

Do Not Use In Water

Tumble Forms are not water toys. They are designed to take in and exhaust air for the cushion-like effect. Naturally water will also be soaked up (as in a sponge) through the vent hole if the cushion is submerged in water.

Outdoor Use

Tumble Forms are designed to be used indoors. However, if they are used out-of-doors, care should be taken not to let them get wet. If the cushions do accidentally absorb water through the vent holes they will dry out best by squeezing and pressing them. Any remaining dampness will disappear after a few days by exchange of dry air through the vent holes.

Cleanability

Tumble Forms covering may be cleaned with household or industrial grade detergents or all-purpose liquid cleaners. Permanent markers and ballpoint pen markings cannot be removed. However non-permanent ink, wax, crayon, oil, grease, dirt can be scrubbed and wiped clean with a wet rag. (Do not soak the cushion – it will get waterlogged).

Use and Care Instructions for Tumble Forms

Tumble Forms Neuro-Developmental Treatment modules and adaptive positioning shapes were especially developed to meet the needs of therapists and teachers working with neurologically challenged individuals. They combine therapeutic design, durability and color to help solve problems of positioning and maintaining the individual with special needs.

Made of soft, flexible yet tough materials, the modular units have exceptional resistance to tearing and abrasion. With the normal care and respect that you would give any cushion, Tumble Forms will give many years of active service.

New Cushion Odor

Residue odors from the manufacturing process linger within the foam cell structure. This will disappear after a few days' use, as fresh air replaces the air inside as the cushion is pressed.

Tumble Forms²

*With Anti-Microbial
Protection*

Made in the USA

Use and Care Instructions

Congratulations!

You have just bought one of today's most revolutionary products, designed for those with special needs. Tumble Forms combines innovative design with technology intensive fabrication to provide a high degree of durability and attractiveness. Moreover, the unique seamless Tumble Forms upholstery provides the ultimate in moisture protections.

So you may enjoy the maximum usage from your Tumble Forms, please read the use and care instructions inside.

Upholstery Variations

Because of the unique handcrafted Tumble Forms Process, minute differences may occur in appearance of protective upholstery. What appear to be tiny craters are not a defect, but are due to variations in atmospheric conditions during the manufacturing process. This in no way affects the strength and moisture resistance of the upholstery.

Vent Holes

Each Tumble Forms shape has at least one vent hole. This has been heat stamped through the covering, and is necessary to equalize air pressure in the foam with atmospheric pressure. Since temperature changes and consequent atmospheric pressure changes may be encountered during shipment, these vents maintain the proper shape and resiliency of your Tumble Forms Module.

Tumble Forms²[®]

*With Anti-Microbial
Protection*

Methods Manual

With Comments and Suggestions by

Mrs. B. Bobath,
M.B.E., DR. RER. HUM (HC) FCSP

Dr. K. Bobath,
M.D., F.R.C. PSYCH

A. Jean Ayres,
PH. D.



A. JEAN AYRES, Ph. D.

BUSINESS & MAILING
5339 BINDEWALD RD.
TORRANCE, CALIFORNIA 90505
(213) 373-3581

CLINIC
1518 CARRILLO AVE.
TORRANCE, CALIFORNIA 90501
(213) 320-2335

March 7, 1980

Gentlemen:

The Tumble Forms roll, wedges and balls show excellent manufacturing advantages for use in sensory integrative therapy. Their construction provides important safety: the child can risk falling against or on them without hurting himself. The washable, smooth upholstery is acceptable to the tactilely defensive child who cannot tolerate the textures of cloth and to the allergic child who reacts to lint, dust, or cleaning chemicals. The various forms offer the creative therapist an opportunity to add variety to obstacle courses, in scooter board games and for use in conjunction with bolster swings and other standard equipment. They are most helpful in treating the more involved client. The delightful colors of Tumble Forms add much to the therapeutic environment.

A. Jean Ayres
A. Jean Ayres, Ph.D.

THE BOBATH CENTRE
5 NETHERHALL GARDENS, LONDON NW3 5RN
THE WESTERN CEREBRAL PALSY CENTRE

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Telephone: 01-794 6084

President: THE MOST HONOURABLE THE MARQUESS OF LICHFIELD

Hon. Consultant Physician:
K. BOBATH, M.D., D.P.M., F.R.C.Psych
Director of Studies:
Mrs. B. BOBATH, M.B.E., F.C.S.P., S.A.A.O.T. (Hon.)
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K. BOBATH, M.D., D.P.M., F.R.C.Psych.
Mrs. J. BAYES, M.C.S.P.
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Mrs. E. HOLLAND-MARTIN
S. W. MURKIN (Hon. Treasurer)
Dr. D. MORRIS, F.R.C.P., D.Ch.
NICHOLAS STARR, Esq.

8th February, 1980

Dear Sirs,

We have now received your gift of rolls and wedges which we like very much. They are beautifully made and will obviously wear very well, and the scooter is especially good. We find all the material you sent us extremely useful in selected cases of cerebral palsy, and if any of our parents, many of whom come from abroad, would need any of the equipment, we shall certainly recommend them to get in touch with you. The material has proved useful as an adjunct to therapy by therapists fully trained in the concept of neuro-developmental treatment.

Your sincerely,
Kent + Beth
K + B. Bobath

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Introduction

This manual is designed to suggest ways to use Tumble Forms in the treatment of neurologically impaired children and adolescents. Many other uses are possible and depend on your adaptive ability and therapeutic needs.

In general, Tumble Forms should only be used by therapists. However, sometimes the therapist may find it efficient to instruct parents, teachers or aides in using the equipment. This Methods Manual may assist in such training.

The use of Tumble Forms should be discretionary since they are not intended for use with all handicaps. The child's progress and valuable treatment time will be lost if efforts are not coordinated by and with the therapist. The manual is primarily based on a survey sent to therapists who use Tumble Forms. Many of their suggested uses are included.

By: Tim Bergeron, B.F.A., B.A.I.D.
Peggy Bergeron, B.S., O.T.

With Technical Assistance From:
Christine Bonville, M.S., P.T.
Andrea Altmayer, O.T.R.
Joseph M. Breuer, B.S., M.A., P.T.
Penelope Knight-Cypress, O.T.R.



Now Better Than Ever!

Tumble Forms 2 products with anti-microbial protection combine innovative design with superior craftsmanship to provide a high degree of durability, functionality, and attractiveness.

Built into the Tumble Forms 2 coating, the anti-microbial protection works from within to help prevent or inhibit odors and help prevent premature coating wear caused by harmful microorganism growth. It also provides an added degree of protection, helping you maintain cleaner, safer surfaces. It won't wash or wear off. Tumble Forms 2's coating continually works to maintain permanent anti-microbial action, helping Tumble Forms 2 products remain fresher, order-free and longer lasting for the life of the product.

Combining innovative design with superior craftsmanship, Tumble Forms 2 products are designed especially for children and adults with special needs. They provide maximum comfort and positive patient/caregiver reinforcement. Tumble Forms 2 are designed for versatility and durability.

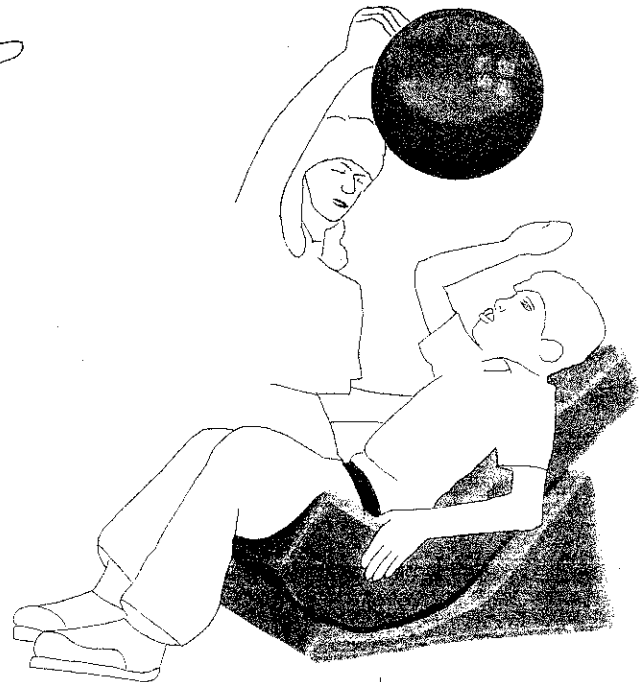
- modular design
- therapists can creatively position clients in an infinite number of ways
- for use in home, school, or clinical settings
- designed for patients from toddler age through early adolescence-even adulthood
- reinforces proper positioning during therapeutic activities
- unique, impermeable, non-stick, non-toxic seamless coating that is flexible and durable
- resists cracking or peeling over an extended period of time-waterproof, stain, solvent and urine-resistant
- high-density, shock-absorbing foam-retains it's shape even after long-term heavy use
- cleans easily with damp cloth and common disinfectants

Tumble Forms 2[®]
With Anti-Microbial Protection

Deluxe Floor SitterTM

The Tumble Forms Floor Sitter consists of a Feeder Seat[®] positioner and a support block. The support block keeps the Feeder Seat positioner propped in an upright position for floor activities, one to one games, etc. The support block will also maintain a slightly reclined position.

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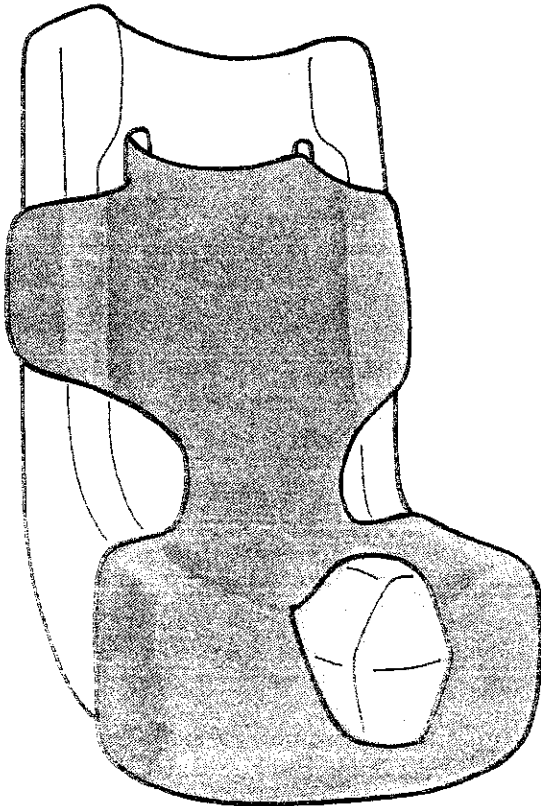
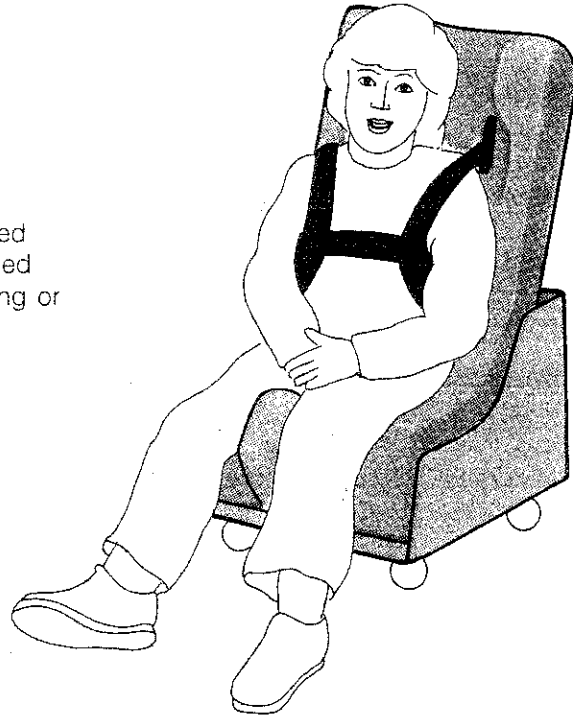


When positioning, make sure the pelvis is planted firmly to the back of the seat, as shown, and secured by strapping. Remember, a firmly planted pelvis is the foundation of successful seating.

Mobile Floor SitterTM

The Tumble Forms Mobile Floor Sitter has a wheeled base and offers ease in moving a properly positioned child to another location without changing positioning or moving seat to another base.

The mobility feature encourages an awareness of body image in relation to direction and the child's surroundings.



Cozee Cover[®]

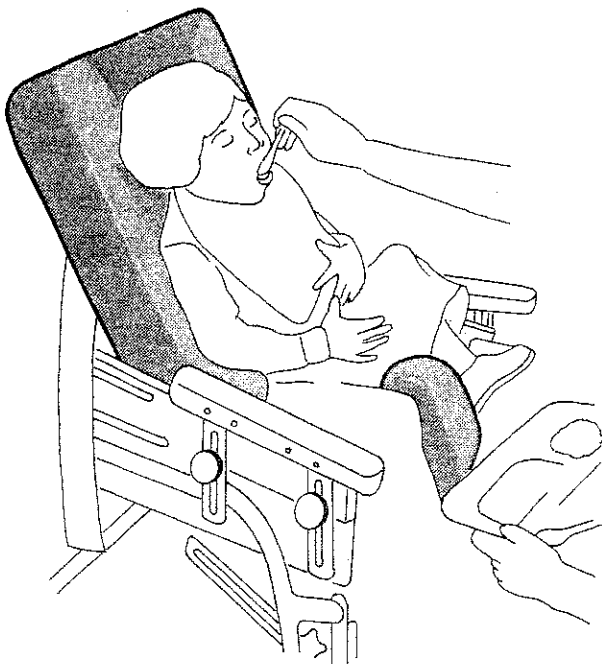
Cozee Cover is made of a soft, breathable fabric that will reduce sweating during times of heat and high humidity. It adds comfort to the Feeder Seat positioner, is easy to put on, and easy to take off. Cozee Cover is machine washable and can be tumble dried. They are available for all three sizes of Feeder Seat positioners.

