



# Introduction To First Time Toilet Training For Individuals With Down Syndrome

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# Acknowledgement

*The Down Syndrome Resource Foundation is located on the shared unceded territory of the Coast Salish Peoples, specifically the **Kwikwetlem** (Coquitlam), **salilwatəł tamaxw** (Tseil-Waututh), **Skwxwú7mesh-ulh Temíxw** (Squamish), and **xw məθkʷayəm** (Musqueam). Without their long history of stewardship and care of this land we could not provide a safe space for families and individuals with Down syndrome to learn and develop new skills.*



# Occupational Therapy

## Occupational Therapist's Goals

- Enable individuals to engage in & perform the *occupations* that are important & meaningful to them
  - *Occupations*: activities that a child wants to do & needs to do within their day
- Develop a child's independence in the areas of:
  - *Self-care* - dressing, eating, hygiene, toileting
  - *Productivity* - printing, drawing, cutting, academics
  - *Leisure* - hobbies, sports
- Adapt the task & the environment to facilitate success
- Recognize a child's strengths & interests



## Presentation Overview

- Typical bladder development
- Bladder development & Down syndrome (DS)
- What the evidence says
- Toilet training readiness skills
- Toilet training steps
- Strategies for success



## Why Is It Important?

- Contributes to independence
- Develops self-esteem, confidence & control
- Often a requirement for school & community programs
- Financially (diapers)



Babies need around  
**6,000 diapers**  
changed in the first 2 years.

At an average of \$0.25 per diaper,  
disposables cost about \$1,600  
by the time a baby is potty trained.

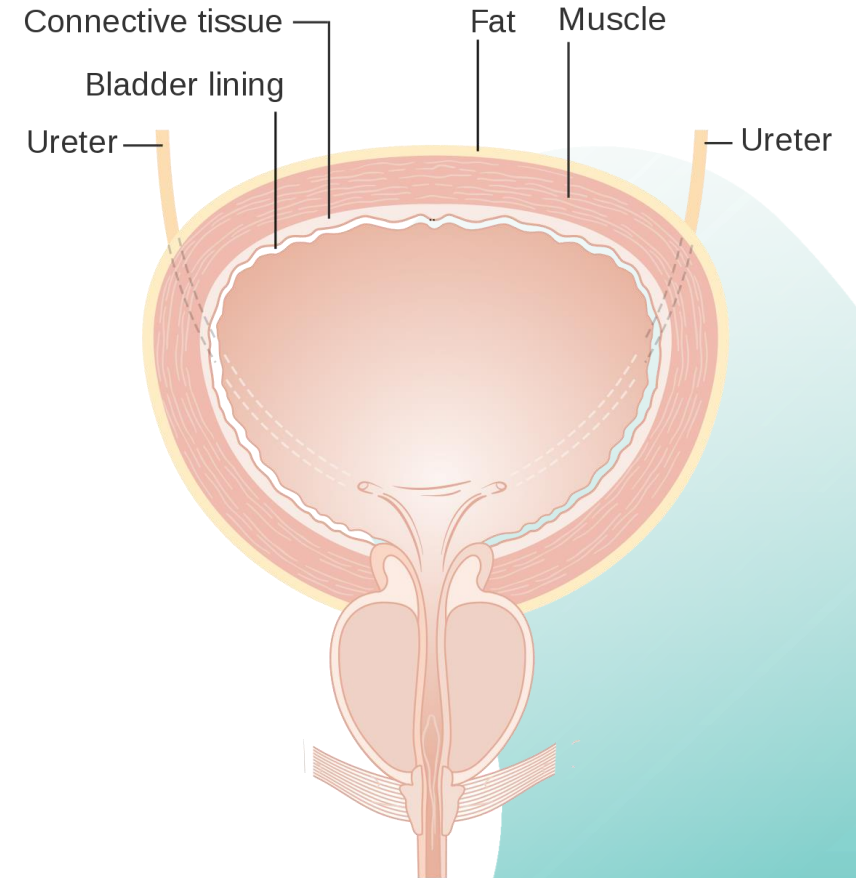
\$1,600





## Typical Development of Bladder Function

- Initially infants void small amounts (once per hour)
- Voiding is 'incomplete' due to lack of coordination between the bladder & external sphincter (1 ½ years)
  - Bowel & bladder capacity is small





