

## Introducing Belt Cane

Some children born blind or mobility visually impaired have developed a resistance to trying new things. When this is the case, we can expect that the child will resist wearing a belt cane, too.

In order for the child to succeed in adopting the safety of the wearable cane the adults will need to lead the way. There are numerous examples of adults leading the way to helping children be safer. Some are passive like putting drawer locks on the cleaning supply cabinet or erecting baby gates in front of the stairs. Others are active such as requiring children to brush their teeth daily or to always ride in car seats. Adults lead the way in these learned rules of behavior and toddlers rely upon adults to keep them safe and healthy.

In order to confidently lead the child to adopting the belt cane in his/her daily routine, the adult needs to realize how essential the pediatric belt cane is for balance and safety when toddlers who are blind or mobility visually impaired begin to develop independent walking skills. The protective frame provides essential feedback for balance and allows toddlers and preschool learners who are blind or mobility visually impaired to move about their environment with improved balance and independent warning about obstacles in the path.

**Desired Behavior:** Child who is blind or mobility visually impaired wears the belt cane most of the day, every day.

### **Belt Cane User introductory goals**

When wearing the belt cane, the child will demonstrate an ability to

- Stand quietly in the middle of the room
  - Move the belt cane frame side to side using just the hips
  - Lift and lower the cane frame
- Sit down wearing the belt cane
  - On a chair
  - On the floor
- Walk holding an adult's hand
- Walk independently

**Alilah's video** - Alilah was a one-year-old girl with optic nerve hypoplasia. She did not reject wearing her belt cane. The purpose for watching her video is to demonstrate the principle of allowing the toddler to wear the belt cane without requiring her to hold the cane frame.

*Toddlers who are first wearing the belt cane do not have to hold the cane handles.*



## **Strategies**

1. First time introduce the belt cane and its parts to the child.

- Allow the child to touch the frame, the handles, push the magnets and roll the ball bearings

*After introducing the belt cane, the day can simply begin with putting the belt cane on after getting dressed and before starting the day.*

2. Communicate the travel plan to the child. A travel plan has a **destination** and an **activity**.

### Example travel plans:

- Tom, we're going to go to the **living room** and **play with the toy piano**.
- Sharon, let's go to the **kitchen** and **give the dog some kibble**.
- Javier, please take me to the **playroom** so we can **bang on the drum set together**.

3. Encourage the child to participate in completing the travel plan.

- If you would typically hold the child's hand to walk around the home, then continue to hold the child's hand with the belt cane.
- If the child typically walks when holding on to furniture or the wall, offer to hold the child's hand instead and walk in the middle of the hall with the child.
- If the child has been walking independently, and the child is standing and not walking - it may mean that the child just needs some time to get used to wearing the belt cane. Allow the child to stand still.
  - Once the child seems to be getting bored with standing, repeat the travel plan and offer the child a hand to begin walking to the destination.
- If the child begins to resist the travel plan, consider changing the motivator.
  - Avoid making "taking off the belt cane" a motivator. The goal is to wear the belt cane - so-making the end of the journey about getting a fun activity - not - if you get there I will take off your belt cane. That is working against the goal of wearing the belt cane most of the day.
  - Try to work through the newness of the sensation of wearing the belt cane by providing lots of fun and engaging child favorite items and activities - put on music, talk in a happy way about the fun at the destination, praise the child, offer another favorite activity.

Make the reward getting to the destination and doing the activity.

Reward for keeping the belt cane on.

Reward for learning/demonstrating new skills using the belt cane.



Lesson Name: Introducing PBC to two-year-old

Begin: **Expect a reaction, Plan for success, remember they've never had independent warning**

Charna's mom hits the reset and demonstrates how adult patience and favorite rewards achieved the desired results.

Charna's family stuck with the pediatric belt cane because prior to obtaining her belt cane Charna was kept out of the playroom for her own safety, had never walked independently outside, was increasingly tactile defensive and exhibiting developmental delays. All clear indicators of need to wear her protective frame



### Lesson tips

- Introducing the pediatric belt cane is about finding the balance between talking about the new device and talking about the destination and rewarding activities planned.
- Provide the child with an introduction to the pediatric belt cane prior to putting it on them, this includes having them contact the belt and the frame. A child who is resistant to touching new things will be resistant to touching the pediatric belt cane, too.
- Tactile defensiveness is a byproduct of having no independent warning before obstacles, things in the world, touch them. They don't want to be touched or touch objects without warning. The pediatric belt cane is



about to change that, but initially it is just another “thing” touching without warning.