Feeder Seat[®]

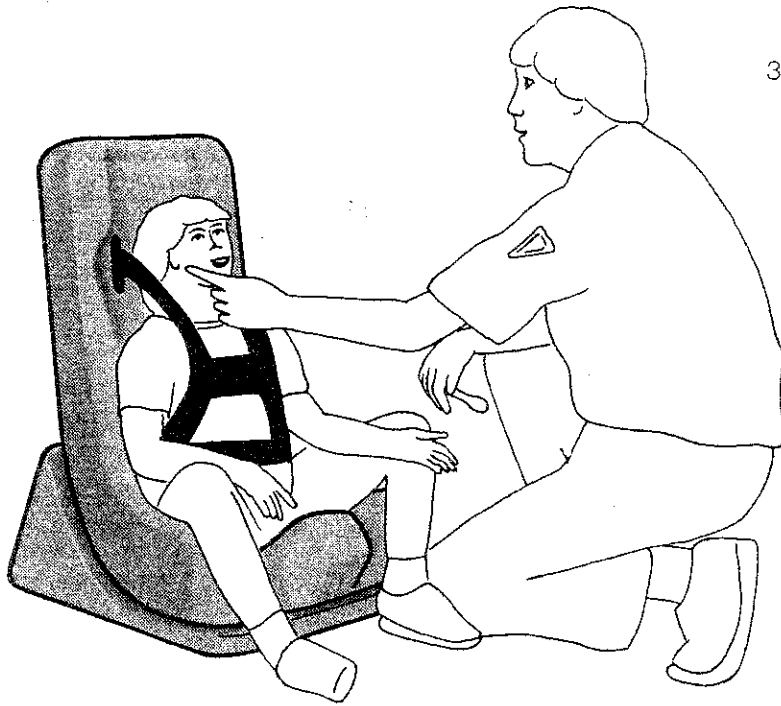
The Tumble Forms Feeder Seat positioner provides positioning control for the whole child while feeding. It is especially useful when working with the cerebral palsy child who lacks proper sitting balance and head and mouth control. It is excellent for home care and direct care staff because it maintains correct posture in selected positions with minimal supervision. The hip strap will firmly hold the pelvis to the back of the seat to maintain a 90° seat-to-back angle.

APPLIED USES

1. **Training Programs** The Feeder Seat positioner also positions the child for attention span activities for use with all forms of therapy:
 - a. One-to-one communication, including speech therapy.
 - b. Practice feeding techniques
 - c. Jaw control exercises
 - d. Oral exercising
 - e. Communication boards
 - f. Grasping and reaching exercises

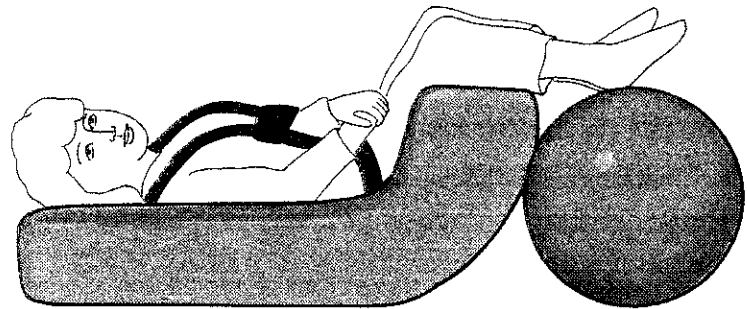


2. **Feeding Program** Since the objective in feeding is eye-hand coordination control, the child must be positioned so that he can begin to gain these skills. The Feeder Seat positioner will help position the child in an erect 90 degree sitting position enabling him to maintain adequate trunk and head control. The lateral side supports maintain left to right symmetry and bring arms slightly forward, the backrest is contoured to keep the shoulders protracted with the head rest preventing the head from being hyper-extended. The abductor keeps the legs mildly abducted and externally rotated.



3. **Upright Sitting** An asymmetric child can be held symmetrically if placed in the seat with hips flexed at 90 degrees and strapped in position. Recline the seat to appropriate angle until the best degree of relaxed control is observed. Although an initial recline of as much as 130 degrees may be helpful, decrease the recline angle back up to 95 or 100 degrees as progress is observed.

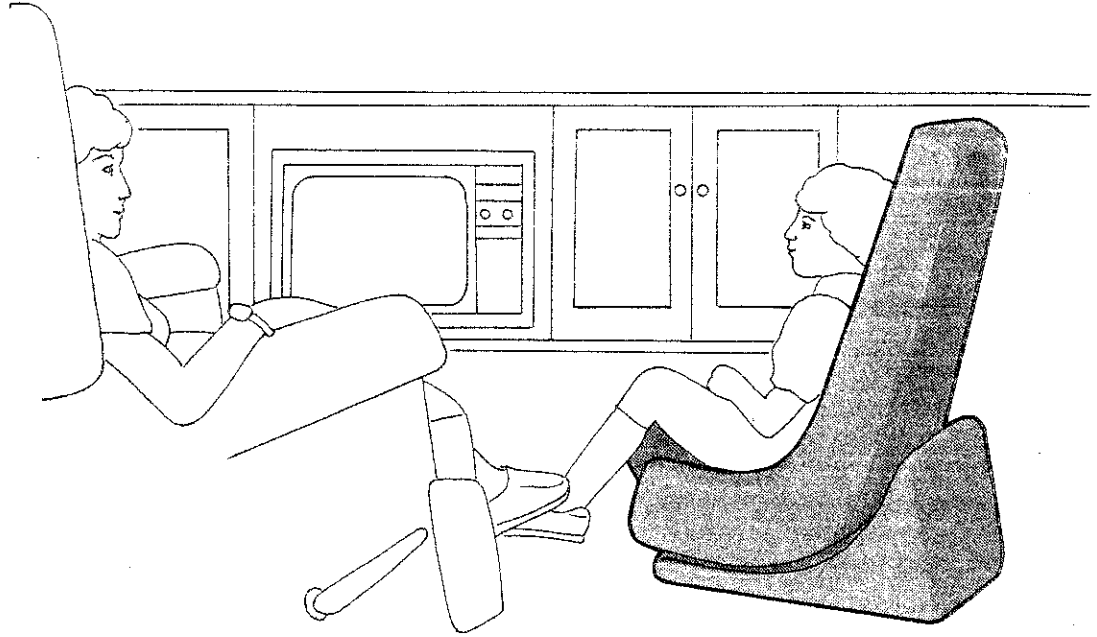
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4. **Use the Feeder Seat positioner Reclined.** For the young adult with spastic cerebral palsy, the Feeder Seat positioner can be used in a supine or reclined position to assist in reducing lordotic curve and to encourage neck flexion. Recline and simultaneously give support at legs to create greater than 90 degrees of flexion at the hips. Gravity will assist along with positioning, to provide range of motion to the lower back. The child can engage in an activity on an easel surface or frame structure with objects hanging downward. Arm movements of lifting (forward flexion) and moving toward the center of body (horizontal abduction) are encouraged against gravity while the trunk and head are fully supported. These same movements are required in an upright position. However, when upright, the child tends to lift shoulders upward attempting to assist and maintain head control. This shoulder elevation significantly limits the child's ability to move his arms. When positioned as shown, the need to elevate shoulders is eliminated, allowing the child to practice arm movements more freely.

(CON'T)

Feeder Seat[®] (CONT)

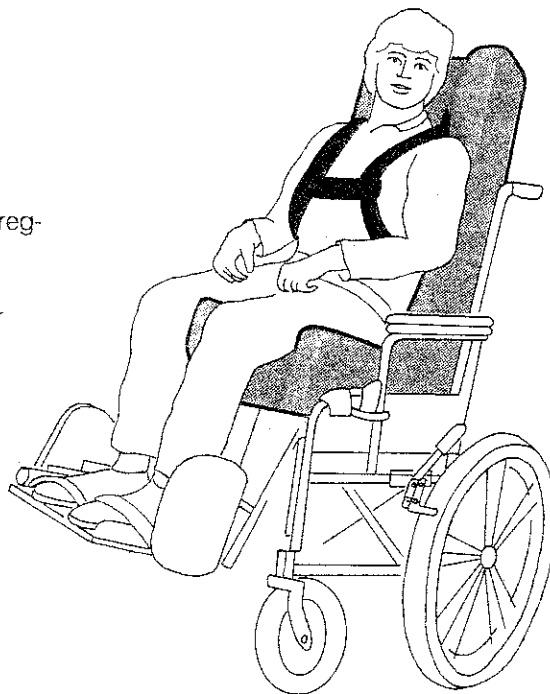


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5. **Adapted to Home Use** The child can also be positioned for home activities. Simply prop the Feeder Seat positioner safely against any stationary object or use the floor sitter block.
- a. One-to-one games
 - b. Observing siblings' play
 - c. Watching mother in kitchen
 - d. Watching TV

6. **Adaptation to Mobility** The all-foam construction provides a material that will push, pull, indent and conform to any irregular surface, cross bar or bracket. This makes it ideal for adapting to many wheeled devices when used with proper strapping for safety.

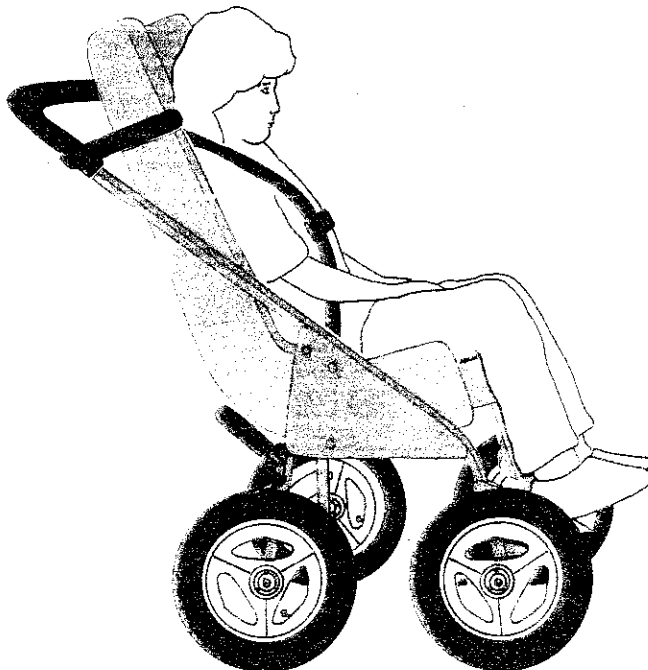
- a. Umbrella style strollers
- b. Regular stroller or carriage
- c. Wheelchairs
- d. Tumble Forms Rover[®]



Tumble Forms recognizes that each child's needs vary greatly and only the therapist can determine whether a seat is appropriate for a particular child. We have therefore designed the Feeder Seat to position children who fit within an approximate height range. The height ranges and inner seat dimensions are provided below to aid the therapist in choosing the appropriate seat.

	Small	Medium	Large	X-Large
Child's Standing Height	26" - 36"	36" - 48"	48" - 60"	60" - 72"
Inner Seat Width At Hips	7 3/4"	9"	12 1/2"	16 1/2"
Inner Seat Depth	8"	9 1/2"	13 1/4"	16"
Inner Seat Height	18"	23"	29"	35"

**Tumble
Forms²** **Rover[®]**



Rover buggy is made to transport the large size Feeder Seat positioner. Its tubular steel construction makes it a durable, convenient method of adding mobility to positioning for the adolescent. The extra large wheels with pneumatic tires roll easily over almost any terrain. The push button reclining feature and adjustable footrest allow maximum adjustment and comfort for the passenger. The foam covered handle makes a sure, comfortable grip. With the Feeder Seat positioner removed, the Rover buggy folds to facilitate carrying in the trunk of a car or for easy storage.

Universal CornerTM Chair

The Tumble Forms Universal Corner Chair is primarily used to practice the basic sitting position. Sitting is the first position in developmental sequence which completely frees both arms for bilateral movement, fine motor skills and eye-hand coordination. Sitting is also the basis for balanced weight bearing on the lower extremities which will then lead to head and trunk control.



1. **Extensor Thrust Inhibition** The 90 degree "corner" shape of the backrest facilitates shoulder flexion which will help prevent extensor thrust from the hips and legs when the child lifts his arms to use his hand. Without the corner seat this child will tend to straighten his hips and fall backwards. Also the 90 degree "corner" shape provides ideal lateral supports to provide practice in balance control. Note that the child must have some degree of trunk control. If he has a floppy head, rounded back, and is unable to use his hands, he is not yet ready for the Corner Chair.

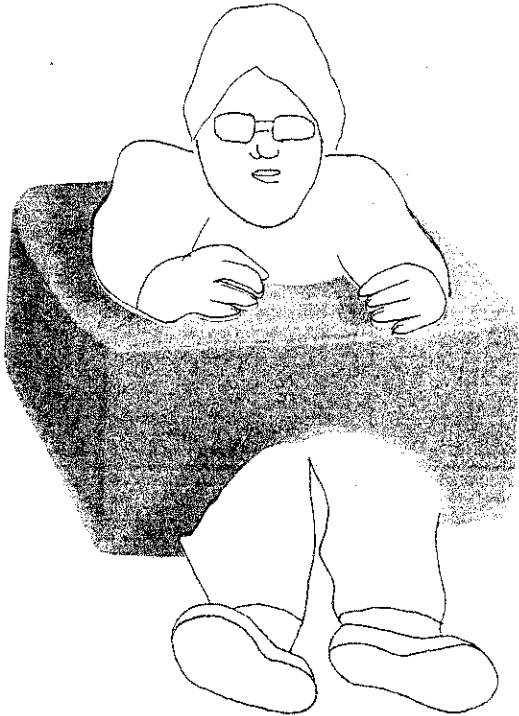
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2. **Knee Extension** By nature of its design, the corner seat forces the child's knees into full extension while sitting. Therefore, a child using the corner seat should have full range of motion in the lower extremities. If not, an option is to seat the child with crossed legs using the abductor post as a brace or raise the child off the seat so that full knee extension is not required.



Square ModuleTM Seating System

The Square Module Seating System consists of the "box" seat and a set of blocks. Each module shape is used for adaptive positioning. They are a tremendous asset because they can be used for a thousand helpful ways of positioning. Their successful use depends largely on your creativity.



APPLIED USED

1. The square "box" seat can be turned upside down and used as an object to pull up to. Also, in this position the round hole provides good support for beginning sitting tolerance. Inverted, the "box" is an object to sit under, putting the child's torso through the hole with legs out the front opening, or flexed cross-legged inside the "box".

2. The ring can be used to practice dressing skills. The child can step into the ring and pull it up to the waist, or pull it over his head. This is an excellent way to develop body awareness.