## Typical Development of Bladder Function

- Most typically developing children begin to perceive stimulation (feeling the need to pee) from bladder tension between 1-2 years
- Perceived stimulation is important as this allows us to 'hold' urine for a short period of time





## Typical Development of Bladder Function

- Typically, by age 3, children can 'hold' a full bladder for a longer length of time
- This increases bladder capacity & decreases frequency of voiding
- The child may be able to 'hold' urine but cannot always start the flow when on the toilet
- By 3-4 years children can start urine flow from a full & 'held' bladder







## Typical Development of Bladder Function

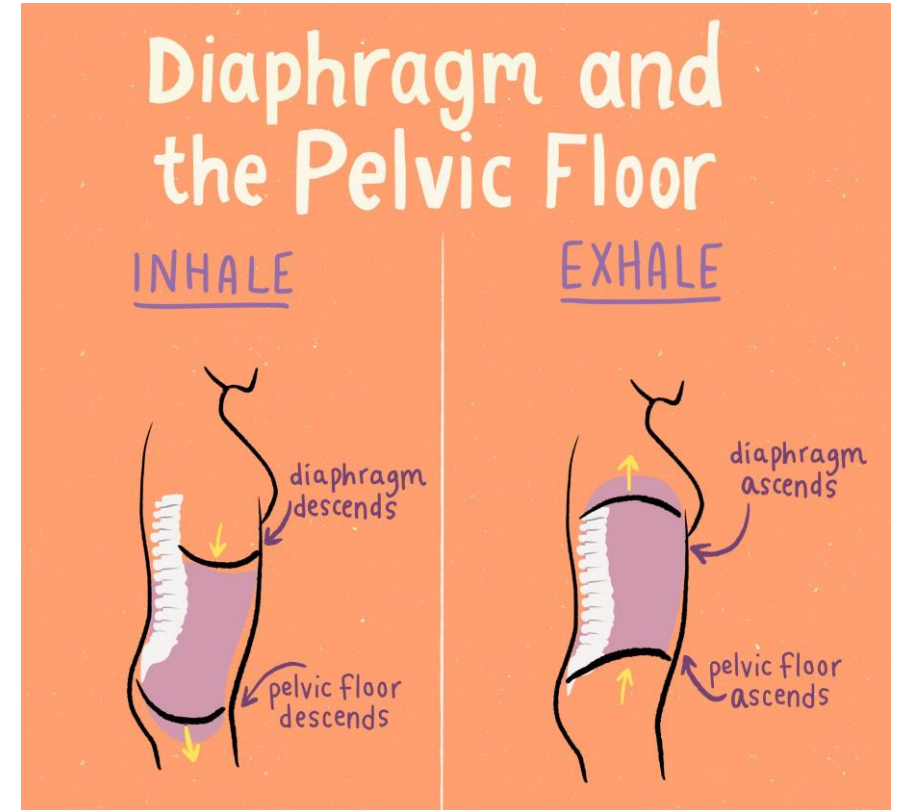
- At **4 years** children can usually void quickly from a full bladder
- By **6 years** most children can start voiding from a less than full bladder
- This means the child can use the toilet at almost any time
- Generally, remain dry through the night





## Diaphragm & Pelvic Floor

- Both work together (*one relaxes - other contracts*)
- Pelvic floor needs to relax so urine can pass through



