Columbia™ MEDICAL

Solutions for Daily Living

INSTRUCTIONS FOR USE

Model #6900
Pediatric Folding Wheelchair

Shown with optional cover and positioning belt.

Dealer: This manual MUST be given to the user of the wheelchair.

Operator: BEFORE using the wheelchair, read this entire manual and save for future reference.

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MAJOR COMPONENTS

*Shown with optional footrest & pelvic belt

*Shown with optional headrest extension

1. Push Handle (Cane)
2. Rear Wheel
3. Front Support Frame
4. Front Caster
5. Front Rigging (Footrest)
6. Headrest Extension
7. Seat Support Reinforcement
8. Seat Support Rails
9. Back Support Reinforcement
10. Back Support Frame

PRODUCT SPECIFICATIONS

Specifications

Number of frame sizes	4
Minimum user weight	N/A
Maximum user weight	165 lbs.
Power	Manual
Frame type	Folding
Rear axle	Fixed
Overall width	19” - 25” (13½” tires)
Overall length (with front rigging)	35” - 45”
Overall height	37” - 44”
Product weight	31 - 36 lbs.
Product materials	Aluminum frame, fabric seating
Parking brake	Pull to lock
Seat width range	12” - 18”
Seat depth range	12” - 18”
Back height	19½” - 21”
Back angle (from vertical)	8°, 11°, 14°, 17°, 20°
Seat angle (from horizontal)	10°, 12°, 15°, 17°, 27°, 30°, 32°
Seat to back angle adjustments	67° - 100°
Seat to floor height	20½” - 23”
Seat to footplate height	6” - 22”
Front caster sizes	6” x 1”
Rear tire sizes	12½” , 13½”

SPECIAL NOTES

READ BEFORE USE

- DO NOT use this product or any available optional equipment without first completely reading and understanding these instructions and any additional instructions material such as owner's manual, service manuals or instruction sheets supplied with this product or optional equipment. If clarification about warnings, cautions or instructions is needed, contact a healthcare professional, dealer or technical personnel before attempting to use this equipment - otherwise, injury or damage may occur.

WARNINGS

- The word "WARNING" refers to a hazard or unsafe practice that may cause SERIOUS INJURY or DEATH to the occupant, attendant(s) and/or to other persons.
- WARNINGS are found throughout the sections of this manual where they apply. Read all warnings in each section and review often until they are second nature to all user(s) of the wheelchair including the attendant(s).

ACCESSORIES WARNING

- Columbia Medical products are specifically designed and manufactured for use in conjunction with Columbia Medical accessories. Accessories designed by other manufacturers have not been tested by Columbia Medical and are not recommended for use with Columbia Medical products.
- Compatibility of non Columbia Medical products is the responsibility of the user in conjunction with his/her healthcare professional.

SPECIAL NOTES

- Risk terms are used in this manual and apply to hazards or unsafe practices which could result in personal injury or property damage. Refer to the table below for definitions of the signal words.

Risk Term	Definition
CAUTION	Caution indicates a potentially hazardous situation which, if not avoided, MAY result in property damage or minor injury or both.
WARNING	Warning indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.

THE INFORMATION CONTAINED IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE.

GENERAL INFORMATION

READ ALL INSTRUCTIONS BEFORE USING THIS PRODUCT

SAVE THIS USER GUIDE FOR LATER REFERENCE

- ❑ This wheelchair may be purchased by prescription or over-the-counter. A clinician or qualified rehabilitation specialist should be consulted regarding proper positioning and use of postural supports in this wheelchair.
- ❑ The safety belt should be worn at all times during use.
- ❑ The attendant should always apply the parking brake before letting go of the wheelchair.
- ❑ All safety straps and belts should fit snugly but comfortably on the user.
- ❑ Although this wheelchair is intended for use both indoors and outdoors, the frame may be subject to corrosion if exposed to excessive moisture and/or salt. Be sure to clean and dry the frame with a soft cloth.
- ❑ The wheels are not intended to be used in sand. Sand will negatively affect operation and performance of the wheels.
- ❑ Use care when unfolding and folding wheelchair to avoid pinching hands.
- ❑ Follow the Maintenance/Inspection Checklist section regularly and on an ongoing basis, notice anything that may need adjustment or repair.
- ❑ When going up a curb or step, face forward and tilt the wheelchair back to lift the front wheels over the curb. Then move forward and lift the rear wheels over the curb.
- ❑ When going down a curb or step, face the wheelchair backwards. Lower the rear wheels down the curb and continue backwards, taking the weight off the front wheels so they can gently be lowered.
- ❑ Maintain control of the wheelchair at all times when going up or down inclines.
- ❑ When transferring to or from the wheelchair, engage the parking brake.
- ❑ This wheelchair has a transit model available which has been crash tested according to the RESNA WC-4:2011 Section 19 - Wheelchairs used as seats in motor vehicles (WC19).
- ❑ Whenever feasible, the individual should transfer out of the wheelchair to a vehicle seat and use a vehicle occupant restraint or should use a child safety restraint system. The wheelchair should be safely stowed and secured so as not to become a projectile in a crash or sudden driving maneuver.
- ❑ If your wheelchair is a WC19 compliant transit model, refer to the Transit Guide for instructions for its use as a seat in a motor vehicle.

⚠ WARNING

- **Never leave an individual unattended in the wheelchair. A fall, tip-over or loss of control may occur and cause severe injury to the occupant or others.**
- **If your wheelchair is not a transit model it cannot be properly secured in a motor vehicle. In an accident or sudden stop the wheelchair may tip over and the occupant or others may be thrown from the chair which may cause severe injury to the occupant or others.**

I. GENERAL GUIDELINES

INDICATIONS FOR USE

The Columbia Medical Pediatric Folding Wheelchair is a manual wheelchair designed to provide mobility aid for children and adolescents who have limited or no ability to ambulate and require a device to aid in seated mobility in the home and community.

STABILITY

The back height, seat depth, back angle, seating system, tilt angle, seat height, size/position of the rear wheels, size/position of the front casters, as well as the user condition directly relate to the stability of the wheelchair. Any change to one or any combination of these may cause the wheelchair to decrease in stability. The adjustments MUST be performed by a qualified technician.

MAINTENANCE

If the wheelchair is exposed to extreme temperature (greater than 100°F or less than 32°F), high humidity and/or becomes wet, prior to use, ensure hand grips DO NOT twist on the wheelchair handle - otherwise damage or injury may occur.

SUITABLE ENVIRONMENT

The wheelchair is intended for both indoor and outdoor use. If the wheelchair is used in the rain, the excess water should be wiped off with a soft cloth. See **Cleaning/Storage** section for detailed instructions on cleaning the wheelchair.