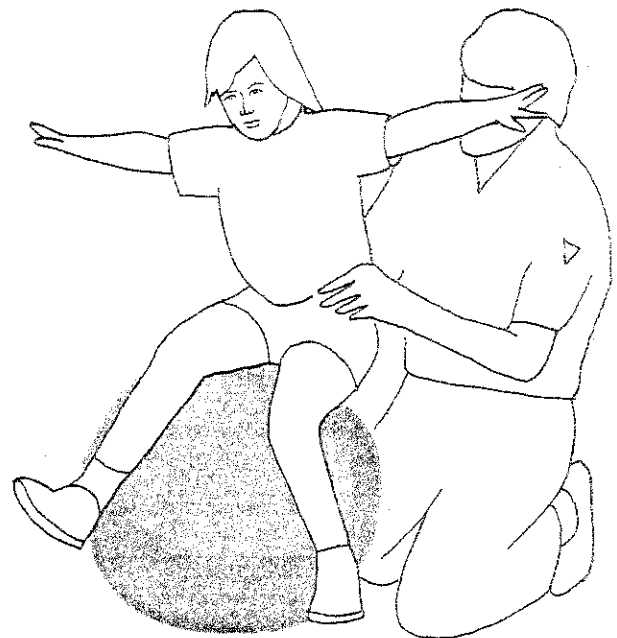


Balls

The 16 inch and 22 inch balls are used for developing vestibular responses, balance, spatial orientation, body awareness and muscle strength. The smallest (11 inch) ball is primarily designed for rolling, pushing, throwing, catching and may also be used for adapted kickball.

The 16 inch ball and more particularly the 22 inch ball are used for more specific therapy activities.

1. **Sitting on the 22" ball** Have a child stand with the back of his legs against one side of the ball; have him sit on the ball while you roll it back until the child is centered on top of the ball; move the ball in different directions to stimulate balance reactions. The more advanced child can be asked to rotate on the ball with his arms outstretched to the side while maintaining good balance.

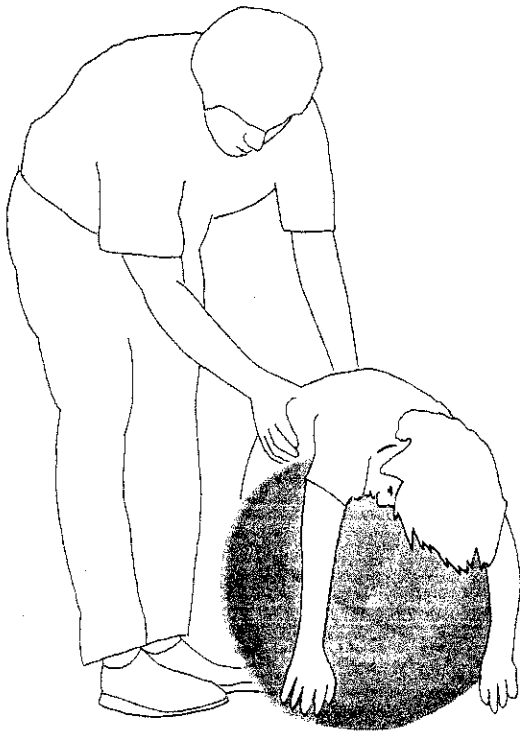
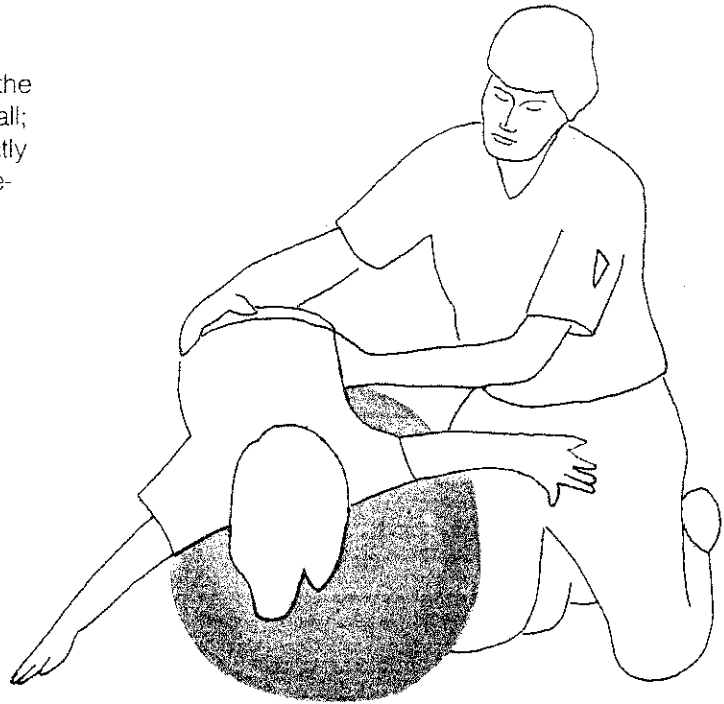


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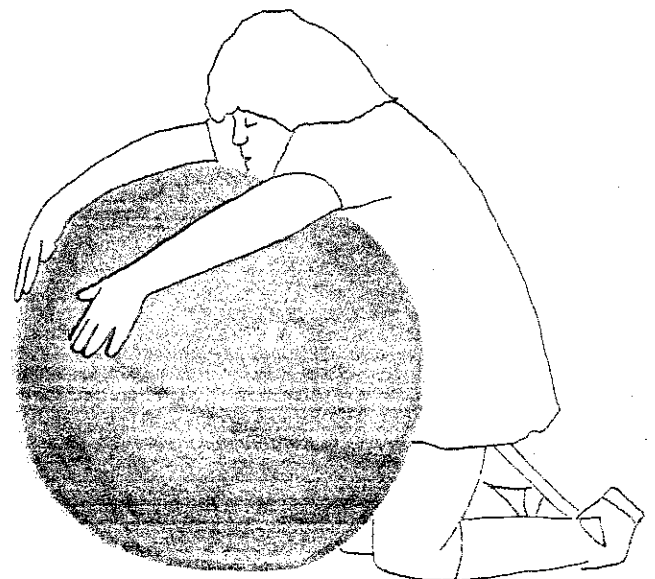


2. **Elicit protection extension reflex** Lay the child prone on the appropriately sized ball with arms in front of ball giving the child support at hips, roll the ball forward and elicit the protective extension reflex.

3. **Elicit trunk equilibrium response** Lay the child prone on an appropriately sized ball; giving the child support at the hips, gently rock the ball forward/backward and side-ways while monitoring responsiveness.



4. **Facilitate relaxation** Especially appropriate for spastic children, you can decrease muscle tone by quietly rocking while the child is in prone position on ball. The child's reaction to this activity should be carefully monitored so that over-inhibition does not occur.



5. **Promote weight bearing on knees** For example; knee walking, hugging the appropriately sized ball.

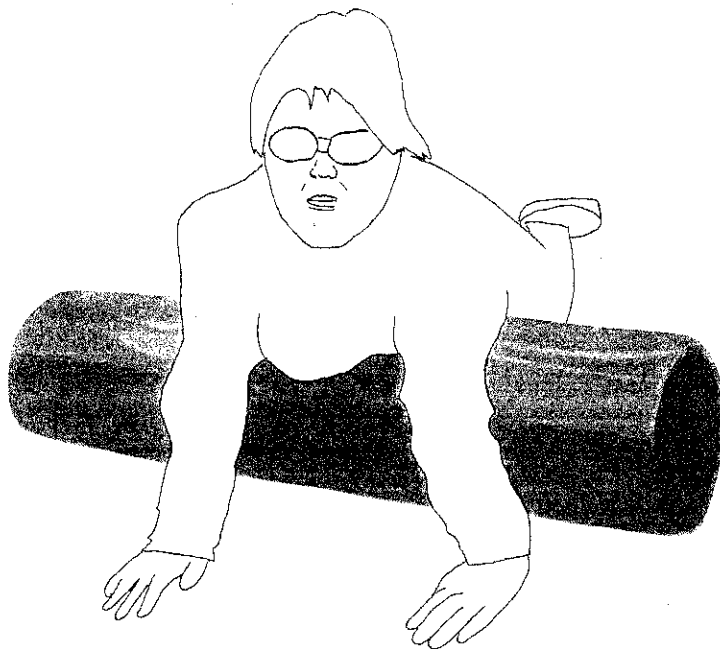
Rolls

Rolls (sometimes called bolsters) are fundamentally adaptable shapes where "rolling" or "rocking" movement is desired on a one-to-one therapist to patient relationship. Generally, they are most suitable for coordination training and for development of normal tone in the trunk in relation to upper and lower extremities.

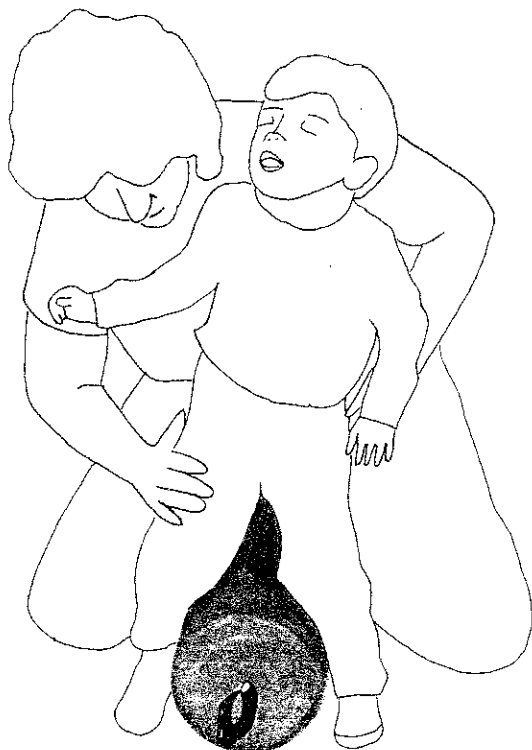
APPLIED USES

1. Development of head and trunk extension

- a. To stimulate head extension, arm extension, hip extension and knee flexion, place the child prone on appropriate size roll and interact with the child. For larger children place the child prone over 2 rolls of similar size. This added support allows for walking forward and backward on the upper extremities.

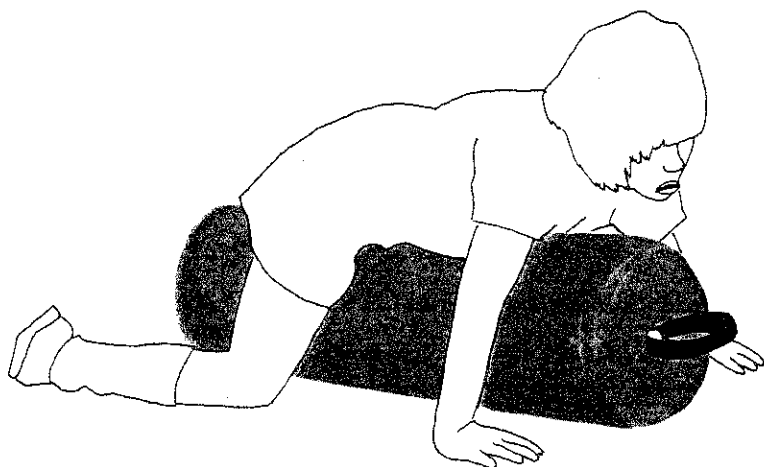
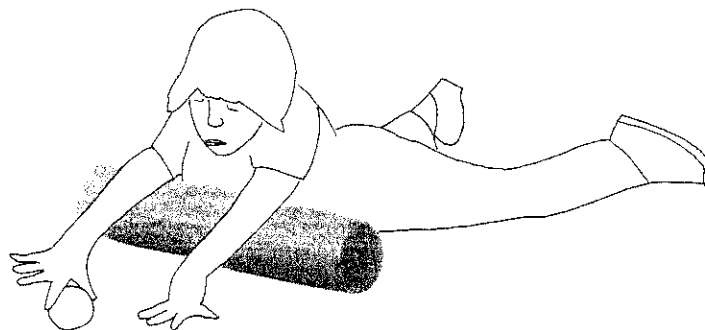


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- b. Place a child astride the roll and position yourself behind him. Place the child's head and trunk on the roll face down and ask the child to slowly extend segmentally beginning with the head and neck to the degree the child can handle. Caution should be taken to prevent hyperextension of the head and trunk which could elicit abnormal movement patterns. To help prevent this, hug the child from behind, holding the child's arms above the wrist. The roll should be of a diameter that permits the child's feet to rest flat on the floor

2. **Development of forearm and hand control**
"Prone Prop" the child on an appropriate size roll. Encourage reaching, grasping and releasing.

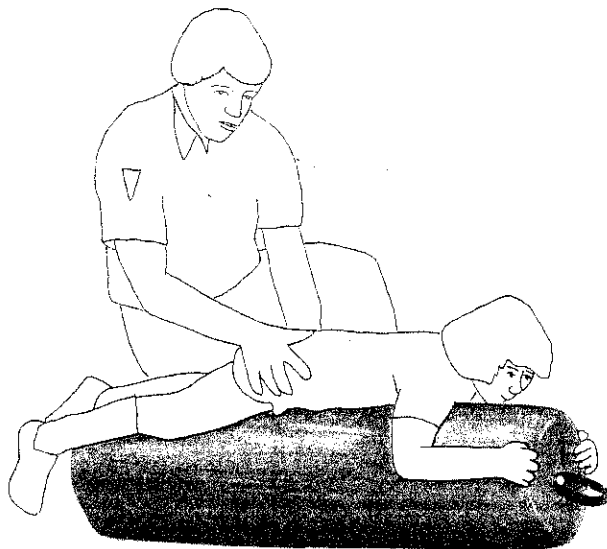


3. **Development of upper extremity weight bearing** Position the child on all fours (creep position) with the roll giving moderate support to the abdomen. Now shift weight bearing from knees to arms in an exercise pattern.



4. **Balance activities**
- Place the child in a sitting position on the roll straddling it. The roll should be of a diameter that permits the child's feet to rest flat on the floor. The thigh and lower leg should be at right angles to each other. The trunk should lean slightly forward from the hips. The hands are placed flat against the top surface of the roll between the knees. The child pushes up with first one foot then the other to simulate a rocking motion. As the motion continues the child should be able to compensate for the shifting position of the roll and maintain his original postural attitude.

