

# Normal Development and 'Red Flags'

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# Does this look and sound familiar?

- My child is not developing normally please help!!!!



# 'Red flags'

- Awareness of normal
- Identify abnormal
- Refer to Paediatrician, Specialist
- Support

# Outline

- Definition of Child Development
- History taking
- Physical examination

Child developmental mile stones and 'red flags'

- Gross motor
- Fine motor/vision
- Hearing/attention
- Speech/language
- Social development

# Definition

- A process whereby an individual achieves physical, social and mental independence and finally can take responsibility for others
- Dependent on normality in:  
Hearing, vision, motor skills, cognitive ability, communication, physical, emotional

# History taking

- **Pre/Perinatal history**

Pregnancy- maternal age, health, smoking, alcohol, recreational drugs, intrauterine infections ( CMV, rubella, toxoplasmosis etc), poor fetal movement/polyhydraminous

Delivery- Prematurity, low birth weight, apgars

Birth injuries

Neonatal/newborn- feeding/hypoglycaemia, infections, hyperbilirubinaemia, seizures, hypoxic ischaemic injuries

# History

- Postnatal -Infections, injuries (NAI, accidental)
- Psychosocial- attachment, social deprivation
- Family history- genetic, medical, learning disabilities

# Physical examination (clues)

- Birth weight, head circumference, fontanelles
- Dysmorphic features
- Absent red reflexes/ nystagmus
- Skin pigmentations
- Tremors/spasms
- Abnormal startle reflexes, fisting
- Floppy baby/excessive head lag



# Normal development and 'red flags'

- Gross motor skills

Newborn- complete head lag

4 weeks- head lag but beginning to develop some control

6 weeks- chin off couch

12 weeks- chest off couch

6 months- sits supported

8-10 months- sits unsupported, crawl

12-15 months- walks independently, creep upstairs

Describe the posture of the neonate



# Reflexes

## Significance of Reflexes



What is this reflex called?

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# New-born check

- Identify the normal and abnormal

What can you spot in this slide?



What's the name of this posture?



Is this a normal posture?





# Red flags- gross motor -pathways awareness (foundation)



- Rounded back
- Unable to lift head up
- Poor head control



- Difficult to bring arms forward to reach out
- Arches back and stiffens legs



- Arms held back
- Stiff legs

# Red flags- gross motor



- Unable to take steps independently
- Poor standing balance, falls frequently
- Walks on toes

# How old are they approx?

## Sitting



# Crawling- variations

## Variations



# Preparation for walking

## Further progress



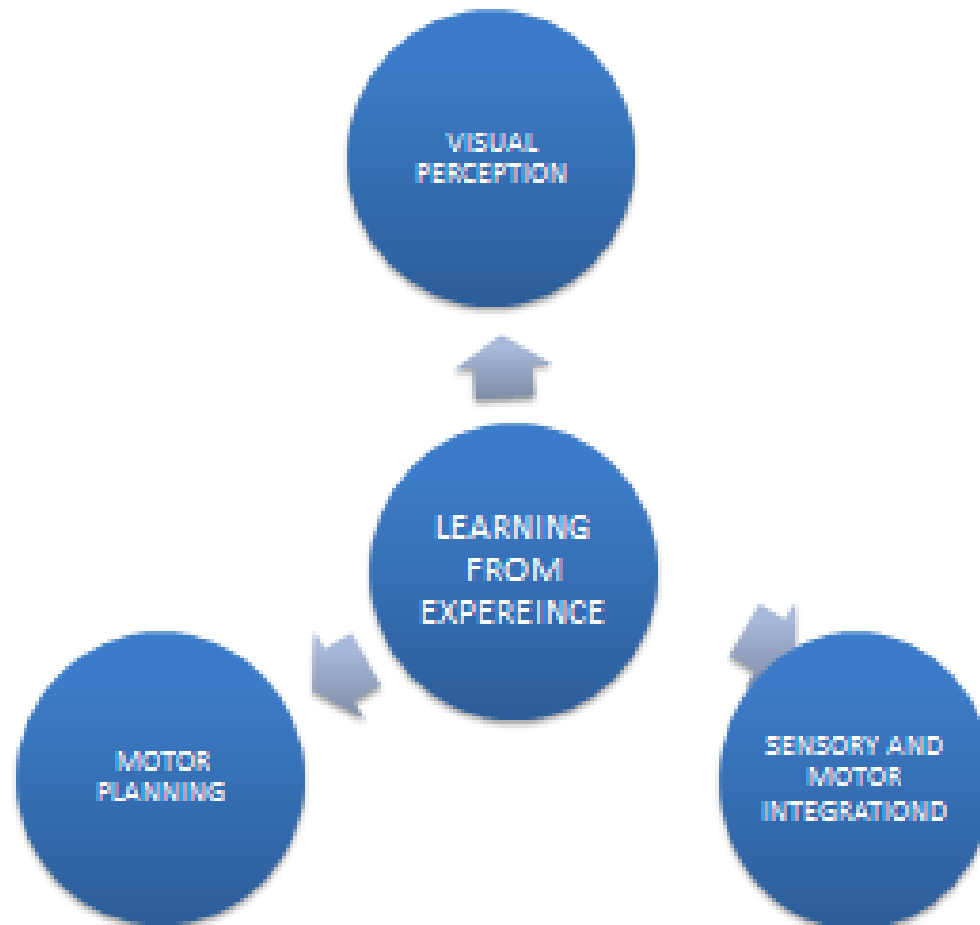
# Red flags....