CAUTION

- **Use caution when using wheelchair on icy or slippery surfaces.**

I. GENERAL GUIDELINES (CONT'D)

OPERATION INFORMATION

Unless otherwise noted, all service and adjustments should be performed while the wheelchair is unoccupied.

To determine and establish the occupant's particular safety limits, practice bending, reaching and transferring activities in the presence of a qualified healthcare professional before attempting active use of the wheelchair.

ALWAYS check foam grips on the push handle for looseness before using the wheelchair. If loose, contact a qualified technician for repair or replacement.

Before attempting to transfer in or out of the wheelchair, every effort should be made to reduce the gap/distance between the wheelchair and the seating surface. Turn both casters parallel to the object that the occupant is transferring onto. When transferring to and from the wheelchair, ALWAYS engage both wheel locks.

CAUTION

- **DO NOT shift the body weight or sitting position toward the direction of reach as the wheelchair may tip over.**
- **DO NOT use wheel locks to try to slow or stop the chair. This is likely to cause the chair to veer out of control.**
- **DO NOT stand on any part of the wheelchair. This may adversely impact the stability of the chair or occupant.**

II. SAFETY/HANDLING OF WHEELCHAIRS

“Safety and Handling” of the wheelchair requires close attention of the wheelchair occupant as well as the attendant. This manual points out the most common procedures and techniques involved in the safe operation and maintenance of the wheelchair. It is important to practice and master these safety techniques until both occupant and attendant(s) are comfortable in maneuvering around the frequently encountered architectural barriers.

Use this information only as a “basic” guide. The techniques that are discussed on the following pages have been used successfully by many.

Individual wheelchair users often develop skills to deal with daily living activities that may differ from those described in this manual. Columbia Medical recognizes and encourages each individual to try what works best for him/her in overcoming architectural obstacles that they may encounter, however ALL WARNINGS and CAUTIONS given in this manual MUST be followed. Techniques in this manual are a starting point for the new wheelchair occupant and attendant with “safety” as the most important consideration of all.

STABILITY AND BALANCE

⚠ WARNING

If you fail to heed these warnings, a fall, tip-over, or loss of control may occur and could result in serious bodily injury to the occupant or others, damage to the chair and surrounding property.

- **The seat positioning belt is a positioning belt only. It is not designed for use as a safety device withstanding high stress loads such as auto or aircraft safety belts. If signs of wear appear, belt MUST be replaced IMMEDIATELY.**
- **DO NOT climb, go up or down ramps or traverse slopes greater than 10°. Proceed down ramps or slopes slowly to avoid hard braking or sudden stops.**
- **DO NOT carry heavy objects on occupant’s lap while occupying the wheelchair.**
- **This wheelchair has been designed to accommodate one individual. If more than one individual occupies the wheelchair this may adversely affect the stability of the wheelchair.**

To assure stability and proper operation of this wheelchair, occupant MUST at all times maintain proper balance. Virtually all activities which involve movement in the wheelchair have an effect on the center of gravity. Columbia Medical recommends always using seat positioning belts for additional safety.

DO NOT lean forward out of the wheelchair any further than the length of the armrests. Make sure the casters are pointing in the forward position whenever the occupant leans forward. This can be achieved by advancing the wheelchair and then reversing it in a straight line.

II. SAFETY/HANDLING OF WHEELCHAIRS (CONT'D)

⚠ WARNING

If you fail to heed these warnings, a fall, tip-over, or loss of control may occur and could result in serious bodily injury to the occupant or others, damage to the chair and surrounding property.

- **Occupant should NEVER attempt to pick up objects by reaching. Reaching or leaning will affect the center of balance of the chair. This may cause the occupant to fall or tip over.**
- **Adjustments to the wheelchair MUST be performed by a qualified technician. The back height, seat depth, back angle, seating system, tilt angle, seat height, size/ position of the rear wheels, size/position of the front casters, as well as the user condition directly relate to the stability of the wheelchair. Any change to one or any combination of these may reduce the wheelchair stability.**

Many activities require the wheelchair occupant to reach, bend and transfer in an out of the wheelchair. These movements will cause a change to normal balance, center of gravity, and weight distribution of the wheelchair. Refer to FIGURE 2.1.

To determine and establish occupant particular safety limits, practice bending, reaching and transferring activities in several combinations in the presence of a qualified healthcare professional BEFORE attempting active use of the wheelchair.

Proper positioning is essential for the occupant safety. When reaching, leaning, bending or bending forward, it is important to use the casters as a tool to maintain stability and balance.

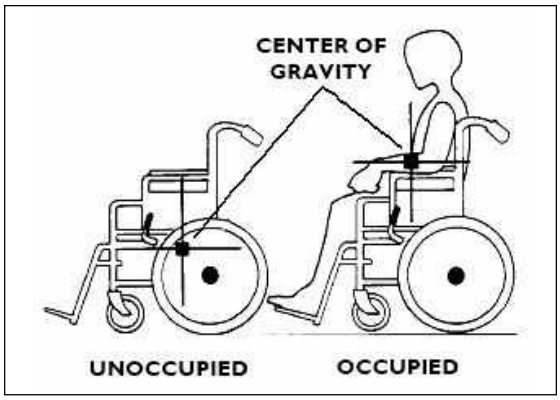

Figure 2.1

CAUTION

- **Avoid carrying heavy objects on the push handles which will shift the center of gravity reducing rearward stability.**

COPING WITH EVERYDAY OBSTACLES

Coping with the irritation of everyday obstacles can be somewhat alleviated by learning how to manage this wheelchair. Keep in mind the occupant's center of gravity to maintain stability and balance.

II. SAFETY/HANDLING OF WHEELCHAIRS (CONT'D)

A NOTE TO ATTENDANT

When assistance to the wheelchair occupant is required, remember to use good body mechanics. Keep your back straight and bend your knees whenever tilting the wheelchair or traversing curbs or other impediments.

Also, be aware of detachable or foldable parts such as arms or leg rests. These MUST NEVER be used to move the wheelchair or as lifting supports, as they may be inadvertently released, resulting in possible injury to the occupant and/or attendant(s). While learning a new assistance technique, have an experienced attendant demonstrate with guidance before attempting it alone.

⚠ WARNING

- **DO NOT attempt to lift the wheelchair by any removable (detachable/foldable) parts. Lifting by means of any removable (detachable/foldable) parts of a wheelchair may result in injury to the occupant or others, or cause damage to the wheelchair.**

REACHING, BENDING - BACKWARD

Position wheelchair as close as possible to the desired object. Position the casters so that they are extended away from the rear wheels to create the longest possible wheelbase. Reach back only as far as the occupant's arm will extend without changing his/her sitting position.