# Diaphragm & Pelvic Floor





## Bladder Development & Down Syndrome

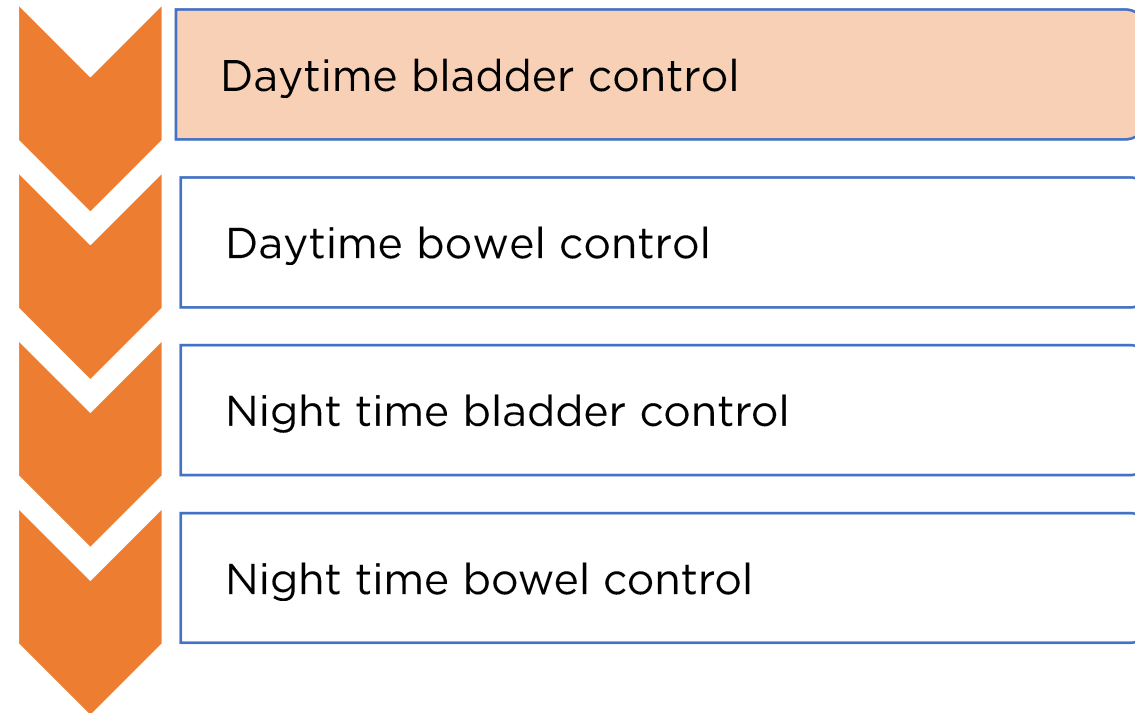
Children with DS:

- Low muscle tone which can affect bladder & bowel control
- Can experience a marked delay in toilet training
- More likely to experience incontinence (Powers et. al., 2015)

	Range (DS)	Range (Typical)
Dry by day (Urine)	1.5 to 4+ years	1 to 3+ years
Bowel Control (BM)	1 to 5+ years	1 to 4+ years



# Progression of Toilet Training





## Prior to Beginning

- Medical considerations
  - When to consult with pediatrician
- Child & parent readiness
- Assess child's skills
  - Physical
  - Language
  - Cognitive
  - Social & Emotional





## Medical Considerations

When to consult pediatrician

- holding back BMs
- constipation & diarrhea
- Voiding dysfunction
- evidence of painful urination or BMs
- extended toilet training resistance (*i.e. lasts several months*)
- medications





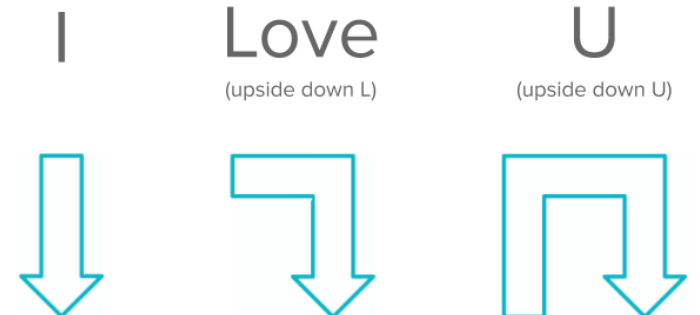
## Constipation

Consult your pediatrician if constipation persists despite dietary change

Ways to help relieve constipation:

- Massage large intestine area (*I L U* massage)
- Heat
- Rolling on a ball (*priming the belly*)

### ILU Massage Strokes







# Urinary Retention

1. **Leaning forward** (and rocking) may promote urination
2. **Resting the hands on the knees** or thighs, which optimizes the position of the bladder for voiding
3. **The sound of water** can promote the bladder muscle to contract
4. **Tapping** over the bladder may assist in triggering a contraction
5. **Stroking** or tickling the lower back may stimulate urination
6. Try **double voiding** - getting off the toilet and returning to try and pee again five minutes later.
7. And we also talked about **modeling the pushing motion** by showing him what his body would look like if he attempted to push to pee.
8. Continuing to use **your prompt of 'long pee'** - just encouraging him to focus on doing it 3-5 times.