- Late walker ( bottom shuffler)
- Cerebral palsy- moro's reflex beyond 2-3 months ,fisting, dragging foot behind when crawling, not using one hand, tip toe walking
- Muscular disorders- poor tone, excessive head lag, 'frog like' posture
- Bone and joint abnormalities

# Fine Motor Skills and Visual Perception

- Fine motor skills refers to small and precise movements such as those of the hands. It can also include movements of the small muscles of the face and mouth.
- This domain also includes vision, as this is important in hand-eye coordination and social functioning.

# INFLUENCES ON FINE MOTOR DEVELOPMENT





# Fine motor

- Brings hands to mouth and watches the movements of his/her hands (0 to 3 months)
- Reaches, grasps and brings hands to midline (3 to 6 months)



Hands at Midline

# Fine motor skills

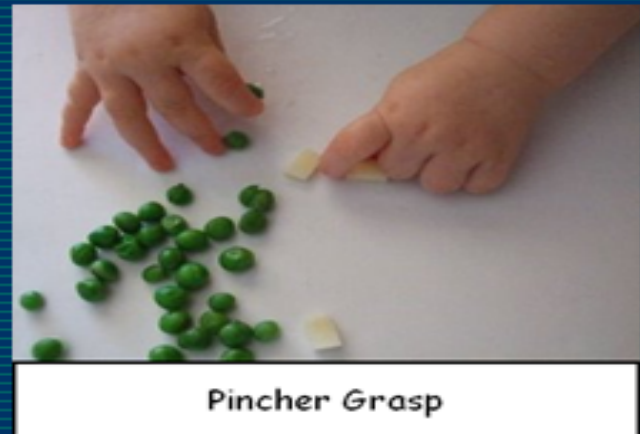
- Transfers objects hand to hand ( 6 to 9 months)

New communication intervener training

Uses a neat, tip to tip pincer grasp on small, pellet-sized items-9 to 12mos.

## Pincher Grasp

- popping bubble wrap
- picking up small objects
- tying bows
- using pushpins
- sewing cards
- stringing beads
- putting pegs in pegboards
- putting clothespins on edges of cans or jars
- using an eyedropper
- putting coins through a small slot



# Fine motor skills

- Scribbles with a crayon using whole arm movements (12 to 18 months)
- Snips paper with scissors (18 to 24 months)
- Imitates a circle and vertical and horizontal lines (2 to 3 years)
- Stacks five to seven small blocks (3 to 4 years)
- Touches each finger to thumb (4 to 5 years)
- Writes first name (5 to 6 years)