Rolls (CON'T)



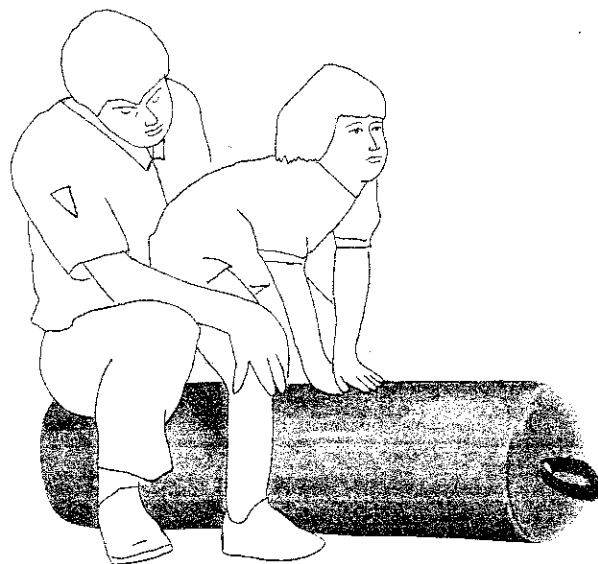
- b. Have the child lie down on the roll in a prone position (lengthwise - not across it). The legs should be extended straight out from the hips with knees slightly bent to allow him to "hug" the roll with his legs. The arms will "hug" the roll as illustrated.
 - Gently rock the roll from side to side asking the child to maintain his original position on the roll and compensating for the shifting center of gravity.

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5. Development of lower extremities
 - a. Straddle a roll in sitting position and gently rock left to right to reduce muscle tone in the legs and feet. Staying balanced on the roll, position the legs out front to stretch hamstrings and abductors. To stretch the heel cords, place hips, knees and ankles at 90 degrees or greater.

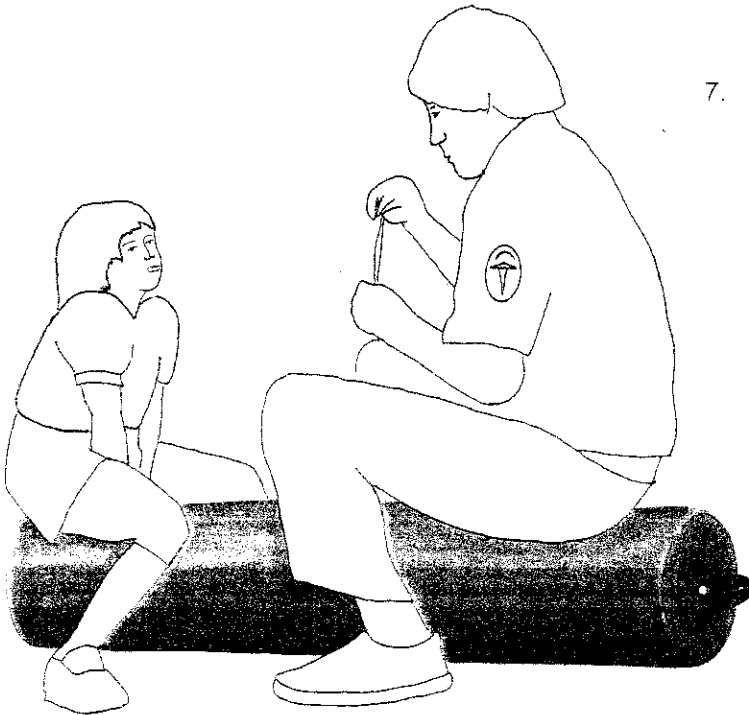
- b. From a sitting position on an appropriate size roll, bring the child to a standing position to facilitate stretching of hamstrings while controlling knee extension and hyperextension.



6. **Develop trunk rotation** Sit the child beside an appropriate size roll and rotate trunk left and right. Build on rotation by gradually leaning sideways to the point of touching the floor on either side.



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7. **Develop perceptual skills**

The longer rolls make excellent seats for teacher and child during one-to-one instructional or sensory stimulation exercises. Working with flash cards or other instructional aids while the teacher and child face each other on the roll permits a more "intimate" atmosphere while encouraging balance control for the child.

(CONT)

Rolls (CON'T)

8. For the blind, orientation in space is a basic skill experience. Develop tactile awareness with hand positions and then smoothly roll forward making trunk horizontal.



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9. **Development of Hip Flexion and Extension**

Position the child in a kneeling posture allowing her to weight bear on the roll with both arms either flexed or extended. Rocking forward and back allows the child to gain control over hip flexion and extension.



Raised Rolls

Raised Rolls represent a versatile new Tumble Forms shape, to expand your positioning options. The elevated sides of smaller models lend themselves to flexion and extension exercises, while the larger models are tall enough for stable bolster sitting. Raised Rolls unique shape provides a stable base for knee and ankle flexion, cervical elongation, and bolster sitting.



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SPECIFICATIONS

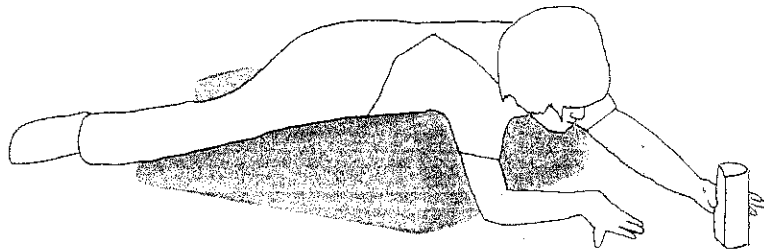
Item Number	Elevation	Width	Length
2789A	2" (5.1cm)	4" (10.2cm)	18" (46cm)
2789B	3" (7.6cm)	4" (10.2cm)	18" (46cm)
2789C	4½" (11.4cm)	5" (15.2cm)	24" (61cm)
2789D	6" (15.2cm)	8" (20.3cm)	30" (76cm)

Wedges

A wedge is primarily used as an alternative to sitting when a child lacks head control, lacks sitting balance and lacks the ability to adjust the trunk from poor posture.

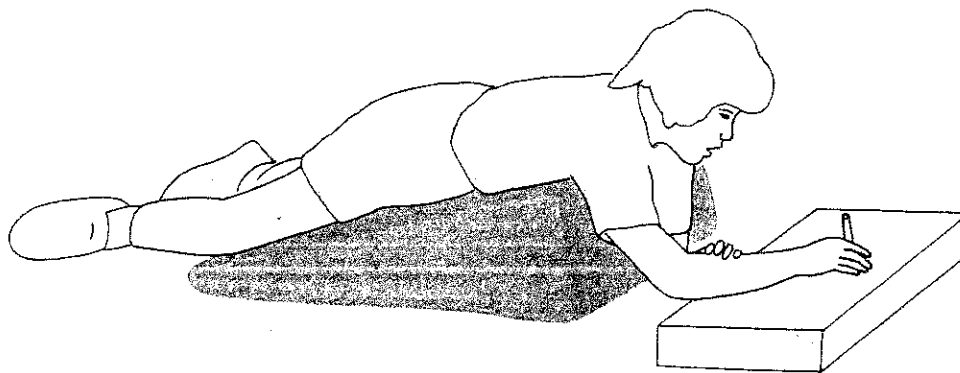
Selection of a particular wedge will depend to a great extent on the size of the child who is going to use it. In general the ideal size wedge for a child will be one whose surface is long enough to accommodate the child's body (in the prone position) from sternum (breast bone) to at least the knees.

APPLIED USES



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1. **Provide weight bearing on upper extremities** Position the child in prone position on appropriate size wedge to accomplish:
 - a. Favored weight bearing on shoulders
 - b. Favored weight bearing on elbows
 - c. Favored weight bearing on extended forearms

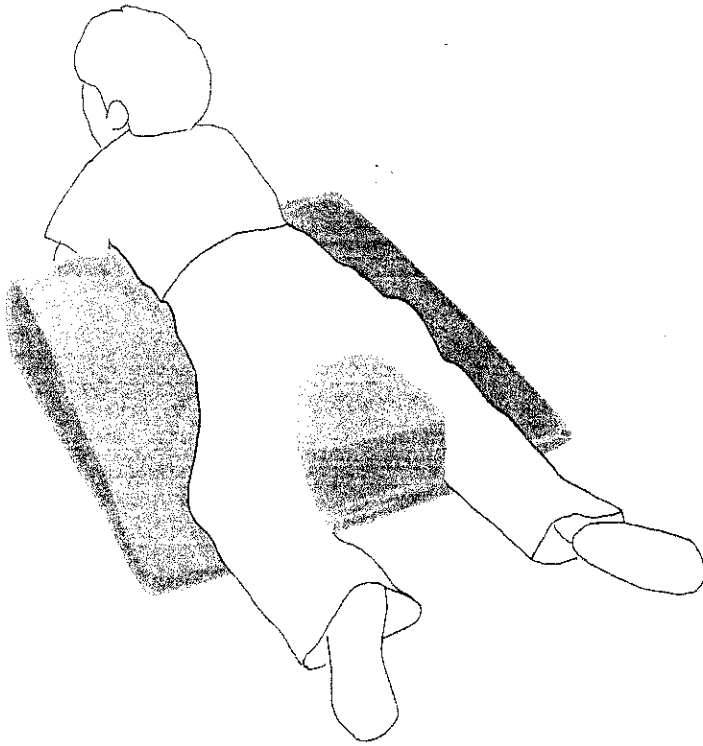


2. **Facilitate head raising and controlled movement** Position a child in prone symmetrically with upper extremities extended over the upper edge allowing his head to be unsupported.

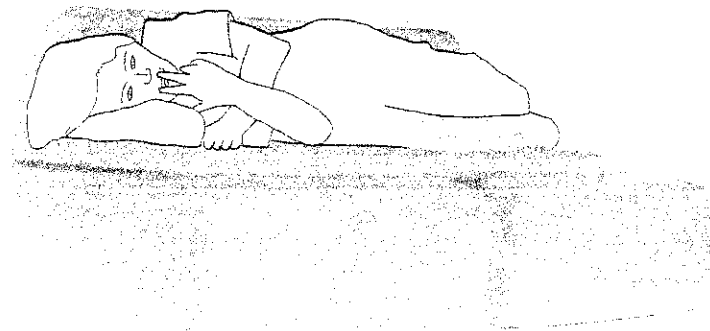
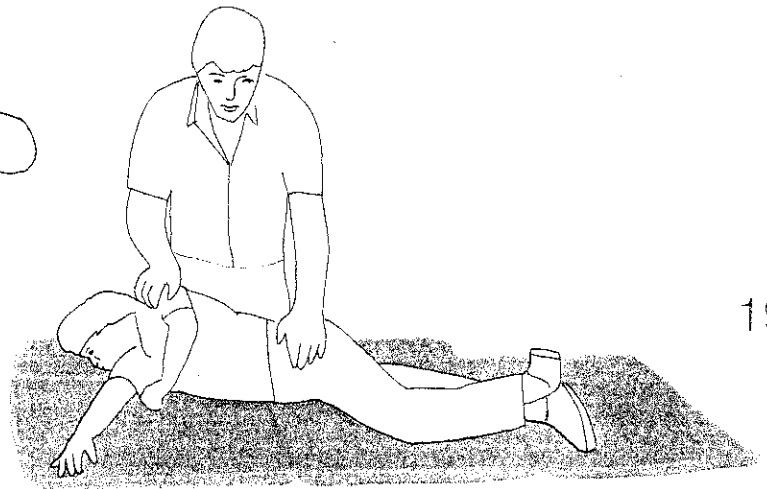
If the wedge is too low, the child will be weight bearing excessively on the forearms, preventing reaching or grasping.

The child may, for other reasons, need a wedge that is too high for reaching and grasping, leaving the play area too low. Since this condition will increase flexor spasticity, simply raise the play area on a board, stool or block. Reaching and grasping activities will help increase range of motion.

(CONT)



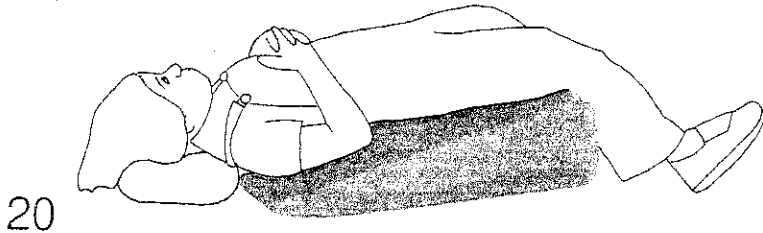
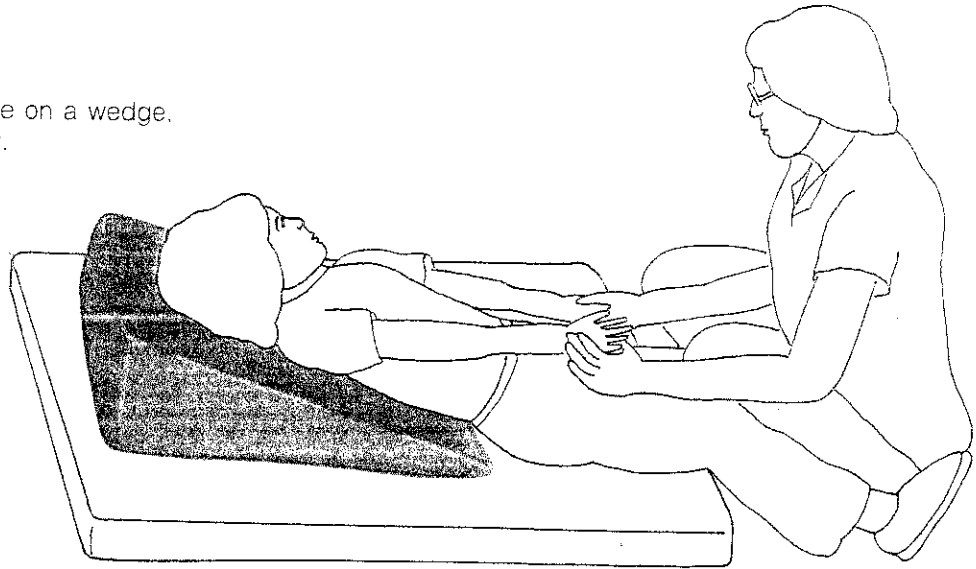
3. **Promote extension of hips and knees with abductor** Place a child in prone position symmetrically so that weight bearing is felt on his trunk, helping the hips to extend and bear weight. In turn, the knees will be freed to extend and bear weight. The abductor is best positioned between the knees at the knee joint.



4. **Facilitate rolling skills** The child is placed crosswise on two or three appropriately sized wedges used to assist the child in trunk rotation.
5. **Creativity**
 - a. Wedges can be creatively used in many situations. Here the wedges raise a side lyer for an angled side lying position.

Wedges (CON'T)

- b. When a child lies supine on a wedge, sit-ups are much easier.