- The only strategy is to put the belt and frame on the child and allow the child to experience the frame contacting objects. Most children find the feedback from frame contact highly comforting.

### **Three videos to watch about getting through the tough reaction to new belt cane sensations.**

Title: Resistance 1-year-old

Summary:

Matias’ parents kept taking the belt cane off each time he cried. This video shows how they worked through the crying. It shows the actual time it took - less than 5 minutes of crying - when he began to understand the benefit of the belt cane frame. This breakthrough was only the beginning of the work to encourage him to wear it most of the day. However, his mom has found that the choice to use the belt cane enabled him to be more confident on the playground and he transitioned to using the long cane at age 4.

Title: Resistance 2-year-old

Summary:

Charna - sticking with it - getting her used to the idea and then keep returning to putting it on until she understood that wearing the belt cane could be counted upon - that her parents were serious and certain that this new thing was permanent and good for her.

Title: Don’t Give Up

Summary

Phoenix cried when she was asked to walk before getting the belt cane, she didn’t walk independently at age 19 months (4 month delay). They slowly introduced wearing the belt cane and by 21 months she was walking well.

## **Immediate “No” and crying responses: Explaining the rejection reaction common among two-year-old learners**

**Tough Twos** – Age two years is understood to be an age when children learn they are separate people, and they can say “no”. Saying “no” is a powerful word that enables them some control. **Saying “no” does not indicate an informed choice.**

**A two-year-old child’s “no” is about control and testing limits. In instances of children who are blind and mobility visually impaired introducing a new activity or device, “no” is not an informed choice.**

Two-year-old children cannot immediately understand the benefit of wearing the pediatric belt cane - safe independence. A parent understands how to introduce new things, that it will take time.

A child needs to experience the value of the new thing in order to accept it. When children are given time to experience the belt/frame combination, they stop resisting and begin to incorporate the information from the frame into their travel and learning.

**At first the pediatric belt cane is yet another foreign object touching them without warning.** If your two-year-old child who is blind or mobility visually impaired has become increasingly resistant to new things, this is a worrisome outcome. Children learn by exploring new things; most things are new to two-year-old children. When two-year-old children reject new things, they are reducing their learning opportunities needed to increase concept, language, and social skills.

**Tactile Defensiveness** A child who is blind or mobility visually impaired may be developing resistance to touching new things because of the combined negative impact of their disability including:

- 1) Unintended and unwanted contacts occur without any independent warning.

- Their blindness or mobility visual impairment means they lack all control over what, when and how anything touches them.
- Walking, moving their hands around, kicking their feet can all result in unintended object contacts.

*Belt Canes Provide Two-Steps of Warning and an Independent Safety Barrier*



2) Hearing someone say “watch out” is not independent warning and is not reliable, because:

- It is not an independent means of learning about the obstacle before contact,
  - People do not say “watch out” before **every** obstacle contact,
  - People say “watch out” and nothing happens,
  - The time between when someone provides a verbal warning and physically being touched by an object is inconsistent and unreliable, and
  - People may be

directing the verbal warning “watch out” to someone else.

A major benefit of wearing the **protective frame** is that it is an **independent means of detecting objects before the wearer touches them**. The child can feel there is something touching the frame of the cane, which is a more preferred sensation than the object suddenly touching them.



The first introduction to a pediatric belt cane is just another foreign object touching them without warning. Therefore, it is natural for the two-year-old to reject the pediatric belt cane just like they reject anything new.

## Guideline

### The Belt Provides the Child No Benefit on its Own

**Introduce the belt and the cane frame as a unit.** It is important to set the goal of the child wearing both the belt and the cane frame always together. If it means less time in the beginning - overtime this strategy will be the most effective.

- There are two parts, but the most important part is the cane frame. The *protective frame provides all the benefits to the wearer.*
- *It is very tempting to want to “get the child used to wearing the belt first” before attaching the frame,* but the child will not experience positive outcomes wearing the belt without its frame.
- If willing, the child can be allowed to hold and push the frame while wearing the belt and then have it click into place.
- The child needs to wear the frame to experience reliable safe mobility.