⚠ WARNING

- **DO NOT lean over the top of the back upholstery. This will change the occupant center of gravity and may cause the occupant to tip over resulting in injury.**

TIPPING

CAUTION

- **The attendant should use caution when tipping the wheelchair.**

1. When tipping the wheelchair, the attendant should hold the back of the wheelchair on a non-removable (non-detachable) part. Inform the wheelchair occupant before tipping the wheelchair and remind him/her to lean back.
2. Be sure the occupant's feet and hands are clear of all wheels and/or pinch points.
3. After mastering the techniques of tipping the wheelchair, use this method to tackle curbs, short stairs, etc.

STAIRWAYS

⚠ WARNING

If you fail to heed these warnings, a fall, tip-over, or loss of control may occur and could result in serious bodily injury to the occupant or others, damage to the chair and surrounding property.

- **Occupant should ALWAYS wear the seat/chest positioning belt. Although the SEAT POSITIONING BELT is an option on this wheelchair. The Seat Positioning Belt as an additional safeguard for the wheelchair occupant. If signs of wear appear, belt MUST be replaced IMMEDIATELY.**
- **DO NOT attempt to lift the wheelchair by any removable (detachable/foldable) parts. Lifting by means of any removable (detachable/foldable) parts of a wheelchair may result in serious injury to the occupant or others, or cause damage to the wheelchair.**
- **It is recommended the occupant should be removed from the wheelchair prior to moving up or down stairs. Extreme caution is advised when it is necessary to move an occupied wheelchair up or down the stairs. Use at least two attendants to move the wheelchair and occupant up or down stairs.**

Follow these instructions for moving the wheelchair between floors when an elevator is NOT available:

1. After the wheelchair has been tilted back to the balance point, one attendant (in the rear) backs the wheelchair up against the first step, while securely grasping a non-removable (non-detachable) part of the wheelchair for leverage.
2. The second attendant, with a firm hold on a non-detachable part of the framework, lifts the wheelchair up and over the stair and steadies the wheelchair as the first attendant places one foot on the next stair and repeat STEP 2.
3. The wheelchair should not be lowered until the last stair has been negotiated and the wheelchair has been rolled away from the stairway.

⚠ WARNING

- **ESCALATOR USAGE:**
  - **DO NOT use an escalator to move a wheelchair between floors. Serious bodily injury may occur.**

III. MAINTENANCE/INSPECTION CHECKLIST

Note: Take this wheelchair to a qualified technician every six months for a thorough inspection and servicing. Regular cleaning will reveal loose or worn parts and enhance the smooth operation of the wheelchair. To operate properly and safely, this wheelchair MUST be cared for just like any other vehicle. Routine maintenance will extend the life and efficiency of this wheelchair.

CAUTION

- **As with any vehicle, the wheels and tires should be checked periodically for cracks and wear, and should be replaced accordingly.**

FUNCTIONAL TESTS

All four wheels should make contact with the floor. With the wheelchair empty, push it forward on a smooth level surface with enough momentum to travel six feet (2 m). The wheelchair should not veer to the left or right more than six inches (15 cm). Wheels should be free running and the parking brakes adjusted to adequately secure the wheelchair. Following the fold/unfold instructions, the wheelchair should fold/unfold smoothly without undue effort. All fasteners should be secure. Fasteners on moving joints should not be over tight. Seat fabric should not be wide-stretched or sagging. Positioning accessories should be correctly adjusted and secure.

SAFETY AND INSPECTION CHECKLISTS

Initial adjustments should be made to suit the occupant's personal body structure needs and preference. Thereafter follow these maintenance procedures:

Inspect/Adjust Initially

- ❑ Ensure wheelchair rolls straight.
- ❑ Ensure hand grips are not loose.
- ❑ Ensure seat, back and/or arm upholstery have no rips.
- ❑ Ensure there is no excessive side movement or binding when rear wheels are lifted and spun.
- ❑ Ensure sealed bearings and axle nut tension are correct.
- ❑ Adjust bearing system if wheel wobbles noticeably or binds to a stop.
- ❑ Ensure wheel/fork assembly has proper tension when caster is spun. Caster should come to a gradual stop.
- ❑ Loosen/tighten caster locknut if wheel wobbles noticeably or binds to a stop.
- ❑ Ensure all caster/wheel/fork fasteners are secure.
- ❑ Ensure that casters are free of debris.
- ❑ Ensure parking brake does not interfere with tires when rolling. To set/adjust the parking brake, push down on the brake handle to locked position. Push the wheelchair with light pressure on the rear wheels. If the wheels rotate, adjust tension by turning the adjustment nut until wheels no longer rotate while locked.
- ❑ Ensure parking brake pivot points are free of wear and looseness.
- ❑ Ensure parking brake is easy to engage.
- ❑ Inspect tires for flat spots, wear and cracks.
- ❑ Check that all labels are present and legible. Replace if necessary.

III. MAINTENANCE/INSPECTION (CONT'D)

Inspect/Adjust Weekly

- ❑ Ensure wheelchair rolls straight (no excessive drag or pull to one side).
- ❑ Ensure hand grips on canes (push handles) are not loose.
- ❑ Ensure wheel/fork assembly has proper tension when caster is spun. Caster should come to a gradual stop.
- ❑ Ensure all caster/wheel/fork fasteners are secure.
- ❑ Ensure that casters are free of debris.
- ❑ Ensure all seat belt buckles click as they lock and cannot be released without pressing the release button. Replace if any belt doesn't lock properly and securely.
- ❑ Clean the surface of fabric cover with a mild detergent and water. Air dry.

Inspect/Adjust Monthly

- ❑ Ensure sealed bearings and axle nut tension are correct.
- ❑ Ensure there is no excessive side movement or binding when drive wheels are lifted and spun.
- ❑ Adjust bearing system if wheel wobbles noticeably or binds to a stop.
- ❑ Inspect tires for flat spots, wear and cracks.
- ❑ Ensure parking brake does not interfere with tires when rolling.
- ❑ Ensure parking brake pivot points are free of wear and looseness.
- ❑ Ensure parking brake is easy to engage.
- ❑ Inspect axles to ensure they are free from dirt, lint, etc.
- ❑ Inspect tilt slides and roller bearings to ensure they are free from dirt, lint, etc.
- ❑ Inspect seat positioning belt for any signs of wear. Ensure buckle latches. Verify hardware that attaches belt to frame is secure and undamaged. Replace if necessary.

Inspect/Adjust Every Three Months

- ❑ Ensure arms are secure but easy to release and adjustment levers engage properly.
- ❑ Ensure that casters are free of debris. If they develop shimmy, use a wrench to tighten the stem nut. Adjust the stem nut clockwise until the shimmy disappears.
- ❑ Ensure sealed bearings and axle nut tension are correct.
- ❑ Clean and wax all parts.
- ❑ Check that all labels are present and legible. Replace if necessary.
- ❑ Clean and lubricate the main folding frames using Teflon® based lubricant.
- ❑ Remove and wash the fabric seat and back by hand or in a washing machine using a mild detergent. Air dry. To avoid shrinkage, do not put in the dryer.
- ❑ Verify that all bolts and nuts are tightened properly.