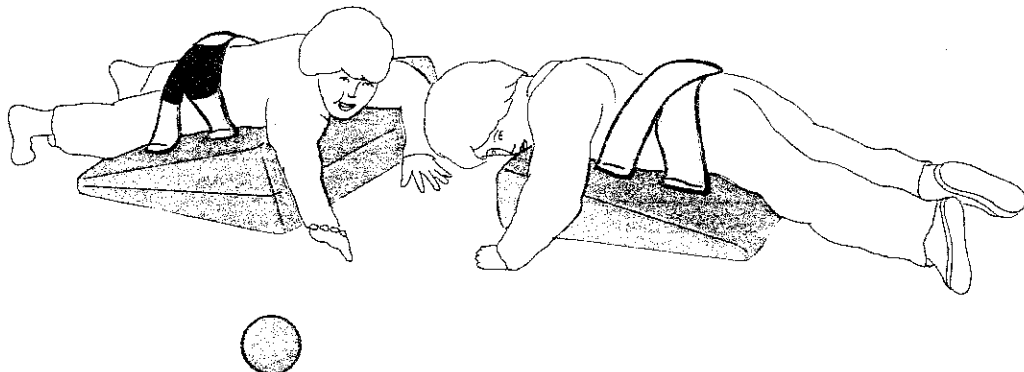
20

This supine position is helpful to relax the upper extremities, head and trunk, as well as the lower extremities, unless range of motion is indicated. Never leave the child unattended in this position with respiratory congestion. Refer to page 22 for postural drainage.

Deluxe Strap Wedges

Tumble Forms Deluxe Strap Wedges give the therapist the ability to work independently, without worrying about the child rolling off the wedge.

The straps are secured over the child with Velcro hook and loop fasteners. The straps can be crisscrossed to emphasize holding just the hips firmly in place.



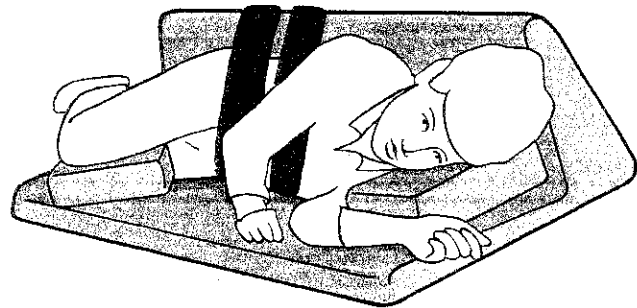
Universal Side Lyer™

Side lying is a basic developmental building block task which a child needs to master in order to roll, balance and crawl. Further development of gross and fine motor and perceptual motor skills depend on achieving this basic task. The Universal Side Lyer provides a technique for comfortably placing a child on his side who cannot maintain the position independently. Side positioning is helpful because it decreases abnormal extension, maintains shoulders in protraction and allows the arms to be placed in midline position.

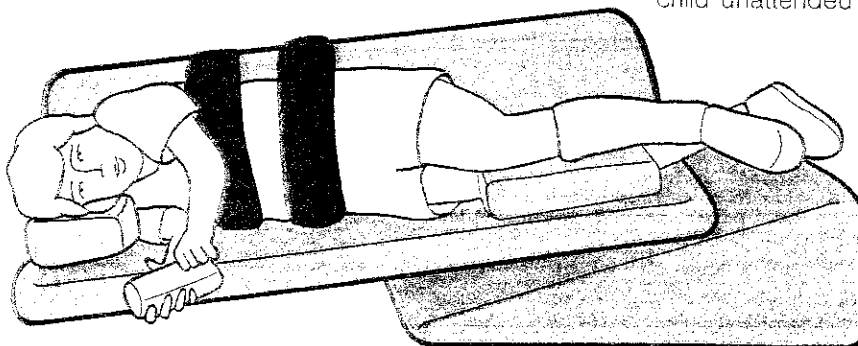
APPLIED USES FOR BOTH LEFT AND RIGHT SIDE LYING

1. **Head Control** The head should be positioned in midline to achieve as much symmetry as possible. First, prevent the head from extending back by placing the head just before the edge and pressing against the back block. Secondly, level the head by placing a terry cloth towel, pillow, or Tumble Forms block under the head high enough to take up the difference between the lower shoulder and lower side of head.

Forearm and Hand Function In the side lying position the lower arm is prevented from going into extreme extension by the base and weight of the child's own body. The upper arm is assisted by gravity to approach midline. Both arms are therefore more relaxed and do not exhibit excessive tone. Hand function can now take place more readily.



2. **Postural Drainage** Congested respiratory conditions can be helped by raising the lower extremity end of the Universal Side Lyer onto the Tumble Forms wedge. Provide proper incline for drainage as well as support for the legs, but do not leave the child unattended while in this position.



Thera-Wedge System[®]

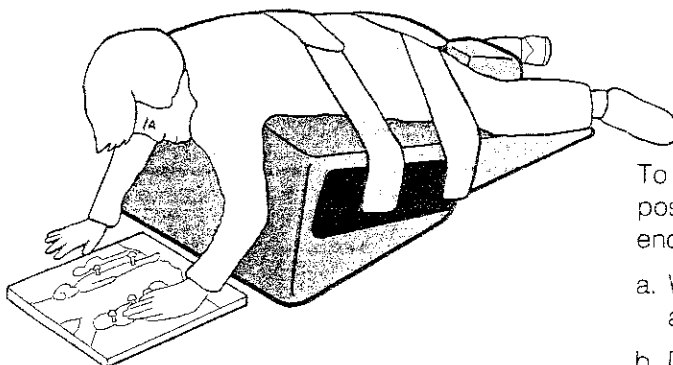
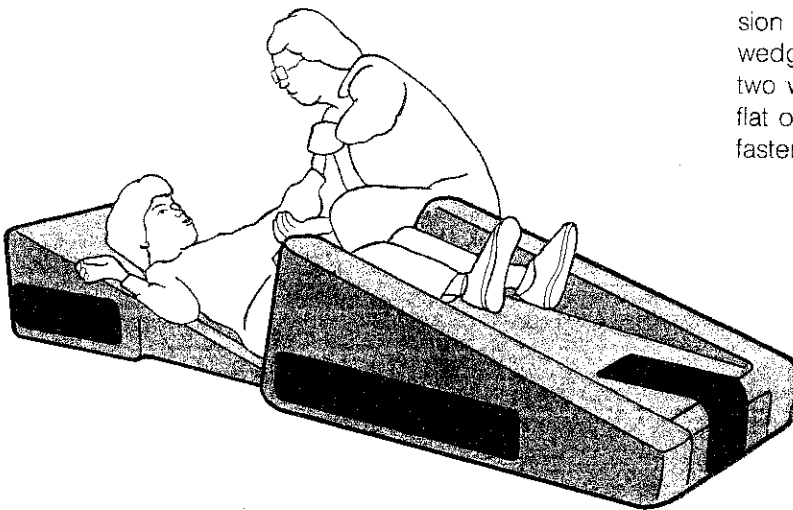
Thera-Wedge System is designed to be used with the older child or young adult. Positioning a larger person for therapeutic activities is more difficult simply because of his or her size. The Thera-Wedge can help appropriate body positioning, while allowing desired maintenance of positioning. Therapeutic intervention is intended to be provided by the therapist or caretaker under therapist advisement.

APPLIED USES

Appropriate static positioning in supine to allow lower and upper extremity range of motion activities.

- a. Head and neck flexion are provided when positioned in supine on smaller inverted wedge.
- b. Lower extremities can be supported using the larger wedge. This type of positioning will help to decrease extensor tone in supine position and reduce lordotic curve while ranging arms as shown. Hip extension movements may push the two wedges apart. To stop this, connect the two wedges with the Thera-Wedge strap flat on the floor and attached to Velcro fasteners at each end as shown.

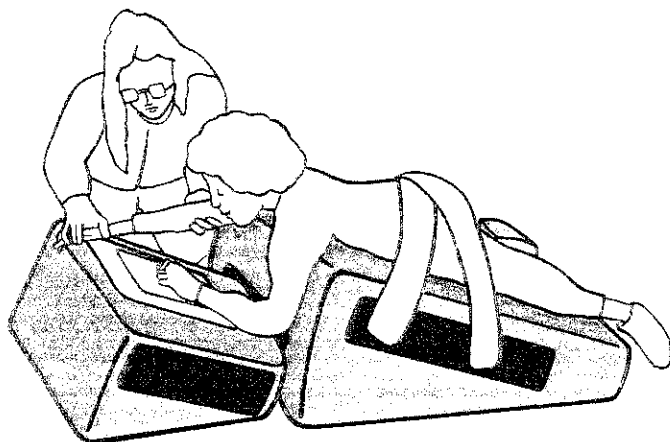
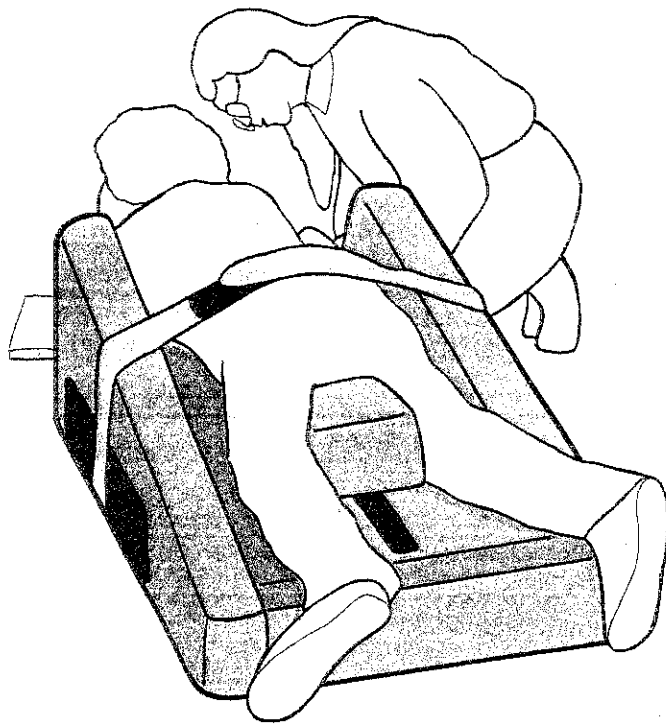
22



To provide weight bearing on upper extremities, position a client in prone on either wedge to encourage the following:

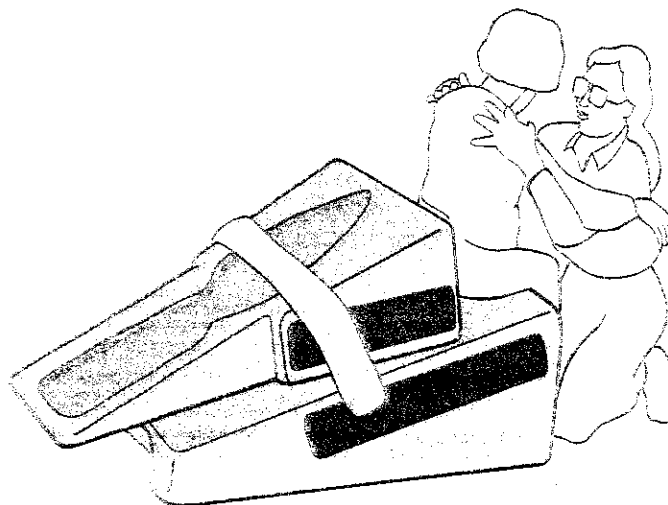
- a. Weight bearing on elbows or extended arms.
- b. Development of a client's unilateral weight bearing while requiring one arm reaching.
- c. The working height of this prone wedge position is 12".

Abduction at the hips and hip and knee extension are provided when a client is positioned in prone using straps and the abductor wedge. The mild drop-off ledge shape molded into the surface illustrated is helpful to relax mild hip flexion contractures. When the ledge is positioned just below the pelvic crest, contractures are encouraged to elongate during 15 minute recommended periods. The effective wedge height in this position is 10".

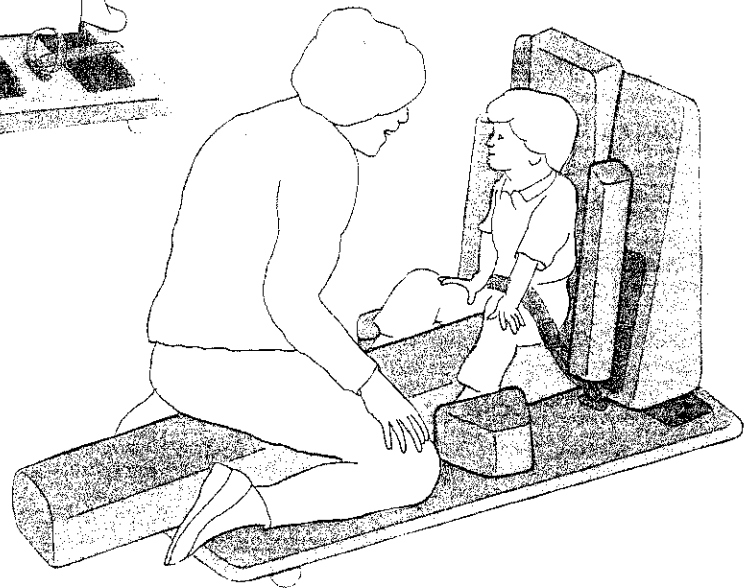
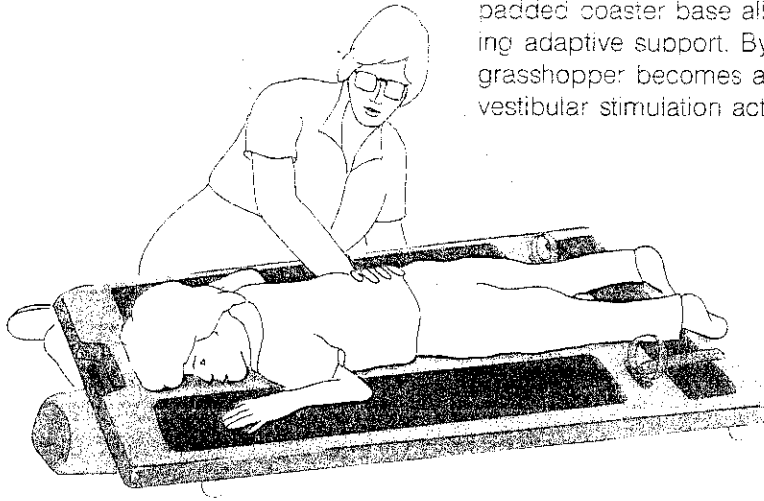


Using the two Thera-Wedges separately and in conjunction allows for a variety of angles and heights at the activity work surface. This encourages different degrees of head control as well as providing variety for required arm usage. The problem of work surfaces being pushed away by the client is also solved when both wedges interlock by nesting. The working height of these nested wedges is 10".