### Strategy checklist

- Aim for a shorter time wearing the belt/frame combination over “accepting the belt first”.
- The key to success of blind toddlers wearing their pediatric belt canes most of the day is the adult’s absolute belief in the necessity of the protective frame.
- Success is achieved when the child wears the belt cane most of the day, every day.

## Distraction and rewards

**Goal:** Keep attention on the motivating place and activity that will happen once the pediatric belt cane has been attached.

When the child's focus is less about the "new" cane and more on the fun-wearing the pediatric belt cane becomes less of an antagonizing feature of the interaction.

**Goal:** Normalize wearing the pediatric belt cane— it should be routine equipment that is worn during all alert times of the day to encourage independent self-confident exploration. A child who is blind or mobility visually impaired needs to know that he/she can rely on this device all the time.

There is no benefit to bodily collisions – there is only a benefit to moving about with independent warning of obstacles and learning to interact with the world through the pediatric belt cane frame.

### Schedule

- Wake up, get dressed including putting on the pediatric belt cane
- Wear the PBC into the bathroom and find ways to enable the child to participate in bathroom activities (not shower/bath) without removing the pediatric belt cane.
- Wear the PBC to the breakfast table, if the child is still seated in a high chair, remove the frame, if the child is seated in a regular dining chair, allow the child to continue to wear the PBC at the table.
- Wear during inside play activities.
- Consider rearranging the furniture to provide additional space, as needed (see chapter xx).
- Take off for nap-time and bed-time.

***When the lights are on, the pediatric belt cane is on.***

## PBC First-time Outcome Checklist

Usage goal (see Usage Guidelines by age) \_\_\_\_\_

Did you:

-introduce the pediatric belt cane prior to wearing? **Yes No**

-provide a destination and motivating goal? **Yes No**

### Measure and monitor the outcome:

-Child resisted PBC being attached? **Yes No**

-Type of Resistance

**Minimal**

**Crying**

**Physical**

**Other:**

-Did child stop crying while wearing belt and frame? **Yes No**



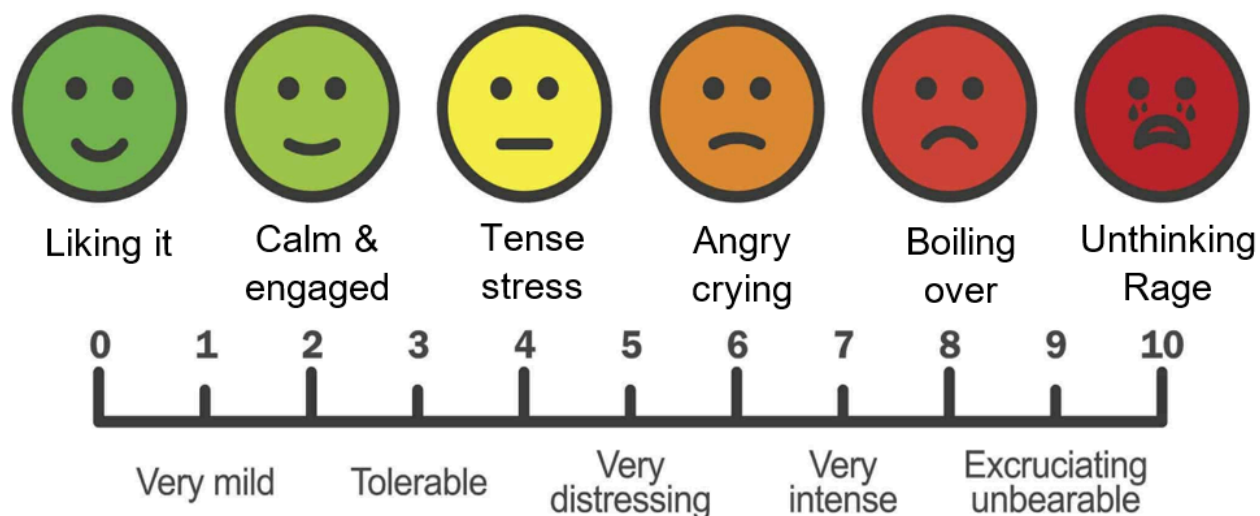
If yes, duration of tears in minutes \_\_\_\_\_