IV. QUICK AND EASY SETUP

For advanced adjustments which are done infrequently or require the use of tools see instructions beginning on page 22.

UNPACKING THE WHEELCHAIR:

1. Save the box in case that you will need to ship the wheelchair in the future.
2. Check to see that all of the ordered parts are in the box.
3. Gather the tools needed to assemble and adjust/fit the wheelchair. See relevant adjustment sections for a list of tools needed.
4. Carefully lift the wheelchair out of the box using good body mechanics, bending at the knees.

UNFOLDING THE WHEELCHAIR:

1. If the footplates are attached, swing them in place by rotating toward the center of the wheelchair frame (Fig. 4.1).

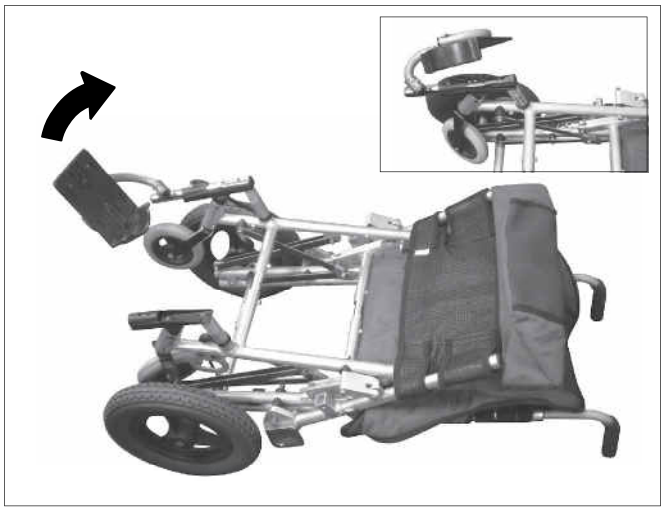

Figure 4.1

Figure 4.2

2. Stand the folded wheelchair on its rear wheels, holding onto one push handle with one hand (Fig. 4.2).
3. With your other hand, push down firmly on the seat tubes. The lock brace on each side will engage (Fig. 4.3). Check to make sure the lock braces are locked by pushing down on the brace cap, you should feel it lock over center. You should not be able to close the seat (Fig. 4.4).

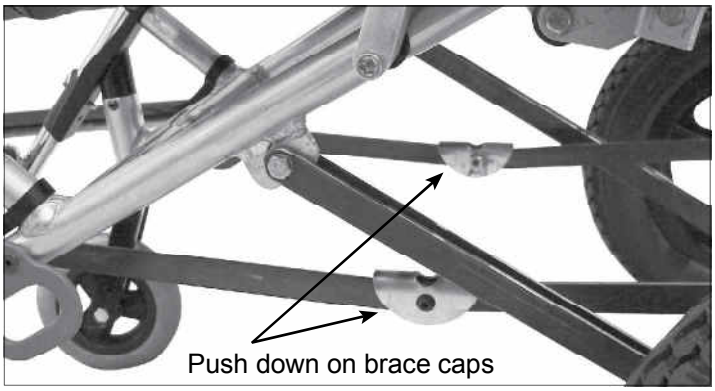

Figure 4.3

Figure 4.4

IV. QUICK AND EASY SETUP (CONT'D)

ASSEMBLING THE FOOTPLATES:

Footplates should be positioned so that the individual's feet or heels rest comfortably on the footplates. The footplates can be placed in 8 different positions without using tools.

1. Insert the footplate tube assembly into the footplate bracket, aligning the holes.
2. Insert the metal detent pin into the hole where the footplate is at the correct height (Fig. 4.5).

   If the correct height cannot be reached in this configuration, go to page 25 to see additional height adjustments available.

Figure 4.5

⚠ WARNING

- **Avoid using the footplates to support weight during entry or exit from the wheelchair.**

ENGAGING/DISENGAGING PARKING BRAKES:

When the attendant is not holding on to the wheelchair and during transfers in or out of the wheelchair, the parking brake should be engaged.

1. To engage the parking brake lift up on the handles on each side of the wheelchair (Fig. 4.6). Make sure the brake handles are pressing firmly against the tire.
2. To disengage the parking brake, first make sure you are holding on to the wheelchair firmly then press down on the handles on each side of the wheelchair (Fig. 4.7).

Figure 4.6

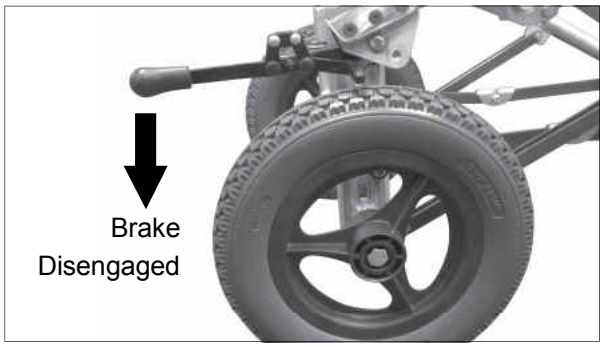

Figure 4.7

FOLDING THE WHEELCHAIR:

1. Lean the wheelchair back on the rear wheels.
2. Swing away the footplates by lifting them up and turning them (Fig. 4.8A) toward the sides of the wheelchair frame (Fig. 4.8B).
3. With your hand, push up on the lock braces on both sides of the wheelchair to release, being careful not to pinch fingers in the mechanism (Fig. 4.9).

Figure 4.8A Figure 4.8B

Figure 4.9

4. With one hand, hold onto the push handle on one side. While still holding onto the push handle, pull up on the seat rail of the same side of the wheelchair (Fig. 4.10).
5. Then carefully set the folded wheelchair down on the floor.
6. Rotate the front casters toward the wheels to get them out of the way of the folding (Fig. 4.11).

Figure 4.10

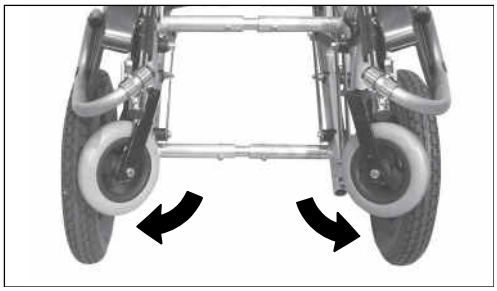

Figure 4.11

7. Press down firmly on the front cross tube to fold the frame tightly (Fig. 4.12).
8. Rotate the front casters back toward the center (Fig. 4.13).