The Thera-Wedge System can also be used to assist the therapist in positioning the child while working on sitting balance. Increased hip flexion is gained by seating the client on the end of the 17" wedge. This decreases extensor tone and lordotic curve thus controlling the lower body while the client works on head and trunk control activities.



The Grasshopper is a mobile positioning system that consists of over 15 different shapes and forms to answer your needs in positioning children up through adolescent size. Positioning a child on the Tumble Forms padded coaster base allows for ease in changing location while maintaining adaptive support. By attaching the Tumble Forms Log to the base, the grasshopper becomes an active therapeutic treatment system for vestibular stimulation activities.



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APPLIED USES

Vestibular Activities

Vestibular stimulation can be used in either of two ways: (1.) to elicit an adaptive protective or equilibrium response of (2.) to effect a change in a child's muscle tone without requiring an adaptive response on the part of the child.

Prone/Supine Positioning

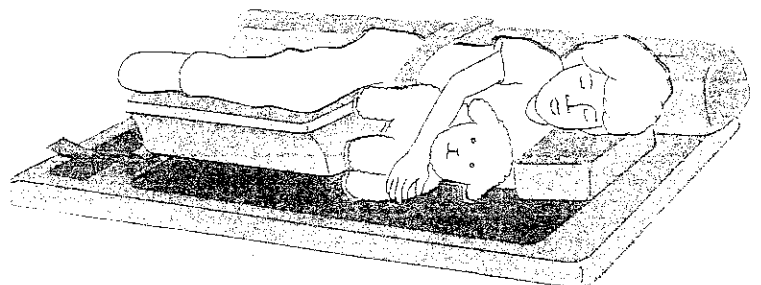
The prone or supine position can be used to develop improved head control, shoulder girdle stability and help prevent contractures and deformities in the lower extremities by facilitating hip extension, abduction and external rotation, knee extension and ankle dorsiflexion.

Side Lying Positioning

Side lying enables the child to achieve a beginning midline control that is important motorically, cognitively and perceptually. It facilitates the development of eye-hand coordination as the child visually monitors his arm and hand movements.

Sitting Positions

Independent sitting enables the child to engage in a range of activities involving varying degrees of eye/hand coordination while upright. Both Roll sitting and Long leg sitting can be used to maintain or increase range of motion.



Soft Top Rocker Balance Board

The ability to maintain balance is fundamental to advanced perceptual motor activities. Biological balance mechanisms along with vision, tactile information and proprioceptor feedback, provide the knowledge for preceiving body orientation in space. Rhythmic movements involving the entire body assist in dramatically developing this basic control.

The following activities are meant to strengthen the child's balance, sense of body awareness and spatial orientation. The expectation level of performance of any balance board activity must be geared to the capabilities of each individual child. Encouragement will help bring about a certain amount of success and skill in using the balance board. Children love music, and it is an excellent way to create a controlled background for all these balance board activities.



APPLIED USES

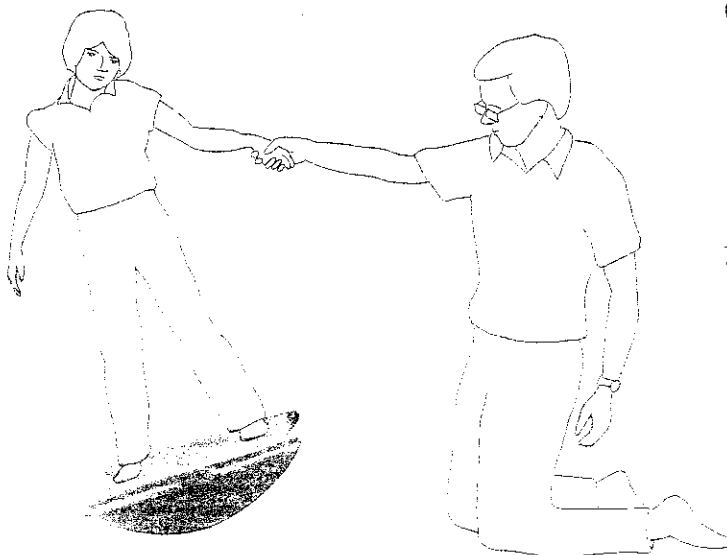
Develop equilibrium reaction, trunk strengthening, eye/hand coordination, and a sense of body awareness:

1. The child practices getting on and off the Soft Top Rocker Balance Board:
 - a. forward
 - b. backward
 - c. to each side
2. The child sits cross-legged on the Soft Top Rocker Balance Board as shown. The therapist rocks the child back and forth and asks the child to maintain balance.
3. Sitting on the Soft Top Rocker Balance Board, upper extremity movements (swimming movements) may be acted out alternating right and left hands and arms.



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4. Sitting or kneeling, have the child roll his head to one side and focus on a target, then to the other side. Have the child roll his head in complete circles.
5. Sitting, kneeling or standing, have the child rock slowly back and forth on the Soft Top Rocker Balance Board. This slow rhythmic pattern is a fuller experience when done to a musical background.
6. Sitting or kneeling the child moves his arms in circles:
 - a. both arms in the same direction
 - b. both arms in opposition
 - c. moving one arm and then the other
 - d. moving one arm and then the other in opposition
7. Child balances on the Soft Top Rocker Balance Board, either sitting, kneeling or standing and:
 - a. folds arms on chest
 - b. raises arms above head
 - c. extends arms out to the sides (as shown)
 - d. bends down and touches toes
 - e. originates own movements



Jettmobile[®]

Despite their handicaps, special children continue to explore their environment. While this may be difficult or nearly impossible for some, the Jettmobile scooter aids their movement by maintaining the child in a symmetrical prone position while pushing and pulling with the upper extremities.

Chest Wedge This small wedge raises the child's chest an additional 2½" if arm extension adjustment is needed. The chest wedge is held in position with Velcro fasteners.

Side Spacer Side spacers are shaped like half moons, 1" in thickness and are held in position with Velcro fasteners. They are useful with smaller children to reduce the width from 10" to 9" or 8" in the chest area. Used in the back of the Jettmobile scooter, the side spacers can reduce abduction by 1" or 2".

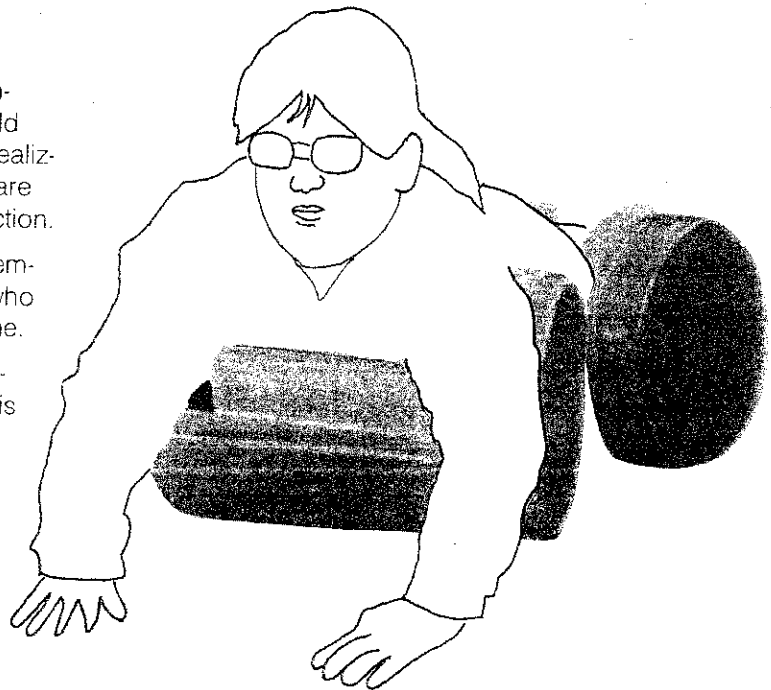
Abductor Wedge This abductor block is attached with Velcro fasteners and is adjustable. Abduction angle can be altered by moving it front to back, and severe postural asymmetry can be accommodated by adjusting left to right.

Hip Strap A hip strap is provided with each Jettmobile scooter for secure positioning. Particularly helpful in reducing abnormal hip flexion, it allows for adjustment fore and aft.

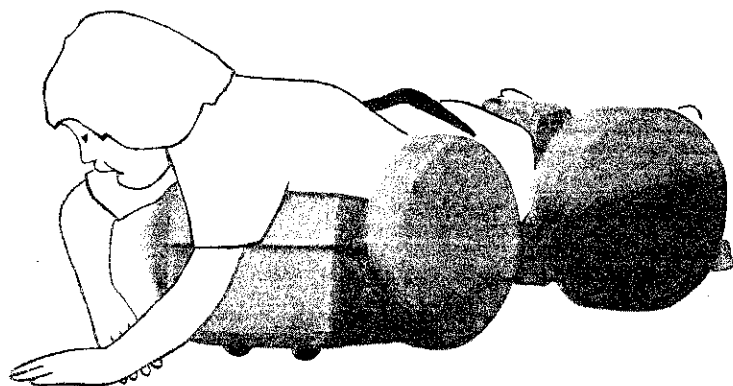
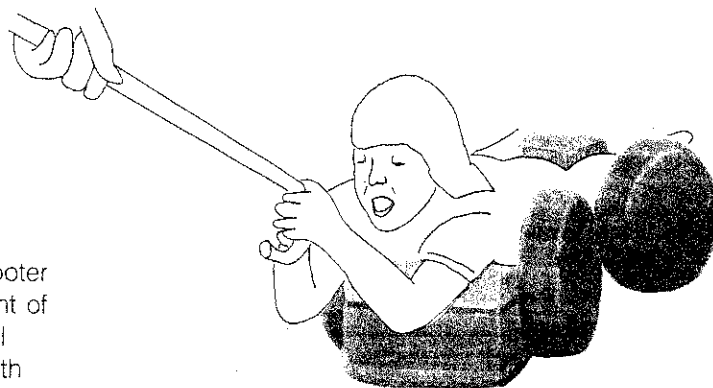
26

APPLIED USES

1. Head and trunk control
 - a. Control the head and trunk by symmetrically positioning the prone child snugly on the Jettmobile scooter, realizing that head and trunk extension are prerequisite to upper extremity function.
 - b. Head and trunk extension can be emphasized by pulling a child along who is grasping the pull rope while prone.
 - c. Since the prone position is easily attained on the Jettmobile scooter, it is a welcome activity for spina bifida children.

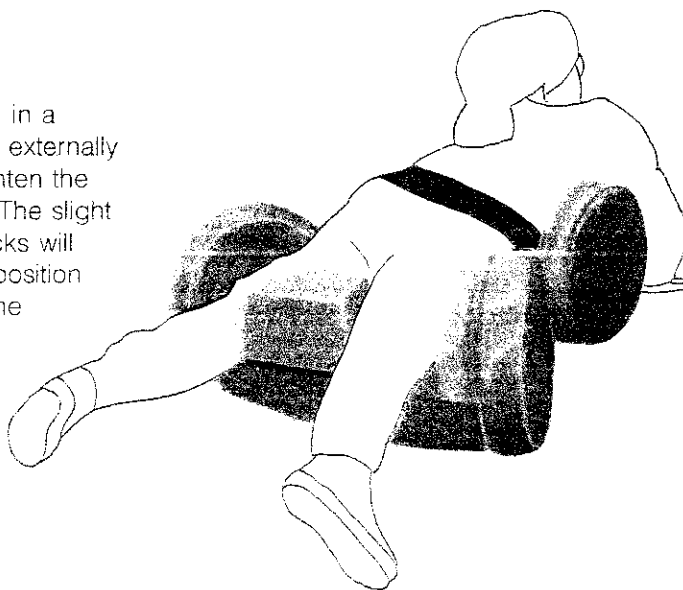


2. **Upper extremities** The Jettmobile scooter is designed to facilitate the development of upper extremities, encouraging bilateral motor coordination and improve strength and endurance of the arms and hands.



3. **Sensorimotor** A stimulating activity is to spin the Jettmobile scooter around in a circle asking the child to use hand-over-hand movements, changing direction from clockwise to counter-clockwise.

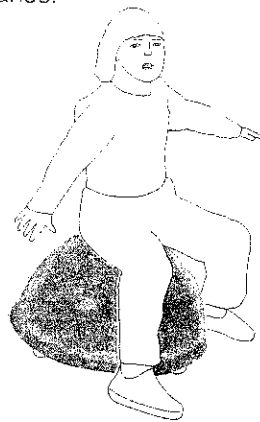
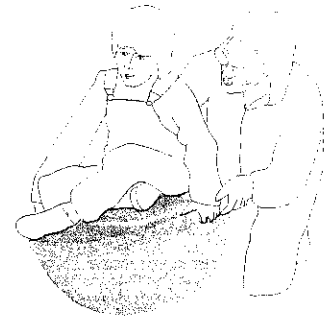
4. **Hip extension** While lying prone in a snug, symmetrical, abducted and externally rotated leg position, gradually tighten the Velcro belt to reduce hip flexion. The slight incline on both front and rear decks will encourage hip extension as you position the child's hips in the middle of the Jettmobile scooter.



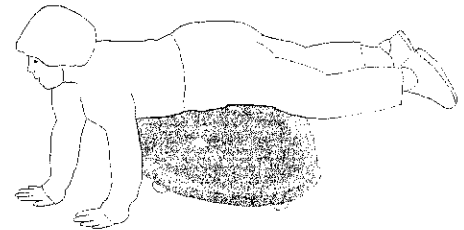
The Turtle is a complete product designed for vestibular stimulation and sensory integration therapy. Conveniently stored inside the rocking Turtle dome is a "T" stool attachment, net swing with rope and height adjuster, an assortment of textured balls and bean bags, and a folder for storing records. The Turtle is an ideal portable system for the itinerant therapist or for any clinic program lacking space.

APPLIED USES

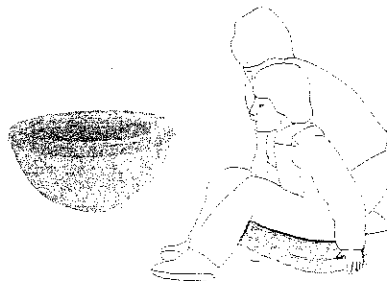
1. **Equilibrium reactions and trunk strengthening** The child sits cross-legged on the disc and the therapist provides movement through space, asking the child to maintain balance.



