

Sometimes prematurity can last a life time

Psychology, Child Development



For many women no other feeling surpasses that of finding out that they are expecting a child. If it is their first time being with child, it is almost expected that they go out and buy all the books on pregnancy to learn what to expect to prepare themselves for the arrival of a healthy baby. Pregnancy is supposed to last 36 weeks or 9 months to be considered full term, giving the baby a chance to fully develop in the mother's womb. However, there are situations where the pregnancy isn't carried to full term and the baby is born prematurely.

Each year in the United States one in ten babies are born premature. Being born premature does not always mean that the child will have developmental delays, but sometimes it does. To be considered premature, you will deliver your child before 37 weeks. The earlier your child is delivered the higher the risk of developmental delays, such as gross and fine motor skills, speech, and cognition. Premature birth can also lead to lifelong problems, such as Intellectual disabilities.

Occupational therapy practitioners can help children who have developmental delays by starting early intervention when they are young. Occupational therapists help with occupations needed in daily life such as ADL's (activity of daily living), IADL's (instrumental activities of daily living), rest and sleep, education, work, play, leisure, and social participation. Occupational therapists work alongside physical therapists, medical doctors, and speech language pathologists to help children gain the most out of their daily lives.

Meeting Alanzo

Alanzo is a one year old boy who was born 28 weeks premature. Alanzo lives with his parents and three older siblings in an inner-city home. He receives Occupation Therapy, Physical Therapy, and Speech language pathology through the community early intervention services. Alanzo's parents speak Spanish as their first language with very minimal English. Alanzo's older brother, Mateo, who is 15 years old, speaks fluent English and acts as their translator. Alanzo experiences trouble with feeding and shows developmental delays in gross and fine motor skills, speech, and cognition. Alanzo has not started to learn to walk and this is a major concern for his parents.

In the case study about Alanzo we see that there are a number of developmental delays he has due to being born prematurely. The first thing we learn about Alanzo is that he has trouble with feeding. Feeding is a critical daily living skill essential to the child's survival, growth, health, and well-being. A child having trouble with eating may result in failure to thrive. Since Alanzo is only a one year old infant, he should have already developed the pincer grasp in order to pick up food, like cheerios, and he should be able to grasp the spoon to start to try to feed himself applesauce.

Alanzo has delays in his gross and fine motor skills. Gross motor skills are activities that require the use of the larger body muscles. Having delay in gross motor affects a number of things in a child, for example not being able to run, walk, or jump which affects their playground play in school. Gross motor skills are crucial for maintaining their ADL's like getting dressed. Not

seeking help to improve gross motor skills can also affect a child's education. Gross motor skills help with maintaining posture in the classroom, and impact their endurance to be able to cope with a full day of school.

Walking is a big part of everyday life. At the age of one, an infant should already be walking while holding onto furniture or about to take their first steps. There are certain steps to take before being able to walk. Tummy time, rolling, sitting, crawling, and standing are essential steps to start learning to walk.

From birth to three months, tummy time is an important activity that helps babies begin to develop purposeful, controlled, and coordinated movements of the body. Tummy time play promotes hand-eye coordination, head and neck control, gives strength to baby's hands and upper extremities, strengthens the tongue, jaw and throat muscles, and starts the development of the babies sensory system. At three to six months, babies begin to roll by lifting their legs and feet towards their hands. This leads to rocking side to side and eventually rolling onto one side (the inspired tree house). Rolling is important because it strengthens the neck, back, and core muscles for postural control. When rolling, babies are learning to use both sides of their body as one, which comes into play later on when they are learning to crawl and walk.

During the first two months infants begin to hold their heads up momentarily when they are supported in a sitting position. Between four to six months babies begin to hold themselves in a sitting position, with support at the hips, which is helping them become more independent and stable. At six

months, they are able to turn their head and upper body to reach outside their base of support without falling over. Sitting is important because it teaches babies to explore toys by using both hands, which is a significant fine motor development, and for learning bilateral skills. Sitting helps babies learn to keep their balance as well as teaches them posture control. While sitting in an upright position, this allows babies to see their surroundings, which promotes visual tracking and visual motor skills.

Babies will begin to “commando crawl” or creeping forward on their belly, this movement will eventually give way to an all fours position. As mentioned before, while in a sitting position, babies will start to go from sitting to all fours and back to sitting. As babies get more comfortable with the transition from sitting to all fours, they will start to put the movements together to crawl with bilateral movement of the legs and arms. Crawling helps babies develop bilateral coordination, strengthens their muscles of the neck, core, arms, and hips (which are essential for walking), develop purposeful, controlled, and coordinated movements of the body, and crawling also helps with the development of visual perceptual and visual motor skills.