Figure 4.12

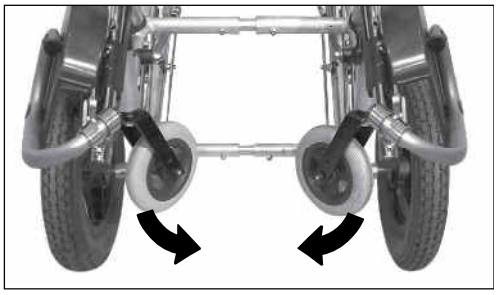

Figure 4.13

SEAT BACK HEIGHT:

Proper seat back height varies according to the client's seated height and postural support needs. See Fig. 4.14. If additional seat back height is required, a headrest extension is available (see **Headrest Extension**).

If the wheelchair is a transit model and used during transportation, it is recommended that the seat back (including a headrest extension if needed) should be at least above the top of the individual's ears to improve head support in the event of a crash or sudden stop which results in rearward head excursion.

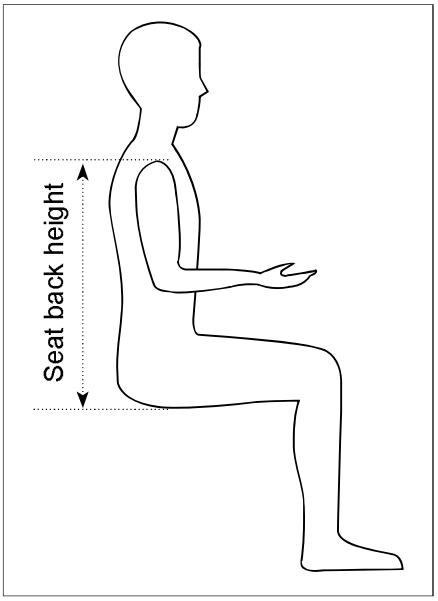

Figure 4.14

IV. QUICK AND EASY SETUP (CONT'D)

SEAT BACK/HEADREST EXTENSION:

If additional seat back height is required, a headrest extension may be added.

To attach the headrest extension, insert the two headrest extension tubes into the two headrest extension receivers and slide down until the holes line up then tighten the bolts.

ADJUSTABLE PADDED HEADWINGS:

Optional Adjustable Padded Headwings provide soft foam support for midline positioning.

1. The Padded Headwings can be attached at various heights by wrapping the Velcro straps around the frame and attaching at the back of the wheelchair (Fig. 4.15).
2. Secure by threading the laces through the grommet holes at the desired height in the back of the seat fabric or headrest extension.

Figure 4.15

TWO-POINT POSITIONING/SAFETY BELT:

To ensure safety and comfort, a pelvic positioning/safety belt should be used at all times the wheelchair is occupied. Columbia Medical offers a two point pelvic positioning belt as an option.

Pelvic belts should fit snugly, but be comfortable for the user. To ensure safety, the pelvic belt should be worn low on the hips, over the individual's bony structure rather than the soft abdomen area (Fig. 4.17).

Figure 4.16

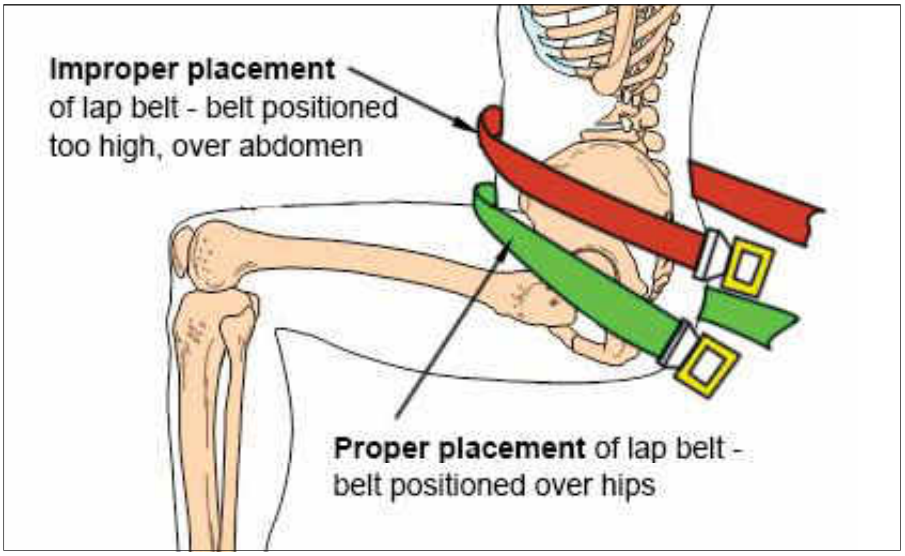

Figure 4.17

1. To buckle the two point belt, slip the metal clasp on the belt strap into the buckle.
2. Press the red button on the buckle to release and pull out the clasp.

⚠ WARNING

- **This positioning belt is not intended as a restraint in a vehicle.**

REMOVING/REPLACING THE SEAT AND BACK FABRIC:

Columbia Medical's folding wheelchair has a two piece fabric seat and back.

To remove both the seat and back fabric:

1. Starting at the top of the fabric back, loosen the Velcro strap and unthread through the center strap guide (Fig. 4.18)
2. Repeat on the other side and at each strap level.
3. Remove the Velcro attachment of the lower wrap-around panels on each side (Fig. 4.19).
4. Fold the seat back fabric down (Fig. 4.20).
5. From the front of the wheelchair, lift up firmly on the seat fabric to disconnect the Velcro (Fig. 4.21).
6. Slide the seat fabric off of the seat rails in the front.
7. The reinforced fabric underneath the place will stay in place unless the seat width needs to be changed.

Figure 4.18

Figure 4.19

Figure 4.20

Figure 4.21

To replace both the seat and back fabric:

1. Reverse the above process, adjusting and attaching the Velcro straps at each level.
2. Make sure to slip the front of the seat rail into the pocket under the seat and slide back all the way.
3. Press firmly on the seat fabric to secure Velcro attachment (Fig. 4.22).

Figure 4.22

To remove/replace only the seat or back fabric:

1. Disconnect the Velcro on the seat fabric from the back fabric at the back of the wheelchair where the seat and back meet (Fig. 4.23).
2. Remove either the seat or back fabric according to the above instructions.
3. Re-attach the seat to the back fabric by pressing firmly on the fabric to make a strong Velcro connection.
4. Make sure the Velcro is adjusted in the proper position to support good posture. Excessive Velcro overlap lifts seat fabric and pushes hips forward, creating poor posture and reducing effective seat depth. Not enough overlap on the Velcro can allow improper positioning in the seat. See Fig. 4.24 below.

