

### GROSS MOTOR

#### VENTRAL SUSPENSION

Birth	-	lack of head control
4 week	-	momentary tensing of neck muscles
6 week	-	momentarily holds head in plane of body
8 week	-	maintains head in the plane of body
12 weeks	-	maintain head beyond plane of body i.e. lift head above the plane of body against gravity

#### PRONE (when lying on tummy)

Birth	-	head to one side (clears nose and airway from mattress) pelvis high knees drawn up under the tummy
6 week	-	only chin lifted off the couch
12 week	-	chin and shoulder off the couch
6 months	-	bears weight of upper body on hands with extended arms

#### 4 MONTHS – ATNR Disappeared

6 months	-	rolls over prone to supine
7 months	-	rolls over supine to prone
7 months	-	bears weight on one hand
	-	rolls over supine to prone to supine
10 months	-	crawl
11 months	-	creep
13 months	-	bear walking (just before walking)

### STANDING

Walking (stepping) reflex disappears by 6-8 weeks except when neck extended – 5 months or more

6 months	-	bears almost all weight with minimal flexion in hips and knees
7 month	-	bounces
8 month	-	readily bears weight on legs
9 month	-	stands holding furniture, stands with support
10 month	-	pulls self to standing position, but cannot let himself down and lifts one foot off the ground
11 month	-	cruises around furniture
12 month	-	walks with one hand holding
13 month	-	stands without support
14 month	-	walks without help with broad base, high stepping gait, steps of unequal length and direction knees bent toeing out shoulder abducted, elbows flexed
15 month	-	creeps up stairs gets to standing position without help
16 month	-	climbs stairs holding rail

- 1 ½ year - runs  
walks well, seldom falls  
walks sideways
- 2 years - runs well  
walks backwards, runs backwards  
picks up object without falling  
climbs up the stairs with both feet per step  
jumps on same spot
- 2 ½ years - Walks on tiptoe on request
- 3 years - climbs up the stairs placing 1 foot per step  
Walks down the stairs both feet per step  
stands on one foot for a few seconds
- rides tricycle
- 4 years - hops on one foot  
Walks down the stairs 1 foot per step

## **SITTING**

### **(Pulled to Sit Manoeuvre) –**

- Newborn - Head lag
- 2 month - hold head momentarily
- 3 month - no head lag
- 6 month - lifts head when about to be pulled up  
Hands held out to be lifted
- 7 month - spontaneous and repeated raising of head

### **Held in sitting position –**

- 2 month - head held up but recurrently bobs forward
- 4 month - holds head up, but head wobbles if sudden trunk movement by examiner  
Sits straight with minimal lumbar curvature
- 5 month - head stable when body gently rocked by examiner
- 6 months - sits with arms forward for support
- 7 month - sits without support for few seconds
- 9 month - sits for 10 minutes
- 10 month - pulls self to sitting and standing position
- 11 month - pivots on sitting to look backwards (righting)
- 15 month - can seat himself in a chair (climbs up the chair – stands on chair – turns around – sits down)

## **GENERAL UNDERSTANDING**

- 1 month - follows a dangling toy (or human face) <90 degrees
- 2 month - follows a dangling toy beyond midline
- 3 month - follows a dangling toy 180 degrees
- 4 month - turns head to a sound
- 5 month - when he drops a toy, he looks to see where it has gone to  
enjoys mirror
- 6 month - stranger anxiety  
Enjoys peek a boo
- 7 month - responds to name  
inhibits to “no”  
pats own image in mirror
- 9 month - claps hands (pat a cake)  
waves bye-bye
- 11 month - puts object in and out of container  
repeats performances laughed at

		hides self behind towel/object (peek-a-boo game)
12 month	-	kisses on request
1 ½ year	-	points to body parts carries out simple orders points correctly to a picture e.g. bird, aeroplane
13 month	-	kisses own image in mirror
2 years	-	obeys 4 simple orders given together parallel play - plays near other children without joining them
2 ½ years	-	interest in sex organs Imitates lines with pencil peak of negativism Helps to put things away
2-3 years	-	gives first name on request
3 years	-	knows own sex constantly asking questions draws a man knows some nursery rhymes may count up to 10
3-4 years	-	gives surname (full name) on request
5 years	-	knows four colours by 4-5 years Knows own age Writes full name

## FINE MOTOR

### MANIPULATION

Grasp reflex disappears at 2 - 4 months

- 3 months - desire to grasp objects  
Excitement shown by rapid movements of limbs, fast breathing, widening of eyes
- 4 months - approaches objects with hands but overshoots  
holds and shakes a toy when given in his hands  
hand regard (also seen in visually impaired)  
hands come in midline
- 5 months- - ulnar grasp and mouthing (no more hand regard)  
splashes in bath and crumples paper
- 6 months - drops a cube if another is offered  
grasps and plays with his feet  
holds bottle
- 6-8 months - radial side of palm grasps the object e.g. block  
ring and little finger press a cube against the thenar eminence of hand
- 7 months - retains first cube / transfers when another is offered  
bangs objects on table  
feeds self with a biscuit
- 9 months - brings 2 cubes together and compares / bangs on each other  
pincer grasp  
reaches objects with index finger  
beginning to release objects
- 10 months - places objects in mother's hands but will not release it
- 11 months - enjoys give and take game  
releases objects in mother's hands  
rolls ball towards examiner  
stops mouthing of objects
- 13 months - 2 cubes in one hand (1 cubic inch size)
- 15 months - enjoys throwing objects to the floor one after another especially when there is someone to pick them up for him
- 15 months tower of 2 cubes
- 1 ½ years tower of 3 cubes
- 2 years tower of 6 cubes
- 3 years tower of 9 cubes & bridge of 3 cubes