Length of time child wore PBC on the first day? \_\_\_\_\_

If no, total duration of tears prior to removal? \_\_\_\_\_

Recommendations:

1. Do not remove the belt cane because of the tears and refusal. Instead strike a deal, I will take it off after you wear it for five minutes.
2. Engage the child in a motivating activity
3. You are winning by keeping the belt cane on, allow the child to win by sitting down, standing still, banging the frame.
4. Gage the child's actual level of distress using the scale below. Remove if you believe the child is at a 7 or above.



Circle level of emotional distress that prompted removal of the pediatric belt cane prior to ending the tearful phase.

### Was the child rewarded for taking the pediatric belt cane off?

Did the child get a hug and a treat, did crying tears work?    **Yes**                      **No**

**YES** - Expect that crying during the next attempt might last longer and be an even stronger reaction.

Toddler negative reaction is not about a clear, informed choice. This is a toddler mindlessly exerting control over being asked to do something new. The pediatric belt cane is not hurting the child, it will help, if we find a way to keep it on the child.



## **We do NOT recommend a belt only strategy**

1. There is no benefit to wearing the belt without the frame.
2. The belt is a sensory irritant and provides no noticeable benefit when worn by the student.
3. The belt alone is not a safety device.

Use a stopwatch to time any rejection behavior to identify the length of rejection – if it does not stop after two to three minutes.



## Plan B

Include the pediatric belt cane into daily routines

1. When most alert and the activity is walking
2. In the morning – wake up, put on the pediatric belt cane – go.
3. Increase the amount of time wearing to correspond with recommended usage guides
4. Ensure the child knows they will have protection everyday all day- they will not have to go without safety – they will wear the belt and the frame each day.

**New information, new reactions, new, new, and new** All the information coming from the belt cane frame to the user is new and may elicit a response. This does not mean that they want the information to stop, it means they need time to learn what the frame is telling them and how to respond to this information.

Look for alternative reasons for crying behavior:

- Is the frame stuck?
- Did the frame indicate a drop off?
- Are they being asked to walk independently when they've been using a more assistive method without the pediatric belt cane?
- Did the adult pick the child up quickly and put back on feet after falling – sudden changes in body position can also cause a reaction in toddlers.
- Is something touching the frame?

It may seem that a child seems happier without the belt cane, but this can also be true of the car seat. A child might seem happier sitting in a car without a seatbelt, but that is an “unsafe happiness”.

A telltale sign of a child who is blind or mobility visually impaired is that the child is not able to let go of his mom and walk away and if they do, they are



unable to visually avoid collisions. After the age of 15-months, the inability to walk across open space is atypical of a child who has the motor ability to bear weight and walk.

Collisions hurt and need to be prevented to increase self-confident independence.

### Pediatric belt cane usage guidelines

Age	Daily PBC Usage Goal
12	3 to 5 hours
15	4 to 6 hours
18	5 to 7 hours
24	6 to 8 hours
36	9 to 12 hours

## CONSIDER

Parents who choose to take off the child's pediatric belt cane after experiencing a few successful minutes and feel that it is important to have the child "rest" from the new information but consider the opposite may also be true.

How do you feel moving through space with the lights off? Do you feel more relaxed with the lights on? Safer?

Wearing the belt cane is a rest from the stress associated with not having essential information about one's next step, like walking in the dark and turning on the lights..

Matias' adoption of the pediatric belt cane remained a stressor for the family, although overtime the amount he wore his pediatric belt increased. The lack of

consistency of wearing his pediatric belt cane continued to make the transitions hard.

Matias was a child who had shown a preference for wearing it, and who demonstrated fear of moving about independently when not wearing it. However, antiquated ideas about children who are blind not needing safe mobility- continued to make adults question whether or not he needed to wear his pediatric belt cane in different environments.

## **Activities**

- Submit the completed PBC First-time Outcome Checklist
- Take video of the each-time providing the pediatric belt cane to the child. Does the child's posture, gait and pace improve overtime?
- Watch the clock - each time the child wears the belt cane - does the length of the negative behavior lessen overtime.