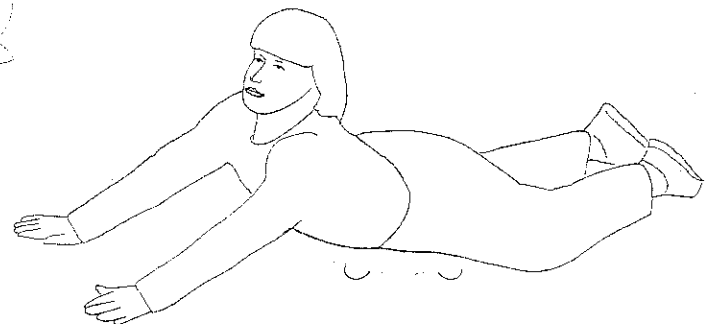
2. **Proprioception to lower extremities, equilibrium reactions, eye hand coordination** The child sits on the inverted disc with feet on floor and attempts to maintain balance. Throw/catch/target games can be played in this position.



3. **Proprioception to upper extremities and reflex integration or eye hand coordination** The child lies prone over the inverted hemisphere weight bearing on upper extremities. Upper extremity weight shifting in this position is facilitated by asking the child to toss bean bags at a target with one hand.

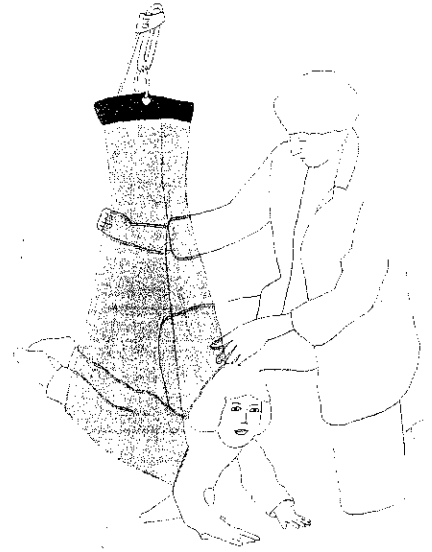
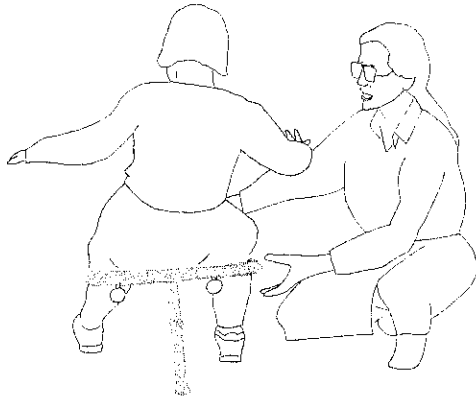


4. **Eye foot coordination, proprioception to lower extremities and equilibrium reaction** The child sits on the scooter board (which serves as the lid to the storage compartment in the Turtle's dome) and uses both feet to propel himself while holding on with both hands.



5. **Bilateral motor coordination, prone extension posture, muscle cocontraction and upper extremity proprioception** The child lies prone on scooter board, using his arms to propel himself. Various tag/relay games can be employed in this position.

6. Lower extremity weight bearing equilibrium reactions and eye hand coordination The child sits on the "T-stool", feet flat on floor and attempts to maintain his balance. Throw/catch games can be played nicely in this position.



7. Vestibular stimulation, reflex integration, muscle cocontraction, proprioception The child lies prone in the net swing and uses both hands on the floor to propel himself. The therapist can monitor the type and speed of stimulation.

**Tumble
Forms²**

Bubble[®]

The Bubble is a basic, portable, vestibular stimulation and sensory integration system. Identical to the Turtle without the net swing package, the Bubble is an excellent product for those without access to proper overhead structure to support a net swing. Most of the same activities involving equilibrium reactions, proprioception, weight bearing, reflex integration, and coordination can be performed in the same manner as the Turtle.

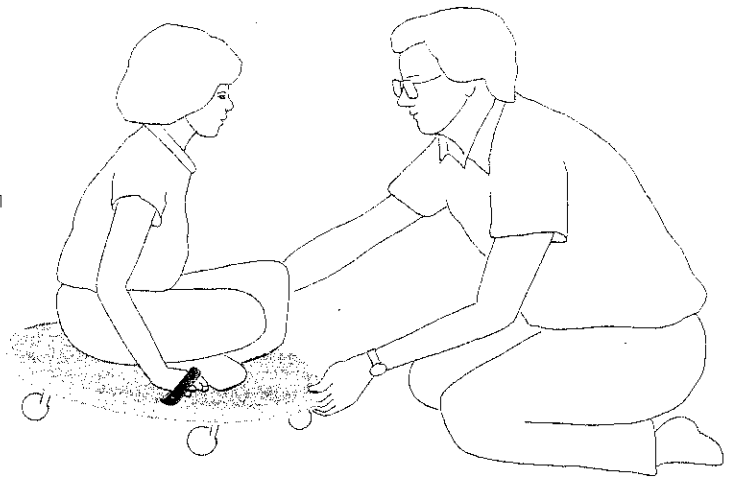


Round Scooter Board

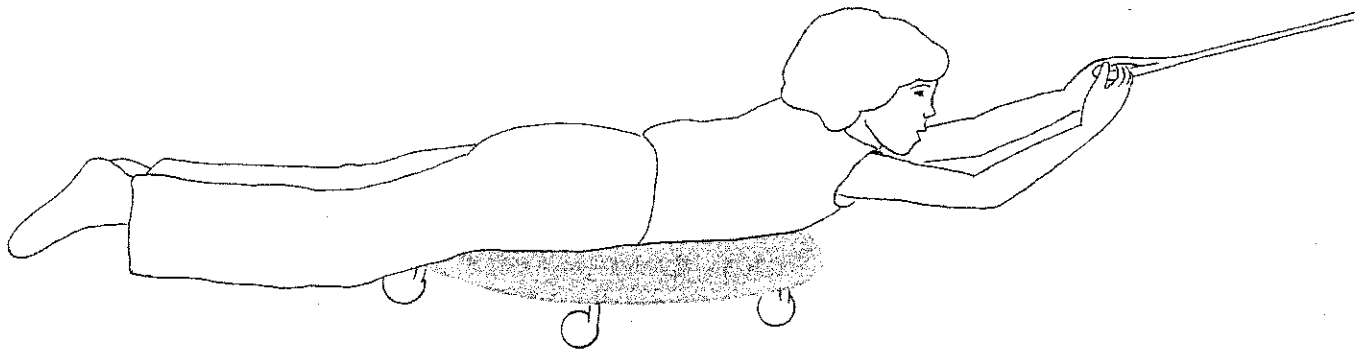
The Round Scooter Board is 24" in diameter, has a soft top, and a handgrip on each side. It will help develop a child's neuro-motor control as he propels himself in any direction, or swivels and rotates. The 2 handles provide secure points to hold onto.

APPLIED USES

1. **Trunk Strengthening** The child sits cross-legged on Round Scooter Board and the therapist provides movement in various directions while asking the child to maintain balance.
2. **Total Patterns** Total patterns, such as those of prone progression are performed in all appropriate directions, forward and backward, sideward to the left and right, turning in a circle and diagonally forward and backward toward the left and toward the right. As the Round Scooter Board moves, the child learns to orient his body to shifting space and to maintain his balance.



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3. **Head and Trunk Control**
 - a. Head and trunk extension are prerequisite to upper extremity function. Gain control of the head and trunk by positioning the child prone on the Round Scooter Board.
 - b. Head and trunk extension can be emphasized by pulling a child along who is grasping a pull rope while prone.
4. **Upper Extremities** Development of the upper extremities and bilateral motor coordination are encouraged, and strength and endurance of the arms and hands are improved by positioning the child prone on the Round Scooter Board and allowing him or her to pull or push for movement.
5. **Sensor/Motor** With the child in a prone position have the child move in clockwise direction hand over hand, then have the child change to a counter clockwise direction.

Sensory Integration Therapy

The senses do not work in isolation. Each works with the others to form a composite picture of who we are physically, where we are, and what is going on around us. Sensory integration is the organization of sensory information for on-going use.

For most of us, effective sensory integration occurs automatically, unconsciously, without effort. For some of us, the process is inefficient, demanding effort and attention with no guarantee of accuracy. When this occurs, the goals we strive for are not easily attained.

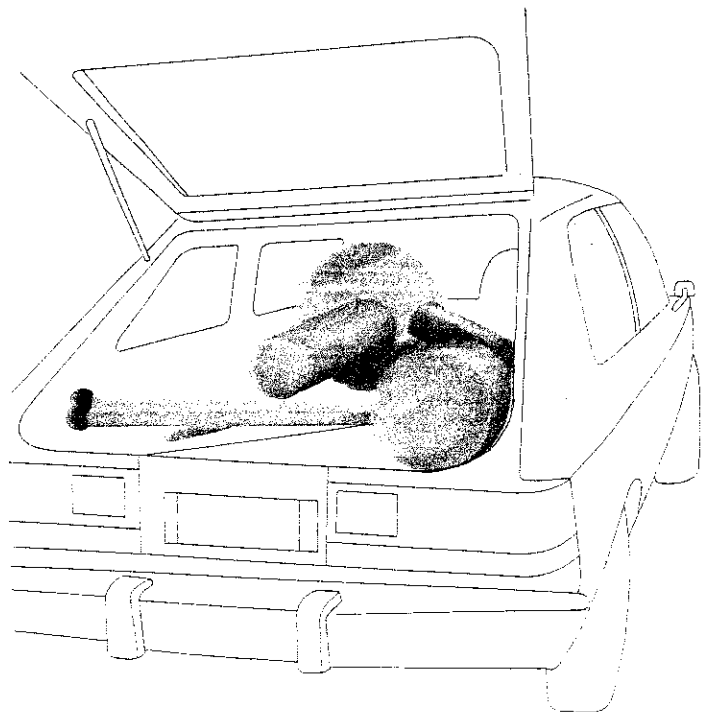
Vestibular stimulation is the core of sensory integration therapy. This type of stimulation provides powerful input, which affects not just the vestibular system, but most other systems (visual, auditory, proprioceptive) through its connecting structures. Since its effects are so far reaching it is clear that it cannot be randomly applied to any child. Even children who have been identified as having vestibular disorders do not all require the same type of vestibular stimulation. Some may require activation of the vestibular system which would be met very effectively through any of these pieces of equipment. But some may be experiencing excessive vestibular activity, in which case other modes of therapy should be used to modulate this. **Exactly what occurs in therapy should be based on careful evaluation and observation by a therapist trained in sensory integrative evaluation and treatment.** Through this, they can determine exactly where the child's problem is and which activities and techniques would benefit him most.

Therapy is most effective when the child is able to choose his own equipment and activities, since they will probably choose that which will benefit them most. It is often necessary however, for the therapist to introduce some activities and provide some structure to the setting.

This equipment has been designed to provide vestibular stimulation for therapeutic purposes. Its appearance has long been awaited by therapists realizing the importance of this type of stimulation for their students, yet frustrated by the architectural limitations preventing suspension set-ups in their work settings.

Some of the parts used in the Vestibulator II such as the oval carabiner clips and support ropes may wear over time. The therapist should regularly inspect and replace any parts that begin to show excessive wear.

The Tumble Forms Vestibulator swing can easily be taken down and transported as shown in the back of a compact hatchback.

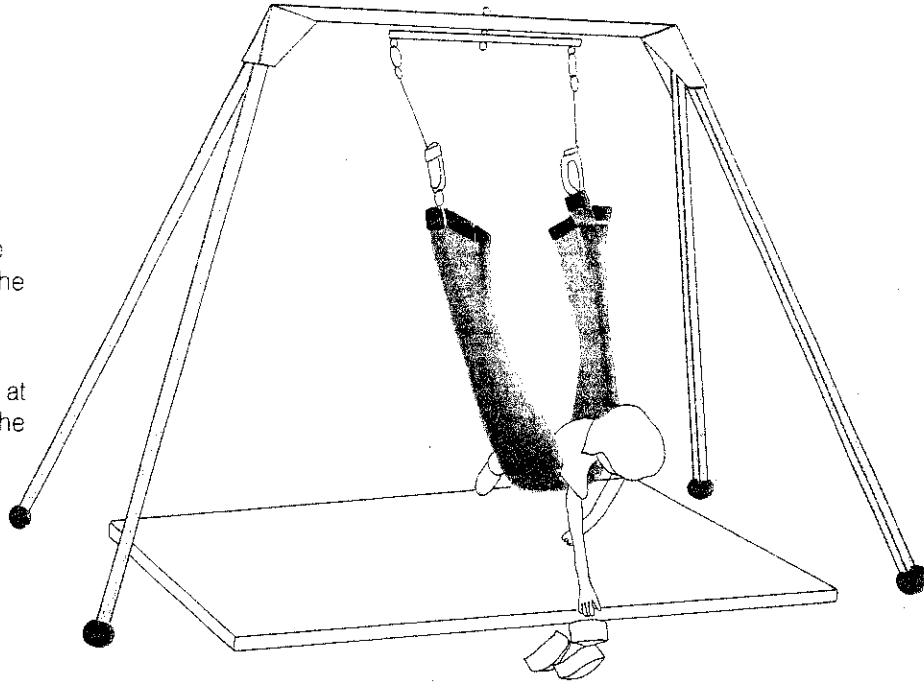


Vestibulator[®] II

Net Swing:

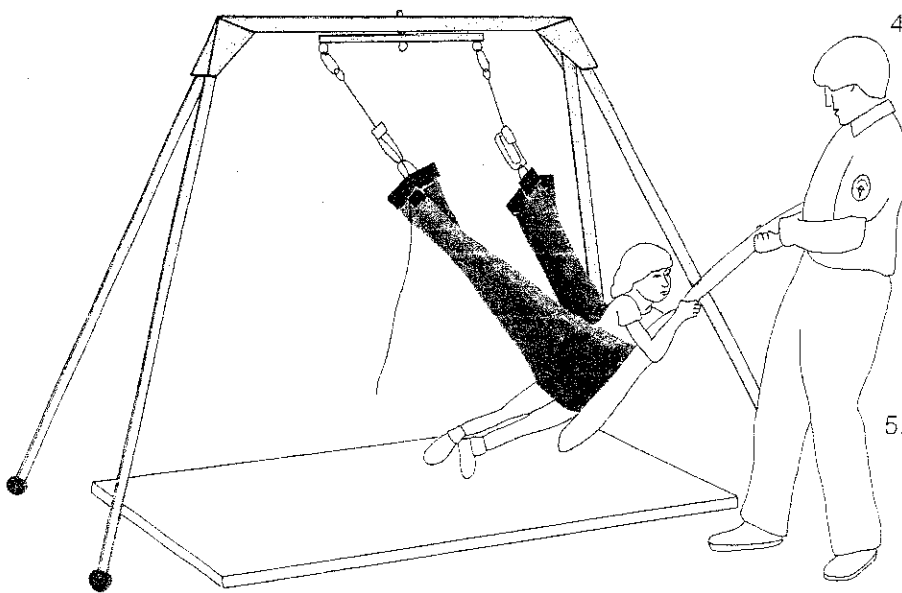
Activities

1. Place the child prone in the net with both hands together. The child then pushes herself with both hands to begin back and forth movement. The therapist suspends a ball in front of the child and she attempts to hit it.
2. With the child prone in the net have her pick bean bags off the floor, one at a time, and, using both hands, toss the bags at a target.



