas of Full Scale, for children up to 6 years of age, and individuals with a developmental level below 8 years of age-**Problem Behavior Scale:** Divided into three broad maladaptive behavior indexes with eight problem behavior areas: **Internalized Maladaptive Behavior:** hurtful to self, unusual or repetitive habits, withdrawal or inattentive behavior **Asocial Maladaptive Behavior:** socially offensive behavior, uncooperative behavior **Externalized Maladaptive Behavior:** hurtful to others, destructive to property, disruptive behavior

#### *SCHOOL FUNCTION ASSESSMENT (SFA)*

Authors: Coster W, Deeney T, Haltiwanger J, Haley S

Purpose: Measures function in the school environment & can be used to guide program planning

Age Range: Elementary school students

Areas Tested: Three parts: Participation in school activity settings; Task supports; Activity Performance. Includes physical and cognitive/behavioral tasks.

#### *SENSORY INTEGRATION AND PRAXIS TEST*

Authors: Ayres

Purpose: Measures sensory systems contributions to balance and motor coordination

Age Range: 4-8 yrs 11 months

Areas Tested: Numerous tests of postural control, motor coordination & planning, fine and gross motor function, & sensory integration

#### *TEST OF INFANT MOTOR PERFORMANCE (TIMP)*

Authors: S.K. Campbell, G. Kolobe, G. Girolami, E. Osten, and M. Lenke

Purpose: To identify infants with deficits in postural control and to document the effects of developmental therapy to improve postural control needed for functional movement in early infancy

Age Range: 32 weeks gestational age through 4 months post-term (or full term to 4 months)

Areas Tested: 27 observed behaviors and 26 elicited behaviors assessing the ability to orient and stabilize the head in space and in response to auditory and visual stimulation in supine, prone, sidelying, upright, and during transitions from one position to another, body alignment when the head is manipulated, distal selective control of the fingers, wrists, hands, and ankles, antigravity control of arm and leg movement

#### *TEST FOR HIP JOINT INTEGRITY*

Authors: Staheli

Purpose: Measures hip joint placement to determine likelihood of dislocation

Age Range: Any age

Areas Tested: Manual movement of the hip joint

#### *TEST OF SENSORY FUNCTION IN INFANTS (TSFI)*

Authors: Georgia DeGangi and Stanley Greenspan

Purpose: To determine sensory processing and reactivity in infants as an assist to diagnosing sensory processing dysfunction

Age Range: Four to 18 months

Areas Tested: Twenty-four items divided into five subtests: -Reactivity to tactile deep pressure-Adaptive motor function-Visual-tactile integration-Ocular motor control-Reactivity to vestibular stimulation

#### *TIMED OBSTACLE AMBULATION TEST (TOAT)*

Authors:

Purpose: Measures time and quality of walking at several points when walking through a specified path

Age Range: Any

Areas Tested: Negotiation over different surfaces, picking up an object, stepping up, over, going around, ducking under obstacles.

#### *TIMED UP AND GO (TUG)*

Authors:

Purpose: Measure of anticipatory standing balance & gait control, motor function through a typical activity

Age Range: 4 years and older

Purpose: Measurement of the time it takes to rise from a chair, walk 3 meters, turn around and return to a seated position in the chair.

*TODDLER & INFANT MOTOR EVALUATION (TIME)*

Authors: Lucy Jane Miller and Gale H. Roid

Purpose: To identify those children with mild to severe motor problems, identify patterns of movement, evaluate motor development over time, plan intervention, and conduct treatment efficacy research

Age Range: Four months to 3 1/2 years

Areas Tested: Eight subtests: five primary, three optional (clinical)

Primary Subtests- mobility-motor organization-stability-functional performance-social-emotional abilities

Clinical Subtests-quality rating-component analysis-atypical positions

*TRANSDISCIPLINARY PLAY-BASED ASSESSMENT- REVISED (TPBA)*

Author: Toni W. Linder

Purpose: To identify intervention needs, develop intervention plans and to evaluate progress made by children

Age Range: Six months to six years

Areas Tested: Comprehensive assessment of developmental processes, learning style, and interaction patterns in four developmental areas: Cognitive, Social-emotional, Communication and language, and Sensorimotor

*VULPE ASSESSMENT BATTERY-REVISED (VAB-R)*

Author: Shirley German Vulpe

Purpose: To determine skill performance, strengths and needs, degree of central nervous system functioning, and environmental influence on task performance

Age Range: Children with atypical developmental or functional skills between birth to six years of age

Areas Tested: Thirteen hundred developmental tasks divided into three sections: Assessment of Basic Senses and Function: analysis of sensory-motor abilities such as muscle tone, joint range of motion, coordination, planning

Assessment of Developmental Behavior: sixty skill sequences contained in six domains of behavior: gross motor, fine motor, language, cognitive processing, adaptive behavior, and activities of daily living, Assessment of the Environment: includes caregiver characteristics and interaction and information regarding the settings such as home, child-care, hospital, Performance Analysis System composed of three sections used to analyze the child's processing related to task performance

**Recommendation for Addition to  
Section on Pediatrics List of Assessment Tools  
for Use in Pediatric Physical Therapy**

**Name of Tool:**

**Author(s):**

**Purpose of Tool:**

**Age Range:**

**Areas Tested:**

**Publisher & Date:**

**How to Obtain:**

**In case we have any questions, we would appreciate your name and a way to contact you.**

**Name:**

**Phone/E-Mail:**

Thank you for contributing to the Section on Pediatrics' List of Assessment Tools for Use in Pediatric Physical Therapy!

Please fax this form to: 703/706-8575  
mail to: Section on Pediatrics, 1111 N Fairfax St, Alexandria, VA 22314  
or e-mail to: [cindysliwa@apta.org](mailto:cindysliwa@apta.org)