



## NECK STRENGTHENING EXERCISES

Neck holding is one of the early skills that a child develops then progresses to more advanced levels; reaching, grasping, sitting, standing, walking etc. Neck holding of a healthy child is achieved at 3 months of age. Functional neck holding is “ability to lift head 90 degree in tummy lying (prone) and keep head and trunk aligned while being pulled to sit” Bentzley et al (2015). Tas & Cankaya (2015) documented that “at least infant has to hold his/her head upright at least for 10 seconds while in supported sitting”.

Unfortunately, there are physiological, physical and mental conditions that make developmental processes slow or difficult to attain but its fortunate to have useful activities and exercises which are on the pattern of development. So, head and neck holding are our first priority to develop so that being a physiotherapist we can progress to further levels.

### **Following techniques should be kept in view;**

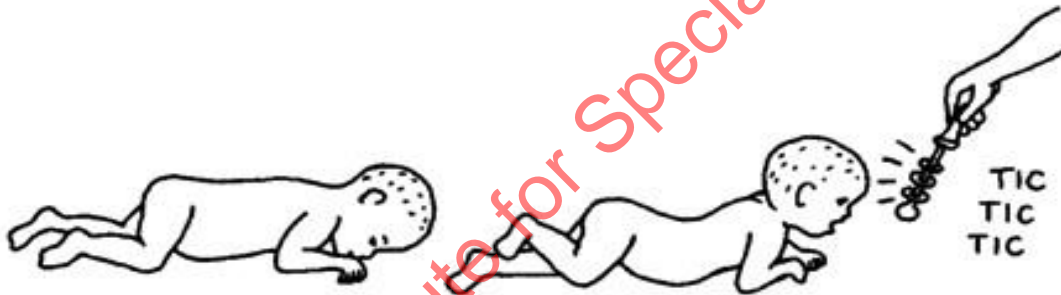
- Always appreciate your child to build confidence
- Talk to the child to seek his/ her attention
- Name the objects using and actions you are doing (name of game)
- Praise your child each time when he/ she succeed or try hard to achieve your goal
- Must consider the pattern of child to achieve a goal (avoid tactic movements of child)
- Whenever you introduce new activity/skill to your child use small steps, so make it easy to learn
- Use toys, fruits, or lighting objects for trickling technique
- Perform exercises 3 times a day, each time repeat every exercise 10-15 times
- Maintain every position or movement for 10-30 seconds

- Exercise plan should be followed regularly

[Note; when child is learning neck holding side by side senses like, touch, sound, eye hand coordination is also in process so visual, sound etc. are the best stimuli to incorporate.]

### **Activities to help the child lift and control head;**

It is important to first lift head to progress rolling. Child should be encouraged to raise head when lying on tummy (prone), attract the child using lightening toys, sounds.



If child does not respond, put him/her like below picture and press muscles on each side of backbone and drag your hand firmly from neck to hips.



If child's back or shoulders are weak there may be trouble raising the head, place a blanket or cushion (or wedge) under the chest of child and shoulders. Put a toy within reach of child to stimulate movement.



If child has still trouble to raise head when lying face down, lay him/her against your own body, making child's body upright. In this way child needs less effort to lift head.



When child is lying face up (supine), take his/her upper arms and gently pull up until child's head hang back a little, then lay him/her down.



**CAUTION;**

*Never pull the child like below holding his/ her hands towards your body and hanging his/her backbone and head back.*



Those CP (cerebral palsy) Children having stiffness/ hypertonia may show reflex stiffness as you pull child's arm. It is recommended, pulling child's shoulder blade forward to lift him/her up but for this child must have some strength to hold neck for few seconds.



If child has not enough power to lift head up when you pull his/her shoulder blades as shown above, then don't try to pull child up. Sit your child up by supporting his/her body then gently tilt child's back a little, now encourage him/her to lift head up. With time being, when child gains strength to hold his head up, gradually tilt his/her back farther back but make it sure that head don't hang back rather head should be hold up by child himself/herself.



If child don't make effort to hold or lift head up while you are feeding him/her then don't put food or nipple into his/her mouth rather touch nipple/spoon to the lips of child and let the child make effort to bring his/her head forward to get milk or food as shown in below picture.



When your child develops better neck holding then support his body firmly and play with him/her but make it sure child's arms and head should be free to move. Use toys, lightening objects or sounds to seek his/her attention as he/she moves neck and arms to take these objects, move these objects in upward, down word, side to side so child can perform movements in all axis around the neck.



### **Good carrying positions of child;**

Carrying the child with face down, helps to develop good head and neck control as shown in below picture.



When child develops some strength to hold neck for few seconds or hold for minutes in supported position then u should carry baby in position shown in below pictures. Child's neck is free to move.



The above two carrying positions are also good for child having high muscle tone (spasticity) as hip and knee musculatures are being stretched in these positions.

### **Precautions;**

- Don't massage those children having muscle stiffness/spasticity (high muscle tone) as it can lead to contracture formation and make the condition adverse.
- Massage is recommended for floppy child (having low muscle tone).
- Exercise must be performed in gentle and smooth way, avoid jerky movements.



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