Babies begin pulling up to stand while holding onto furniture between 8 to 12 months. Next, babies begin to furniture walk and experiment standing unsupported, showing that they are able to balance on their own. When a baby stands and starts to balance, this not only strengthens the babies’ muscles, but also helps the baby maintain postural control. Once babies feel comfortable and confident of standing on their own, they will begin to take their first steps towards walking. As you can see, there are a number of

important steps, each developing the baby for the next. Without these crucial steps, learning to walk wouldn't even be in the mind of an infant.

Alanzo has delay in his fine motor skills. Fine motor skills are the ability to use the small muscles of the body, especially those of the hands, to perform tasks. Between birth and three months infants interact with their surrounding environment through visual inspection. At this stage infants begin to learn different grasps allow the infant to have contact with objects placed in their hands. Infants start to develop reaching skills at four months old. Infants begin to transfer objects from one hand to the other working on their bilateral coordination skills between five and six months. When infants are the age of six months, when they begin to sit on their own, they start to reach for objects with strong balance and posture control. By one year old, infants' fine motor skills are developed enough to allow the infant to combine objects and explore their functional uses. Fine motor skills facilitate the development of functional and symbolic play skills.

Fine motor skills are important for performing ADL's like being able to grasp the toothbrush when brushing their teeth. Delay in fine motor skills can affect a child's academic skills such as grasping and holding a pencil correctly as well as being able to hold scissors to cut papers. Without the ability to complete activities where fine motor skills are needed, a child's self-esteem may suffer and their academic performance may be compromised. In order for children to develop fine motor skills without delay, they need to have proper hand and finger strength, hand eye coordination, and proper proprioception.

The development of language is closely related to both cognitive and psychosocial development. Language development starts as early as three months and continues to develop until adolescence. Starting at the age of three months infants begin to “coo” which usually are pleasant vowel sounds. Infants begin to babble at the age of four months. At the age of six months, infants only recognize the speech of their native language. Infants begin to recognize and imitate the actions of caregivers. By the age of twelve months, infants developing properly, know between two and eight words including “mama and dada”.

Client Factors, Limitations, and OT Concerns

Alanzo is a one year old boy whose role is to be a son and a brother. He has no prior level of function because he is starting early intervention at an early age to help him catch up and develop properly. He has developmental delays in feeding, speech, fine and gross motor skills, and walking, this is not a fatal dx and could be easily maintained by seeing an Occupational Therapist, Physical therapist, and speech pathologist. Alanzo has a number of challenges including feeding himself because of his fine motor delays, not being able to grasp the spoon to start to feed himself and walking due to delays in gross motor skills.

The client has a few limitations due to his dx. Without being able to sit, stand, or walk it is hard for Alanzo to reach for the toys that he wants to play with and he does not have proper postural control. Without being able to sit, Alanzo did not develop hand eye coordination and this will be hard for him to learn to crawl. Alanzo has a lot of support at home, with his parents wanting the best for their child and putting him in early intervention so he can get

the help he needs to develop properly. His brother is also a support system because he helps his parents by translating what the Occupational Therapist says due to the fact that they only speak minimal English and Spanish is their native language.

One of the main concerns for the OT for the client is delays in gross and fine motor skills. The delay in gross motor skills affects walking, running, jumping, ADL's, and the development of fine motor skills. We will be focusing on the fine motor skills of feeding, to get the client to learn to grasp the spoon. For gross motor we will focus on the child being able to sit and furniture walk. We will focus on strengthening postural control and bilateral coordination.

Deficits that the client has are feeding, delays in speech, cognition, fine motor skills, and gross motor skills. We want to work on feeding first in order to get the child eating and able to learn to feed himself, so he does not acquire failure to thrive. To get the client to learn to eat we will work on fine motor grasping skills. We will work on the clients gross motor skills by strengthening of the core muscles to be able to get the child to start to sit, crawl, and stand. Working on the three important developmental building blocks will help Alanzo feel confident enough to start to try to take his first steps. Alanzo's parents are most concerned with their son learning to walk and taking the appropriate developmental steps to get there.