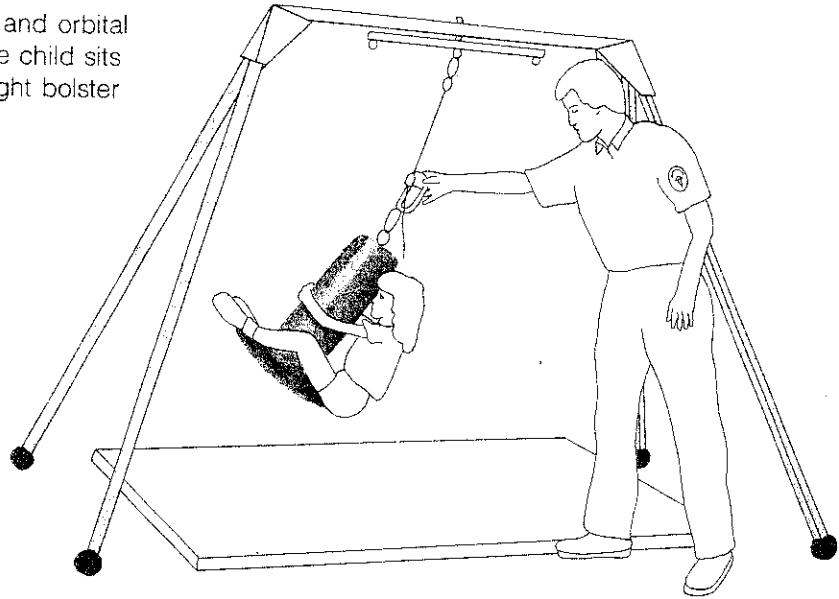
32

3. Again, with the child prone in the net, have her push herself in a circle, crossing her hands in front of her. Hand over hand sequence.
4. Have the child lying in the net and pushing herself back and forth with both hands together. The therapist stands in front of the child holding one end of a towel. The child attempts to grasp the free end of the towel and climb hand over hand towards the therapist. When the child reaches the therapist's end of the towel, she holds on and maintains her position for as long as possible. Then she lets go and has a free ride.
5. Sitting cross-legged in the net, the child is pushed by the therapist in linear and circular patterns. DO NOT impose the stimulation on the child. She must be allowed to determine the intensity and duration of this activity.



Flexion Swing

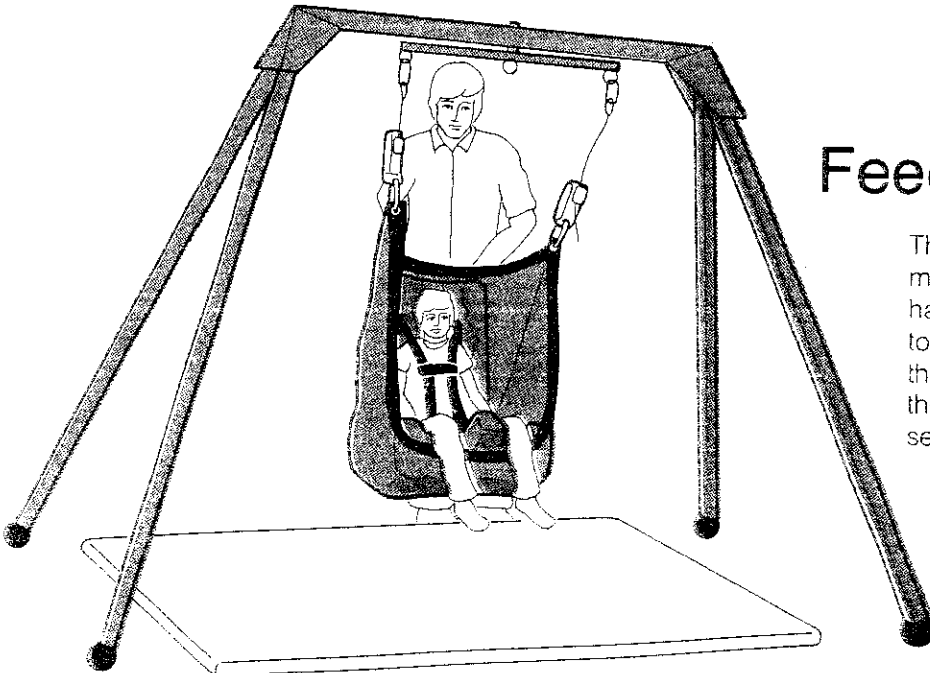
The Flexion Swing provides linear and orbital movement through space while the child sits on the platform and hugs the upright bolster portion of the swing.



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Feeder Seat® Swing

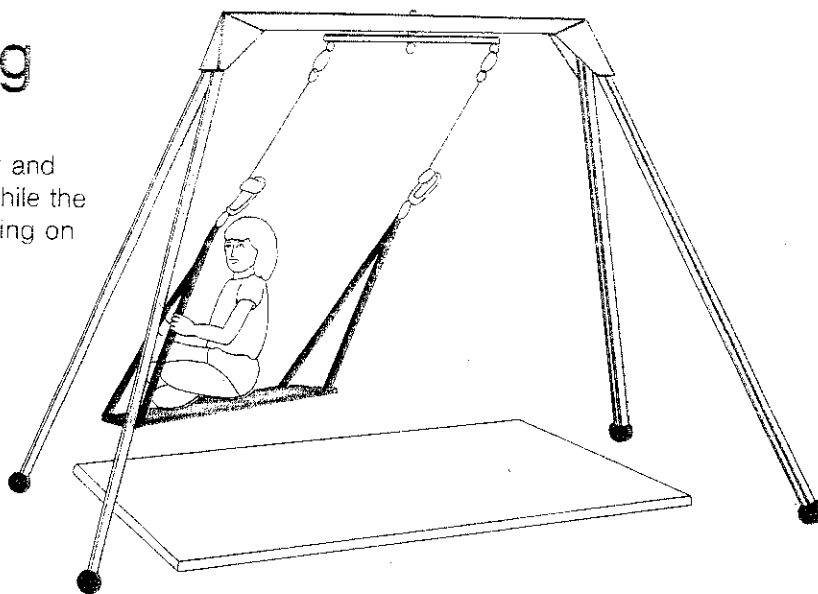
The Feeder Seat Swing provides linear movement through space for the multiply handicapped child who is not usually able to have this experience. The child is therapeutically positioned and supported in the Feeder Seat positioner which is nestled securely in the net hammock.



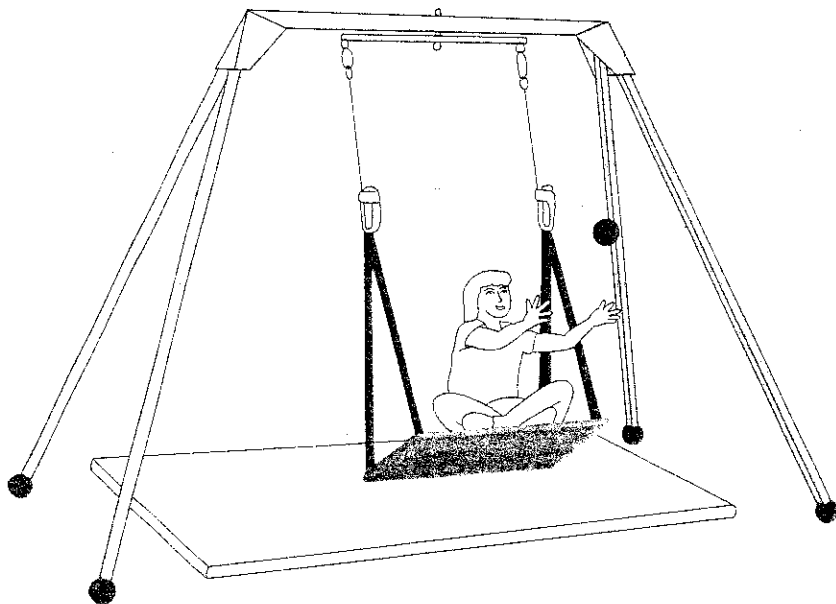
Vestibulator[®] II

Platform Swing

The Platform Swing provides linear and orbital movement through space while the child is quadruped, sitting or kneeling on the platform.



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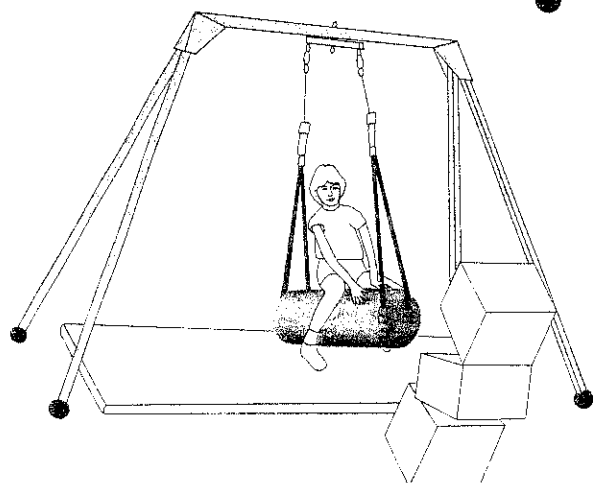
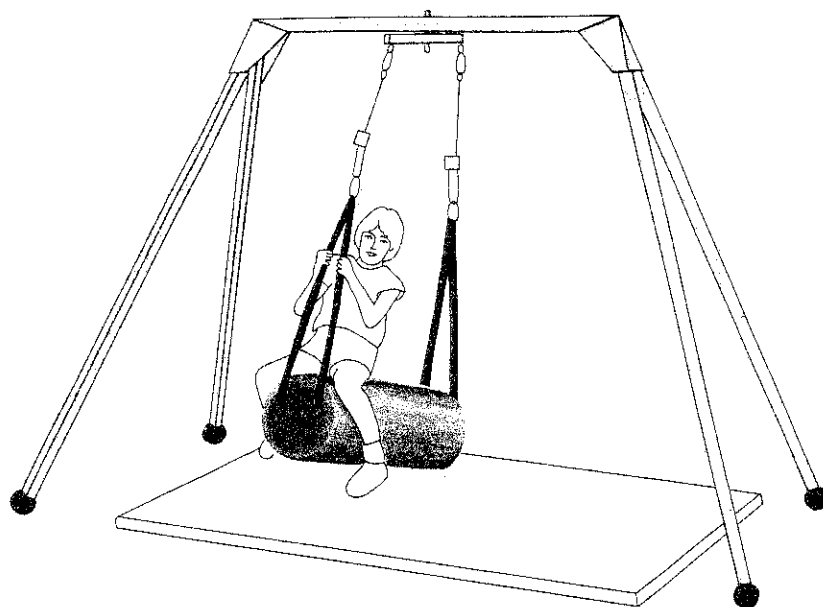


Activities

1. The child maintains a quadruped position on the platform while it is moving through space.
2. Sitting the child cross-legged, he attempts to maintain his balance while catching bean bags and tossing them to various targets using both hands.
3. Have the child kneel on the platform and play various bean bag games with him while he attempts to maintain his balance.

Bolster Swing

The Bolster Swing provides linear and orbital movement through space while the child; a) sits straddled over the swing with his hands flat on the swing in front of him; b) sits straddled over the swing holding onto the support straps or; c) lies prone on the swing with his arms and legs together and his head flat against the surface of the swing.

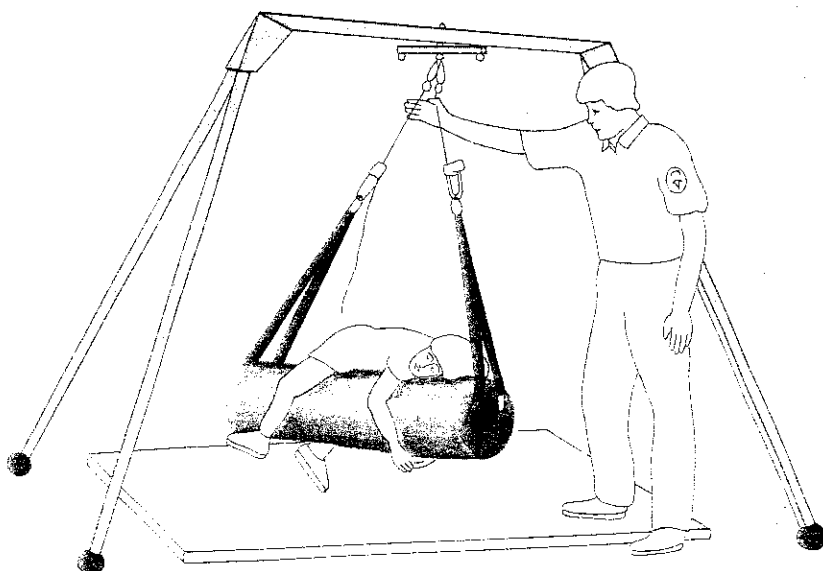


The child sits straddling the bolster, legs slightly flexed so that his feet don't touch the floor, and holding onto the support straps. Have the child swing himself back and forth by pushing and pulling the straps.

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The child sits with hands flat on the surface of the swing, pushes with both feet, and "pumps" with his trunk in the direction of movement. The therapist stacks several large cardboard boxes in front of the swing and the child attempts to swing himself high enough and straight enough to knock them over.

The child is prone, hugging the swing with one side of his head flat against the surface of the swing, while the therapist pushes the child in a linear and orbital plane. Encourage the child to keep his head against the surface of the bolster for maximal stimulation.



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Sammons Preston Rolyan
An AbilityOne Company
4 Sammons Court
Bolingbrook, IL 60440-4989
Phone: 1-800-323-5547
In Canada Phone: 1-800-665-9200