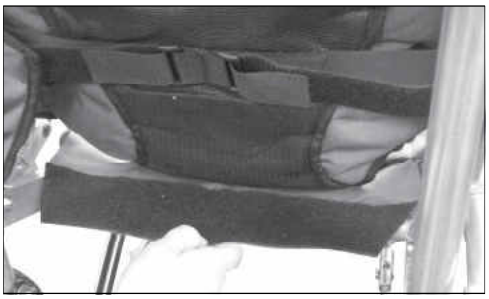

Figure 4.23

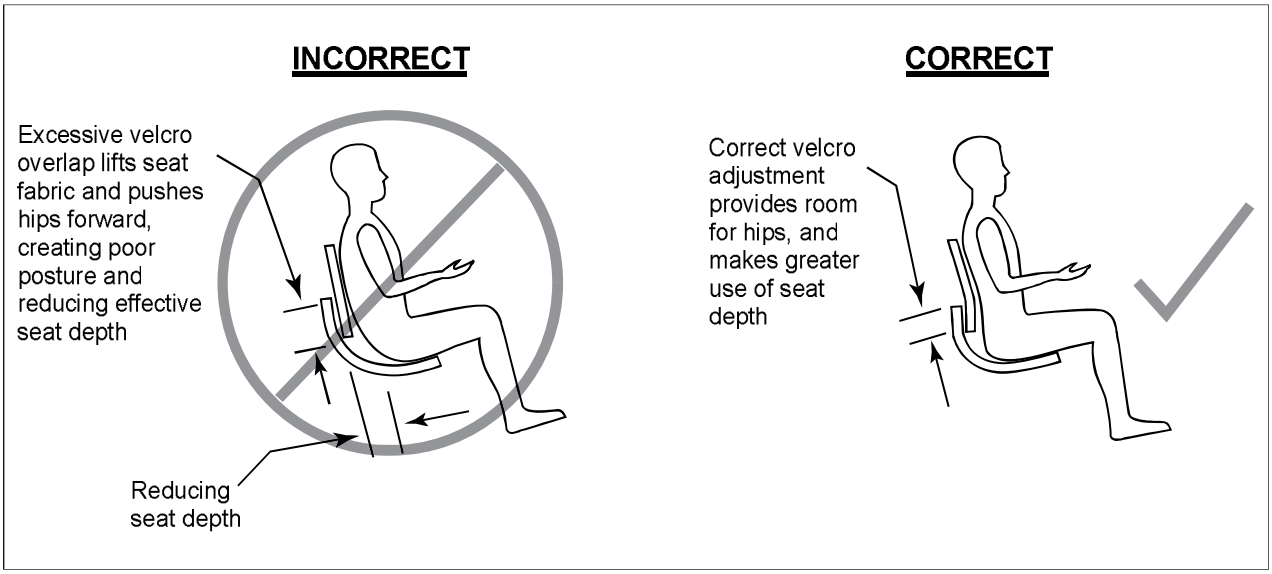

Figure 4.24

V. ADVANCED ADJUSTMENTS AND SETTINGS

SEAT DEPTH ADJUSTMENT:

Tools needed: 5/32” Allen wrench

Proper seat depth promotes proper sitting posture in the wheelchair. The Pediatric Folding Wheelchair can be adjusted in seat depth from 12” to 16” in one inch increments using tools.

If the wheelchair is not set at the desired seat depth it can be adjusted by changing the position of the seat back with the use of a Allen wrench.

1. Remove the seat fabric. See **Removing/Replacing the Seat and Back Fabric**.
2. Unbuckle any belts or straps.
3. There are 5 hole positions on the seat rails where the seat back tubes can be attached to the seat rails to set seat depth (Fig. 5.1).
4. To shorten/lengthen seat depth, remove the 2 bolts that attach the seat back tubes to the seat rails using the Allen wrench. Repeat on the other side of the wheelchair (Fig. 5.2).
5. Slide the seat back tubes to the desired position, aligning holes. Secure the seat back tubes to the seat rails with the bolts and blue Locktite tighten using the Allen wrench.
6. Replace the seat fabric and re-attach the seat fabric Velcro to the back fabric Velcro.

   Make sure the Velcro is adjusted in the proper position to support good posture. Excessive Velcro overlap lifts the seat fabric and pushes hips forward, creating poor posture and reducing effective seat depth. Not enough overlap on the Velcro can allow improper positioning in the seat. See Fig. 4.24.

   If the seat depth length is increased or decreased more than one inch, new seat fabric will be required.

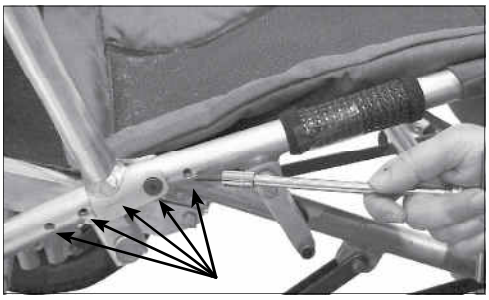

Figure 5.1

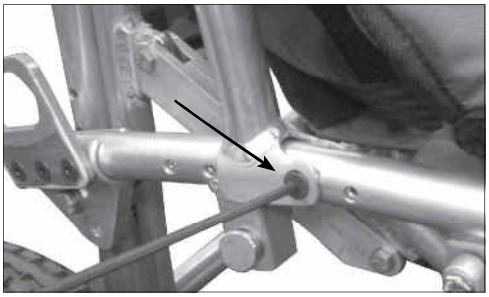

Figure 5.2

SEAT AND BACK WIDTH ADJUSTMENT:

Tools needed- 3/8” wrench and Phillips screwdriver

Proper seat width enables the user to sit comfortably. The seat width is measured between the outsides of the seat tubes (Fig. 5.3).

The Pediatric Folding Wheelchair allows growth of seat width by widening the frame. It can be set to three different seat widths, 12 inches, 14 inches, 16 inches.

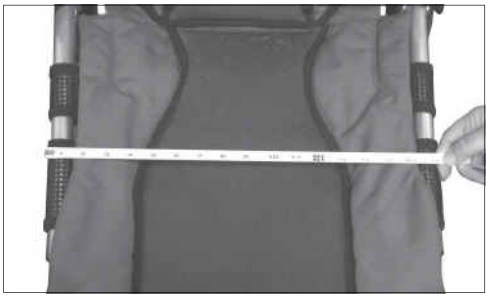

Figure 5.3

If the wheelchair is not set at the desired width or if the individual grows or changes the wheelchair frame must be widened or narrowed with the use of the Phillips screwdriver and wrench.

1. Remove the seat fabric. See **Removing/Replacing the Seat and Back Fabric**.
2. Unbuckle any belts or straps.

SEAT AND BACK WIDTH ADJUSTMENT (CONT'D):

3. The wheelchair has four cross tubes that telescope on internal tubes.
   - A cross tube near the front casters (Fig. 5.4)

Figure 5.4

   - A cross tube near the rear wheels (Fig. 5.5)

Figure 5.5

   - A cross tube at the seat level (Fig. 5.6)

Figure 5.6

   - A cross tube near the top of the wheelchair back, between the push handles (Fig. 5.7)

Figure 5.7

You will work on one side of the tubes at a time. Each side of the tube has 4 positions to accommodate seat width of 12", 14", 16" and 18" (Fig. 5.8). You will push the side frame along cross tubes toward the center and align the holes to narrow the frame and pull away from the center and align the holes to widen the frame.