## Child Readiness

- Ability to remain dry and unsoiled for 1-1.5 hours
- Remain dry during naps
- Wets diaper less often
- Does the “pee dance”
- Regular BMs
- Stops playing to have a BM





## Parent Readiness

- Prepared for accidents & some 'messiness'
- No major transitions happening
  - Work, moving, travelling, house guests etc.
- Time commitment
  - Ability to set aside sufficient time
- Other important people in your child's life are on board
  - Family members, teachers, support workers, school etc.



## Child's Motor Skills

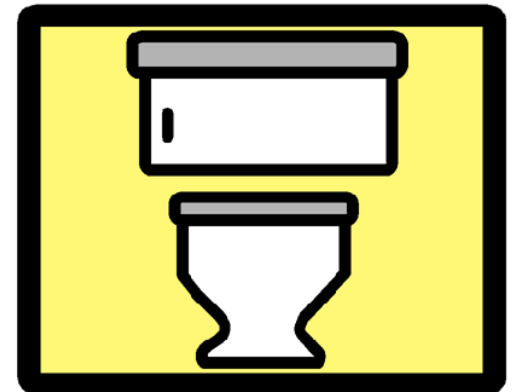
- Ability to get to the bathroom
- Pull pants down
- Stoop & sit independently
- Sit for approximately 5-10 minutes
- Relax & eliminate
- Push





## Child's Language Skills

- Ability to communicate if diaper is wet
- Communication (*verbal, sign, visual, gesture or combination*)
- Not always required





## Child's Cognitive Skills

- Follow directions
  - Awareness: Does child notice when soiled?
  - Interest in the bathroom or toilet routine?
  - Understand that if they do what you say good things happen  
(*ex. if we go potty then we can play*)
- Attention levels
- Sequencing/Planning
- Visual picture exchange





## Child's Social and Emotional Skills

### Social relatedness

- Imitates mom/dad, caregivers or siblings
- Desire to be clean (e.g., wants diaper changed quickly)

### Interested in the toilet

- Not fearful of toileting (e.g., bathroom or toilet)

### Not in a 'No' phase

### Learning style

- Visual learners

### Cultural preferences



## No 'Readiness' Signs?

- Introduce child to bathroom and toilet
- Talk about anatomy using proper terminology
- Read books about toileting
- Toilet Play
- Encourage child's participation in pre-toileting skills (handwashing etc.)
- Observation of parents or other sibling(s) using toilet
- Changing diapers in the bathroom
- Try putting them on the toilet when they have peed or pooped





## Toilet Training Steps

- Preparation (materials – social stories, books, clothing, etc.)
- Environment (*positioning, equipment, adaptations, sensory*)
- Toilet schedules
- Rewards
- Visual Supports
- Accidents
- Teaching Skills (*dressing, handwashing, flushing, wiping*)
- Generalizing to other toilets
- Expectations





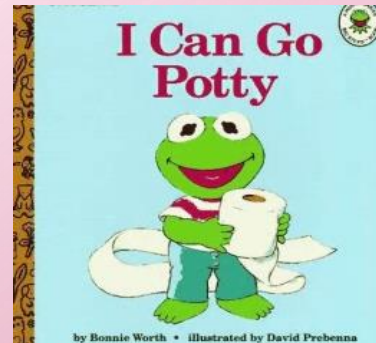
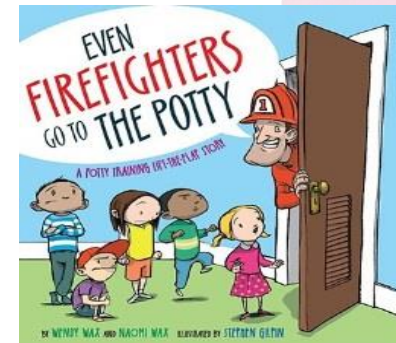
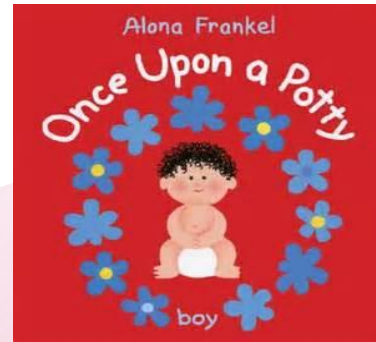
## Preparation