New communication intervenor training

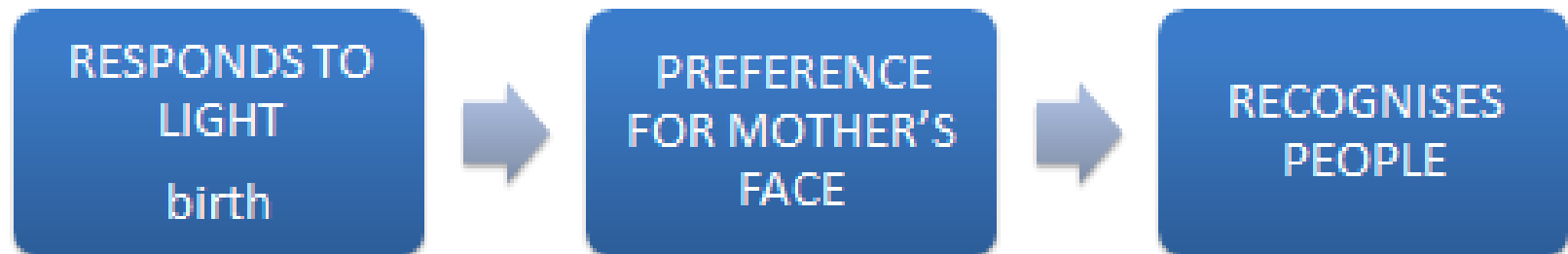
# Red flags

- Using one side persistently
- Abnormal palmer/pincer grasp
- Unable to play with a variety of toys
- Difficulty with activities – cutting, feeding, dressing, throwing etc
- Writing difficulties

# Red flags

- Cerebral palsy
- DCD
- Muscular disorders
- Neurological disorders
- Joint/bone abnormalities

# Progression of visual recognition



# Visuo-motor skills



*follows dangling toy*



*holds toy but cannot yet  
co-ordinate hands and eyes*



# Vision- red flags

- Child not:

Focusing on main carer's face by 3 months

Following objects with eyes 4-5 months

Exploring surroundings 7-12 months. Move eyes and hands together e.g. stacking blocks  
2months-2 years

# Red flags

- Blindness -facial grimacing, eye boring, flapping of hands, bumping into things, holding toys close to eyes
- Squints, refractive error, colour blindness
- Attachment (postnatal depression)
- Autism -poor social interaction, restricted patterns of behaviour/play, bumping into things ( poor spatial awareness/coordination)

# Hearing/attention- red flags

- Child does not:
- Startle to loud sounds- 6-8 weeks
- Quieten to main care's voice- 3 months
- Turn towards sound source- 4 months
- Imitate sounds- 6-8 months
- Recognize name- 12 months

# Red flags

- Does not respond to name
- Early babbling stops
- Talks loudly
- Poor attention
- Comes close to TV/increases volume
- In 'dream world'
- Fever/discharging ears/pulling ears

# Red flags

- Deafness (congenital/acquired)
- Sensorineural
- Conductive ('glue ear')
- Family history of deafness
- ADD/ADHD? Short attention span, fidgetiness
- Associated medical conditions e.g. Allports syndrome, Usher's syndrome

# Speech/language- red flags

- The child does not:
- Coo with pleasure- 3 months
- Babble – 6 months
- Understands ‘no’, ‘bye bye’- 9 months
- Understands own name, 1-2 words- 12 months
- 10-20+ words- 18 months
- 50-70% speech intelligible, 2 word phrases- 24 months

# Red flags

- Stuttering, bilingual
- Selective mutism
- Semantic pragmatic deficit (ASD)
- Verbal dyspraxia ( poor motor programming)
- Drooling/feeding difficulties- mechanical
- Neurological- dysarthria
- Genetic/chromosomal syndromes (Down's, Angelman's, Fragile X)
- Acquired-head injury, epilepsy, landau-Kleffner, cerebral infections

# Social skills- red flags

- Not smiling at by 6 -8 weeks
- Poor response to main caregiver
- Poor eye contact when fed
- By 18 months- failure to acquire pretend play and joint attention, social pointing
- Poor social interaction
- Poor pretend play, repetitive/obsessive behaviours
- Challenging behaviours (emotional, mental, ADHD, child abuse)



# References

- Pre- School Child Health surveillance and Health promotion. A Manual for Hertfordshire. Second Edition.
- R S Illingworth. The Development of the infant and young child. Normal and abnormal. Fifth Edition.
- Bruner J (1983) Child's talk: learning to use language. W W Norton, New York.