Remove and adjust one side of the frame at a time to maintain alignment of the internal tubes.

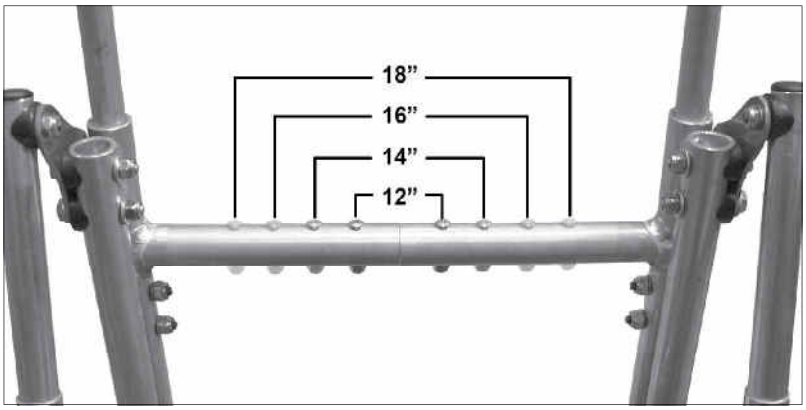

Figure 5.8

SEAT AND BACK WIDTH ADJUSTMENT (CONT'D):

Determine the desired cross tube settings for narrowing or widening the frame.

4. Remove the screws, holding the nuts on the end of the screws with the wrench while turning the screws with the Phillips screwdriver (Fig. 5.9). After the nut has been removed, continue to turn the screws to remove them from the hole completely. Repeat until all four cross tubes are free to move on one side.
5. Push the frame sides together firmly or pull the wheelchair frame apart to slide the tubes to the desired position, aligning the holes.
6. Replace the screws and nuts and tighten securely.
7. Repeat on the other side of the frame, removing the screws, moving the tubes into the desired position, then replace the screws.
8. A different sized seat and back fabric will be required if the seat width is widened or narrowed.

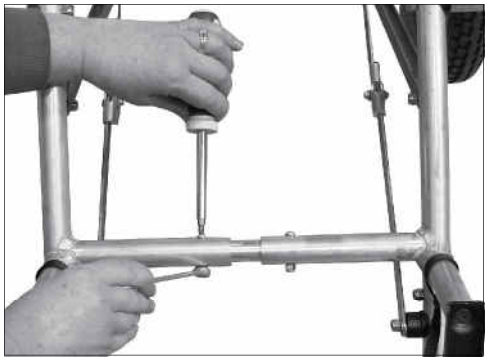

Figure 5.9

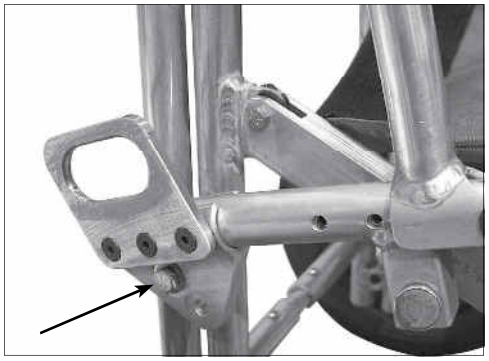

Figure 5.10

SEAT ANGLE ADJUSTMENT:

Tools needed: 5/32" Allen wrench, 7/16" end wrench, 1/2" hex wrench

The seat angle on the wheelchair is set at 30° from horizontal as standard. There are 7 seat angle settings: 10°, 12°, 15°, 17°, 27°, 30°, 32°, that can be positioned according to the user's need. See different settings in Fig 5.12 thru 5.14.

The triangular seat bracket can be pivoted down (Fig. 5.12), flipped up (Fig. 5.13), or flipped backward (Fig. 5.14) to achieve different angles.

9. To pivot the bracket (Fig. 5.12): use a 1/2" wrench to loosen the bolt in Fig. 5.10, holding the nut at the end of the bolt in Fig. 35 with a 1/2" wrench. After the nut is removed, continue to pull the bolt out of the holes in the back frame and the triangular seat rail bracket, taking notice of the placement of all washers.
10. Replace the bolt and washers, replace the nut on the end of the bolt.
11. Tighten the bolt with the 1/2" wrench, holding the nut with the 1/2" wrench.

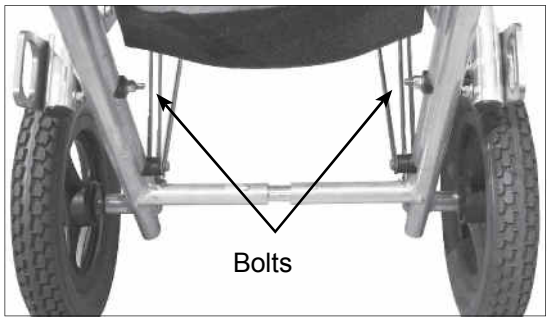

Figure 5.11

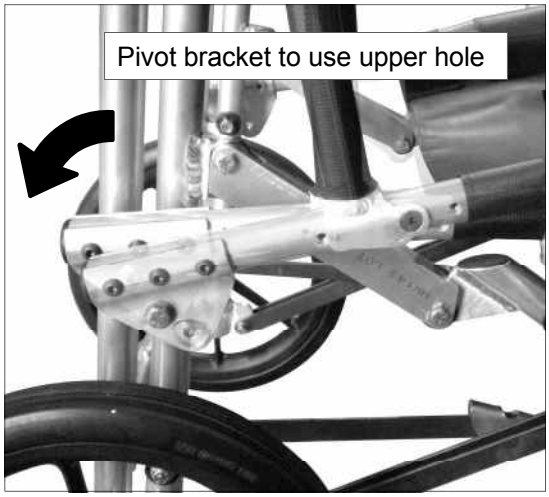

Figure 5.12

SEAT AND BACK WIDTH ADJUSTMENT (CONT'D):

12. To flip the bracket up (Fig. 5.13) or backward (Fig. 5.14), unscrew the bolts in with 5/32" Allen wrench and 7/16" end wrench.
13. Flip up or reverse the bracket according to desired angle setting, then mount the bolts back.