### Materials

Read books about using the toilet

- Once Upon a Potty, *Alona Frankel*
- I Can Go Potty, *Bonnie Worth*
- Even Firefighters go to the Potty, *Wendy & Naomi Wax*

Sing songs about the potty





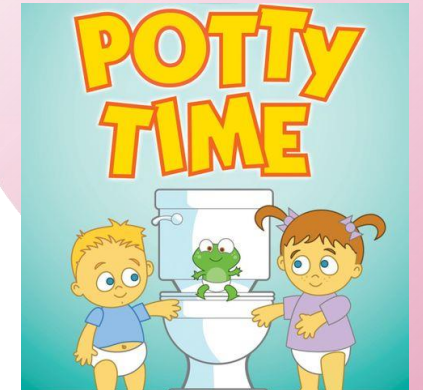
## Preparation

Watch videos on toileting

- Elmo Potty Time
- Sesame street 'You'll use the potty'

Toileting App

- Potty Time with Elmo
- Daniel Tiger's Stop & Go Potty
- Potty Training Learning With the Animals
- Potty Time





## Preparation

### Social Modeling

- Model toileting routine with family members (parents, siblings)
- Practice the toilet sequence within play with a favorite doll or stuffed animal.

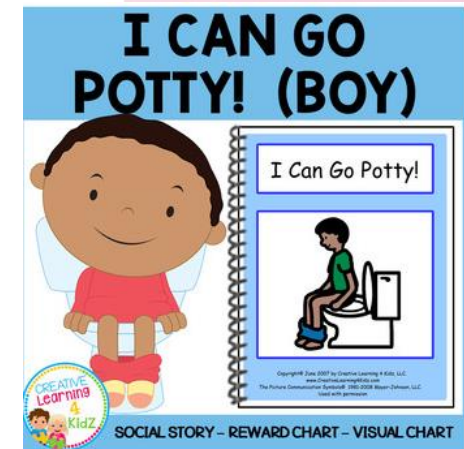
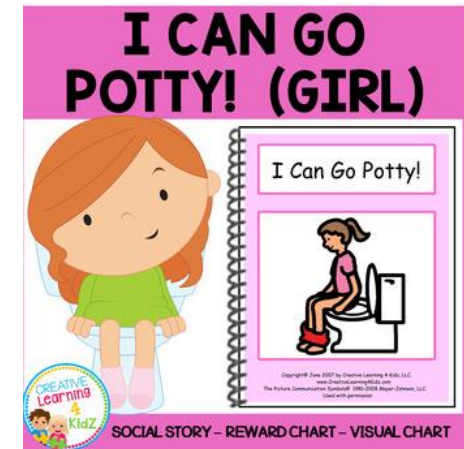




# Preparation

## Create Individualized Social Stories

- Take pictures of the following steps with your child at home:
  - Toilet
  - Pulling underwear / pants down
  - Sitting on toilet
  - Wiping
  - Pulling underwear / pants up
  - Flushing Toilet
    - Washing hands
- Pictello - talking visual story creator
  - Create, playback and share visual stories
  - Add your own photos
  - Export to PDF or print to read as a story book





## Preparation

### Clothing

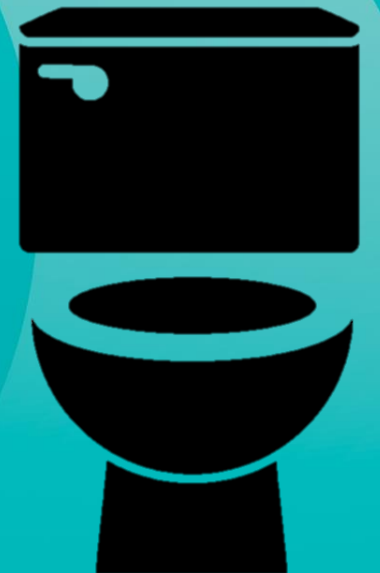
- Use least amount of clothing possible
- Use easy to remove clothing
  - Loose, stretchy pants with elastic waistbands
  - Shirts that are hip length or shorter
  - Cotton underpants for daytime
  - Pull ups for nighttime
  - No drawstrings, zippers or buttons
- Diapers vs Underwear
  - Begin underwear once child is dry 50% of the time





# Toilet Training Steps

- Preparation (materials – social stories, books, clothing, etc.)
- Environment (*positioning, equipment, adaptations, sensory*)
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## Environment