## FEEDING

- 6 months - chewing, feeds self with biscuit  
begins to hold spoon, holds bottle
- 1 year - rotates spoon when near his mouth while attempting to feed self
- 1 ½ years - can feed himself with minimal spilling – no rotation of spoon  
By 1.5-2 years, picks up a cup – drinks – puts cup down  
turns 2 to 3 pages at a time
- 2 years - turns one page at a time
- 3 years - uses knife and fork

## DRESSING

- 15 months - takes off shoes
- 1 ½ years - takes off socks & gloves, unzips fasteners
- 2 years - puts on pants, socks and shoes
- 3 years - dresses and undresses himself except back buttons and occasional advice about back and front and advice about correct foot for correct shoe
- 5 years - tie his shoelaces, fully independent for dressing

## FEEDING

- 2<sup>nd</sup> week - may need 6-12 feeds per 24 hours  
2 feeds in night
- 10 weeks - skip night feed intermittently
- 3.5 – 4 months - skips feed at night and sleeps 6-7 hours straight (wide variations)
- 9 month - 4 feeds per day
- 1 year - 3 meals per day (wide variations)

## VISION

- 28 weeks gestation - Blink reflex in response to light
- Light reflex - > 29<sup>th</sup> week – sometimes present < 28, well developed at 32 weeks gestation
- 32 weeks - Turns head to diffuse soft light  
maintaining eye closure till bright light is removed
- Birth (40 weeks)- - Fixates on human face for few seconds  
follows dangling ring in a range of 45 degrees if 8 to 10 inches away  
transiently follows moving person or bright target
- 1 month - follows human face or bright object 90 degrees  
fixates on mother as she speaks
- 2 month - follows human face or bright object past midline
- 3 month - follows human face or bright object 180 degrees

- 6-12 weeks - smiles at mother as she speaks (social smile)
- 3 months - fixates on feeding bottle
- 4 months - fixates on ½ inch brick (grasping with eyes)
- Doll's eye response - appears at 25<sup>th</sup> week gestation – disappears by 2 to 3 months
- Binocular vision - begins 1 ½ months, Well developed by 4 months
- 4 months - hand regard – also seen in visually impaired (hence not a visual milestone)
- 5 months - excited to see his food being prepared
- 1 year - follows rapidly moving objects

### **Acquity of vision-**

- Birth - Can see human face at 30-45 cm (focal point of eyes at birth)  
Acuity of vision 20/150 feet as per Nelson's (i.e. approx 6/48 meters)  
20/400 feet as per Morris Green
- 6 months - 20/20 feet (6/6 meters) = same as adult

### **HEARING**

- 2 months - turns eyes to sound
- 3 months - turns head to sound and eyes look in the same direction
- 5 months - turns head downwards to sound
- 6 months - turns head upwards to sound
- 8 months - turns head in a curving arc to sound
- 10 months - turns head diagonally (e.g. lower left to upper right) in response to sound

### **SPEECH**

- 2 months - social smile
- 2 ½ months - vocalises vowels
- 3 ½ months - consonants for displeasure ??  
consonants for pleasure
- 3 – 4 months - holds long conversation with mother
- 4 months - laughs loud
- 6 months - Monosyllabic babble
- 7 months - Poly syllabic babble
- 10 months - word with meaning / imitate sounds eg: “g for dog”
- 10 – 11 months - 1 word
- 1 year - 3 words with meaning

- 15 months - jargon speech (at least 1 meaningful word)
- 2 years - uses pronouns (2-3 years)  
3 words together in a sentence - may be with a lisp
- 3 years - gives first name on request
- 4 years - gives surname & full name on request

## **SPHINCTER CONTROL**

- 15-18 months - tells mother that he has wet his pants
- 18 months - may say "no" when asked  
tells just before passing urine / stool
- 18-24 months - dry during day
- 3 years - dry at night (75% children)  
May need treatment if not dry at night by 5-7 years

## **PLEASURE**

Show displeasure before pleasure  
Learns to say "no" before "yes"

- First few days - quietyens when picked up – first sign of pleasure
- On feeding - splaying of toes  
alternate flexing and extension of toes
- 6 weeks - smile
- 8-12 weeks - vocalises with pleasure
- 3 months - squeals with delight
- 4 months - massive response of pleasure - moves trunk & limbs, fast breathing, wide eyes  
laughs loud  
smiles when pulled to sit
- 5 months - becomes ticklish  
Laughs on seeing a finger approaching for tickling
- 6 months - smiles at dog / another baby

Later enjoys all newly acquired skills eg: sitting, standing, walking, games and company