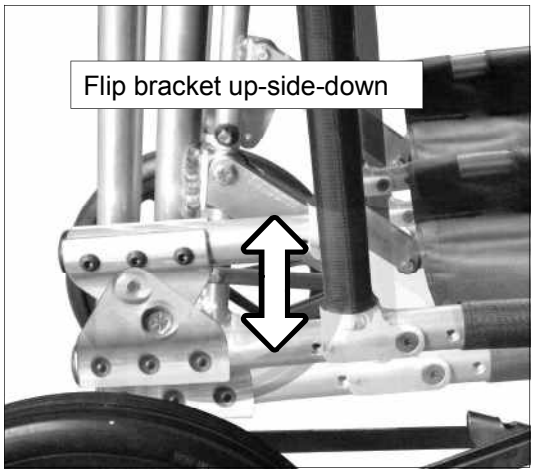

Figure 5.13

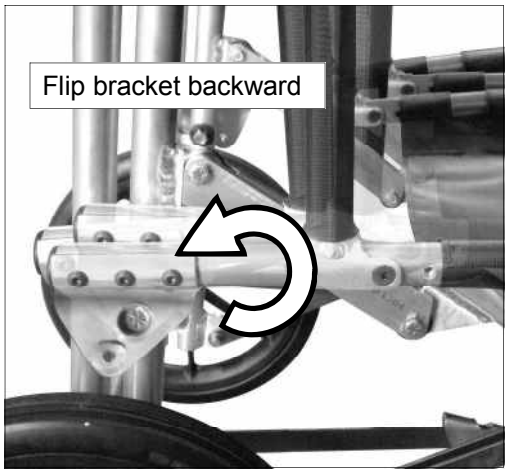

Figure 5.14

FOOTPLATE HEIGHT:

ALTERNATIVE ADJUSTMENT (6" - 12"):

Tools needed: 5/32" Allen wrench

If the correct footplate height cannot be achieved following the instructions in the Quick Start section:

1. Remove the metal pin that secures the footplate tube to the footplate bracket. Take the footplate tube out of the footplate bracket and set aside (Fig. 5.15).
2. Reverse the footplate bracket. Use an Allen wrench to remove the two bolts and reverse the bracket from top to bottom. Re-attach the footplate bracket by replacing the bolts and tightening with an Allen wrench (Fig. 5.16 & Fig. 5.17).
3. Replace the footplate tube and adjust the footplate to the correct height.

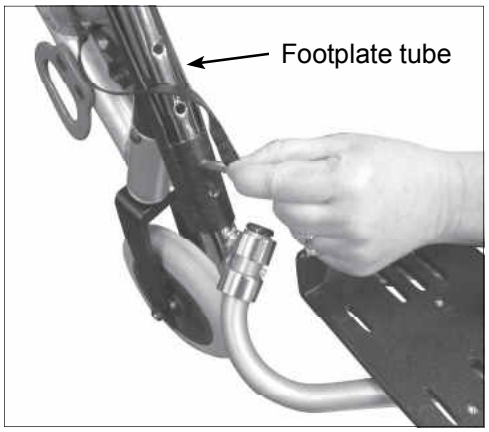

Figure 5.15

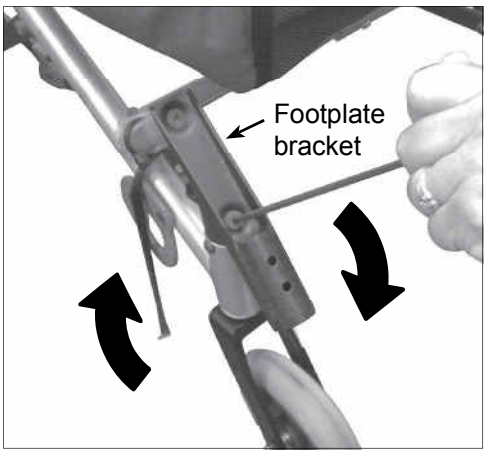

Figure 5.16

Figure 5.17

VI. CLEANING AND STORAGE

To prevent the spread of germs, clean all areas of the wheelchair that come in contact with user or caregiver with disinfectant wipes on a regular basis.

CLEANING OF FRAME:

- The frame should be kept dry and free of debris and dirt.
- Clean the frame with a moist cloth.
- To maintain easy folding and adjustment, wipe the frame with a non-toxic, hypo allergenic and biodegradable lubricant to moving parts as needed.
- Avoid using the wheelchair in salt-water environments that may cause corrosion on the frame. If the wheelchair is exposed to the saltwater, it should be washed clean with water and wiped dry with a towel immediately. Apply lubricant to all moving parts after the frame is dry.

CLEANING OF WHEELS AND BRAKES:

- Wipe off dirt or mud from the wheels and brakes with a moist cloth as needed. The wheels and brakes should be clean at all time as to not interfere with pushing and locking of the wheelchair.
- Readjust the brakes if necessary.

CLEANING OF FABRIC:

- Remove the fabric by following the instructions on **Removing the Seat and Back Fabric** section.
- Wash the fabric with mild detergent.
- Air dry.

STORAGE:

- To prevent rust or corrode, the wheelchair should be stored in a clean and dry area.
- Before extended storage periods, and before reuse, inspect the entire wheelchair according to the **Maintenance/Inspection Checklist**.
- Apply lubricant to all moving parts.
- Before use, disinfect the entire wheelchair, especially the areas that come in contact with the user or caregiver, with disinfectant wipes.

VII. TRANSIT USE

⚠ WARNING

- **If your wheelchair is not a transit model, it must not be used as a seat in a motor vehicle.**

- This wheelchair has a transit model available which has been crash tested according to the RESNA WC-4:2012 Section 19 - Wheelchairs used as seats in motor vehicles (WC19).
- Whenever feasible, the individual should transfer out of the wheelchair to a vehicle seat and use a vehicle occupant restraint or should use a child safety restraint system. The wheelchair should be safely stowed and secured so as not to become a projectile in a crash or sudden driving maneuver.
- If your wheelchair is a WC19 compliant transit model, refer to the Transit Guide for instructions for its use as a seat in a motor vehicle.

VIII. LIMITED WARRANTY

Columbia Medical warrants the frame and cross brace of this wheelchair against defects in material and workmanship for five years to the original purchaser. Columbia Medical warrants all other original manufactured parts and components of this wheelchair against defects in materials and workmanship for one year from the date of purchase. We will repair and replace any part or entire product at our discretion for a period of up to one year from the date of deliver to the original purchaser. This warranty does not include cost of inconvenience, shipping, and property damages.

LIMITATIONS

- Columbia Medical does not warrant:
  - A. If the product has been tampered with or repaired by unauthorized individuals.
  - B. Damage from neglect, accident, misuse, or from improper installation or repair.
  - C. Damage from exceeding the weight limit.
  - D. Modification without Columbia Medical written consent.
- This warranty is VOID if the original serial number label is removed or altered.
- This warranty is NOT transferable and only applies to the first consumer purchase of this wheelchair through an authorized Columbia Medical dealer.