### Toilet position: Sitting

- Feet supported - flat on floor or on foot stool
- Knees higher than hips - feet / legs apart
- Elbows on knees
- Stomach bulges out
- Straight back - leans forward, bends at the hips
- Bottom touching the back of the toilet seat





# Importance of Positioning





# Environment

## Equipment

- Small potty chairs
  - Ensure child's feet are on the ground and bottom supported
- Toilet Seats
  - Potty seat / ring reducer to support child while sitting





# Environment

## Equipment

- Stepstools for safe & independent access to the toilet & sink
- Arm rests or toilet frames to ensure stability
- Urinals
- Pee Guard





## Environment

Adaptations to Toileting Environment - [Think Accessibility](#)

Equipment is set up to facilitate independence

- Soap & hand towels are in reach
- Toilet paper is convenient to obtain
- Doors & light switches are within reach
- Taps are safe & accessible to child





# Environment



## Toilet Adaptations













# Adaptations to Toileting Environment

## Toilet Area

- Make the toilet area inviting
- A place they feel safe, relaxed & happy to go
  - Visual schedule / reward chart on the wall
  - Bag of reinforcement toys on shelf
  - Read favorite books on the toilet
  - Play music & blow bubbles while sitting to relax



# Environment

-  • Visual (*sight*)
-  • Auditory (*sound*)
-  • Tactile (*touch*) – includes texture, heat/cold, pain tolerance
-  • Gustatory (*taste*)
-  • Olfactory (*smell*)
-  • **Proprioceptive** (*body awareness*): tells us where our bodies are in space, and how different muscles and joints are moving
-  • **Vestibular** (*movement*): Situated in the inner ear, our vestibular system helps us maintain our balance and posture and understand where and how fast our bodies are moving.
-  • **Interoception** (*internal body awareness*): ability to sense what is going on inside our bodies internally. It tells us if we have a full or empty bladder or bowel.





# Environment

## Understanding Sensory Processing

**Sensory processing** is the ability to take in, organize and make sense of the sensory information received by the brain from the sensory systems, and respond appropriately (O'Donnell, Deitz, Kartin, Nalty & Dawson, 2012).

Children with DS can experience differences in the way they process and respond to sensory information.

Results from a 2010 study suggest that **49%** of individuals with DS experience sensory processing difficulties (Bruni, Cameron, Dua & Nov, 2010), compared to approximately **5 - 16%** of the general population.



# Environment

## Sensory Processing Difficulties

Over or under responsive (*sensitive*):

1. **Smell** - pee/poo, soap or other scents
2. **Lighting** - bright lights, glare or darkness
3. **Temperature** - room, stool or toilet seat
4. **Touch** - soap, fabric, or toilet paper
5. **Proprioceptive/Vestibular** - Being lifted / feet off ground
6. **Noise** - toilet flushing, water tap, fan or hand drier
7. **Interoception** - unaware of their bowel or bladder being full, unable to discriminate whether they need to urinate or have a BM, can't "push" or feel that they've had an accident



# Environment

## Sensory Strategies

1. **Smell** - unscented cleaners/soaps & scents
2. **Lighting** - soft lighting or coloured light shade
3. **Temperature** - padded toilet seat (*softer & warmer*)
4. **Touch** - diaper wipes or wet face cloth in place of toilet paper, foam soap
5. **Proprioceptive/Vestibular** - equipment to facilitate security (*stool*)
6. **Noise** - headphones / ear plugs or music to limit auditory input
7. **Interoception** - let them sit, blow bubbles, wear underpants under their diaper



## Toilet Training Steps

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# Toilet Schedules

Serve two purposes

- **First** - child will access the toilet during the times they are most likely to pee



Success

- **Second** - predictability for new behavioral expectations



Resistance



## Toilet Schedules

On a chart record child's daytime elimination habits for **one week**

- Times & dates for urine & BM's
- Natural patterns of elimination will become evident
- Provides an average time that the child is able to hold urine (stay dry)
- This will determine the appropriate times to bring the child to the bathroom

### Elimination Data Sheet

#### KEY:

U = Urinated in toilet

B = Bowel movement in toilet

UX = Urinated (accident)

BX = Bowel movement (accident)

D = Dry (Did not urinate)



DATE	Mar 6	/	/	/	/	/	/	NOTES
TIME	EXAMPLE							
Awake	UX							
9:00	D							
9:30	D							
10:00	D							
10:30	D							
11:00	UX							
11:30	D							
12:00	D							
12:30	D							
1:00	BM							
1:30	D							
2:00	D							
2:30	D							
3:00	D							
3:30	UX							

Notes: Please track if Child has urinated (in toilet or accident in diaper), or had bowel movement (in toilet or accident in diaper) or if he is dry every **30 minutes** at school.