Currently, Alanzo needs help with feeding; his parents have to feed him. He cannot pick up cheerios correctly to place them in his mouth. When a spoon is placed in front of him, he doesn't even attempt to pick it up or touch it. He

needs to have support sitting, and does not attempt to go on all fours to start to crawl. In order for an infant to crawl, they need to feel confident in sitting, and going to all fours and back to sitting. Being able to sit unsupported, promotes the ability for an infant to strengthen core muscles needed for standing and walking, bilateral body coordination, and postural control.

Occupational Therapy Goals and Interventions

Occupational therapy encourages rehabilitation through the performance of activities required in one's daily life. Occupational therapy practitioners help children whose diagnosis affects their daily lives, maintain their occupations throughout their day as well as living their lives to the fullest. When an Occupational Therapist creates a treatment plan for a patient they do so by setting goals. They set short term goals which work towards their long term goals. When achieving short term goals patients feel proud of themselves and see that they can do what they set their mind to no matter their diagnosis. OT practitioners will create a plan for meeting those goals, which creates a measurable criteria and time frame. The ultimate goal of an occupational therapist is to help a person live as full and normal a life as possible, regardless the type of disability.

We have created 5 short term goals based on Alanzo's needs. These short term goals could be achieved within two to four weeks and will be directly related to the OT problem list.

To improve function in FM development, patient will increase UE strength and stability with 10 minute tasks in prone position within two weeks.

Patient will be placed on a prone position over supportive device (triangle wedge) for two minutes each session. Doing activities in prone position will help the patient hold their head at midline strengthening the core muscles of the neck, shoulders, back, and trunk. The OT will place play doh in front of patient so patient can pinch, squeeze, and punch the play doh. This will help increase FM development by strengthening the muscles of the hands and fingers.

Patient will have increased hand eye coordination, by completing five minute grasping and placing tasks each session, for three weeks.

Patient will be in a supported seated position for 5 minute intervals each session. OT will place a board in front of the child with cardboard tubes taped to the board. The patient will have brightly colored pompoms in front of them. OT will demonstrate how to pick up the pompom and place in the cardboard tube. Child will then do the activity themselves. Having bright colored pompoms will peak interest in the child, this activity will help with hand eye coordination as well as grasping.

Patient will be able to sit unsupported, by increasing trunk control and balance by doing activities in a supported upright seated position for five minutes, every day, for four weeks.

Patient will be placed in a supported upright seated position by using pillows and wedges. Once the child is safely seated, the OT will place the child's favorite toys within child's reach. Patient will use grasping techniques to get the toy, and come back to upright position without falling over. Each time

patient is successful at receiving his toy, the OT will then place the toy farther from the child so the child will use balance and posture control to receive the toy and come back to upright position without falling over. This will improve the core muscles needed for gross motor development. Doing this activity for 5 minutes daily for four weeks will teach the child balance as well as posture control so he does not fall over when seated unsupported.

Patient will begin walking, with little to no assist, by cruising around furniture to receive his toys every day, for five to fifteen minutes, within 4 weeks.

The OT will place patient's toys all around the room. The child will then be placed in a standing upright position holding onto the furniture. The child will have to cruise around the furniture and the room to get the toys that he wants to play with. The first day we will begin with one toy, and each day we will add another toy to give the child the ability to go farther and tolerate cruising around the room for longer periods of time. This will help him with bilateral body movement, a major step in development towards walking. Once a child gets comfortable with cruising around furniture, he/she will let go and start to take their first steps.

Patient will strengthen oral motor, to prepare for OT referral to speech therapy, by doing exercises, every day for five to ten minutes, within 3 weeks.

OT will provide a mesh bag for patient. Have child hold mesh bag, which is filled with fruit, and have them chew or suck on the bag. OT will first use fresh fruit and once the child learns what he has to chew on the bag to get

flavor, OT will then use frozen fruit to make it more challenging for the child. Using frozen fruit will challenge the child by having them use more of their oral motor in order to melt the fruit and get flavor. The child will do this activity for five to ten minutes daily to strengthen his oral motor muscles to prepare for the speech therapist, within the 3 weeks.

Conclusion

In conclusion, we see that even though Alanzo was born premature and has a few delays, there are many ways he can improve. Alanzo's parents will take him to OT every day for the next month to increase his development and learn milestones in order to get on track to developing properly. By working with the OT daily for the next month, Alanzo will progress significantly in concurring his short term goals set by the OT. Alanzo's family should not feel upset that their child has slow development because through daily therapy and activities their son will be able to do that of typical children. Alanzo is only one year old and still needs to develop. Many children have delayed development but once they receive OT they being to develop like a typical child. A diagnosis should not define your child; they can still live their everyday lives and live life to the fullest no matter what their impairments may be