# Toilet Schedules

## Requesting Toilet

- Demonstrate how to request the toilet using a specific word, sign or visual



- **Sign:** “T” (toilet)

- **Verbal:** “pee, poo or potty”



- **Visual:** toilet

E.g. Have child say “pee,” model the child’s specific sign or gesture to the visual of the toilet

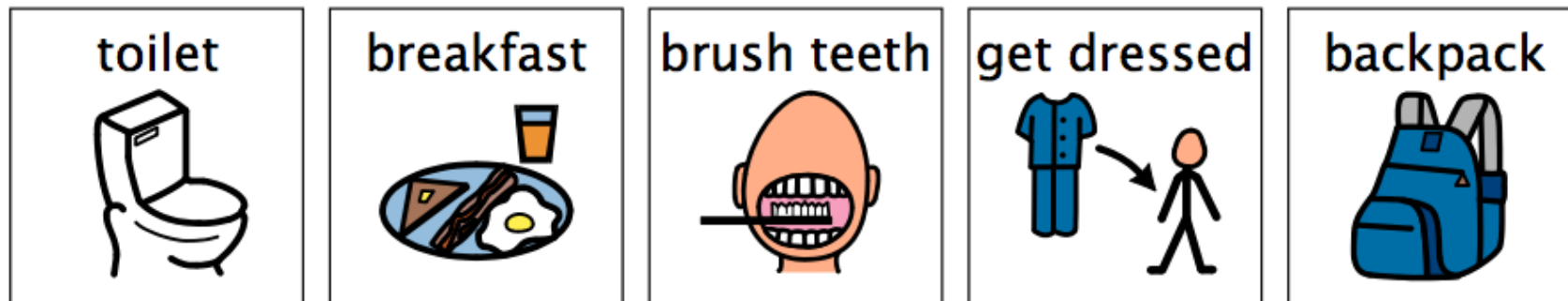




# Toilet Schedules

## Sitting Times

- Introduce sitting on the toilet into an already established routine
  - *Morning routine:*



- TELL child “it’s toilet time” – don’t ask!
- Bring child to sit on toilet approx. **10-15 minutes** prior to their average elimination time
  - Appropriate times are determined from the elimination chart



## Toilet Schedules

- To begin sits should be brief & stress free
  - Give child a choice to sit for 1-2-3 mins
- Aim to sit for a few seconds, and build up to 3-5 minutes
- Use a visual timer
  - Provides a visual time reference
- Goal is to eventually sit for 5 mins approximately 5-6 times per day
  - Once after each meal





# Toilet Schedules

## Example

- Child pees on average every **60 mins**
- Parents take child to toilet every 45 mins
- Morning routine: wake up, toilet, breakfast
  - Pees in toilet → toilet in **75 mins**
  - Does not pee in toilet → toilet in **20 mins**
- Must be **consistent** & follow the child's toilet schedule!
  - Prevents likelihood of accidents
  - Follows child's natural elimination schedule
- Use a timer to set an alarm





# Toilet Schedules

## Maintain Record

- Continue to maintain a record of child's **successes** vs **accidents**
- This will assist to track child's progress in toileting process
- Eventually, when child is consistently peeing on toilet with no accidents, begin extending time between sittings
- Long term goal is for the child to hold urine for approx. 3-4 hours





## Toilet Training Steps

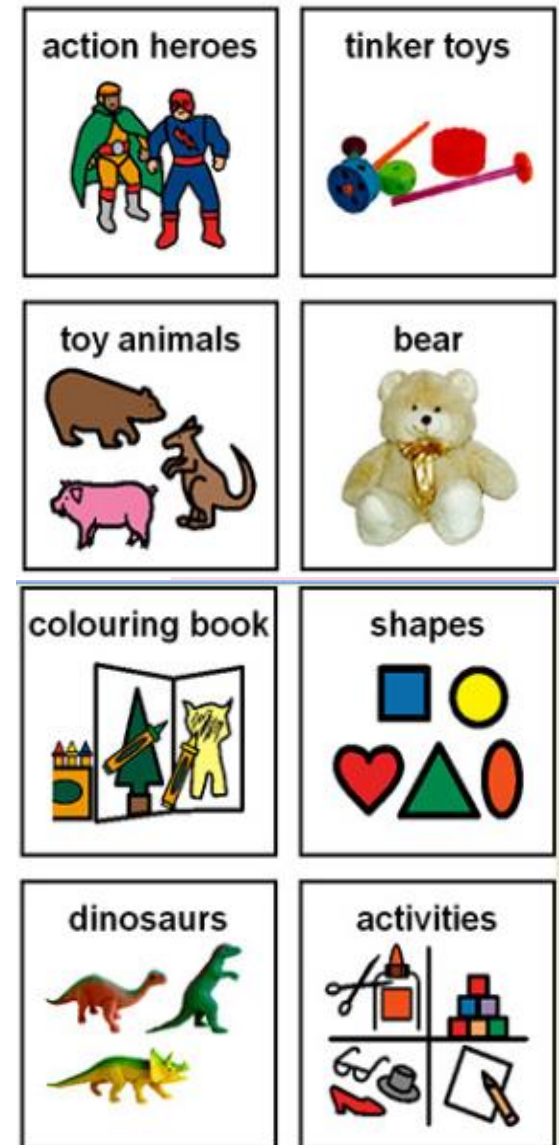
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## Rewards

- Rewards provide feedback and assist with motivation
- Decide which reinforcers will work best **before** training starts
- Choose low-cost activity-based **incentives**
  - i.e., time with a preferred toy or stickers
- The reward should **only** be accessible during toilet time
- When child pees, provide the reward **immediately**
  - Stored close to toilet, out of reach & portable





# Rewards

## Social Reinforcement

- Rewards should be combined with social reinforcement
  - Praise & positive feedback
- Social reinforcement should be specific
  - i.e. “Great! You peed in the potty!”
  - Don’t get too excited / loud when celebrating – may startle and stop urination
  - Don’t say ‘if you pee in the toilet you get ...’ as we want to avoid the coercive verbal cycle / power struggle





## Rewards

### Social Reinforcement

- Rewards will eventually be faded out as child masters toileting skills
- Occasional social reinforcement will be enough to maintain motivation







## Toilet Training Steps

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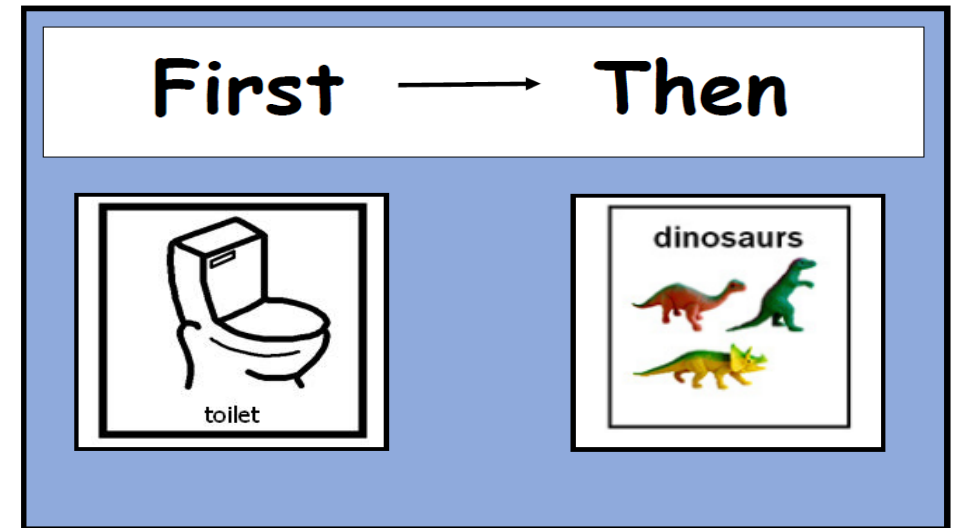




## Visual Supports

‘First-Then’ visuals assist child to understand:

- First, they pee, then they receive their reward







# Visual Supports

## Visual Sequence

- Pre-teach toilet steps using visual sequences
- Visual sequence chart can be put up in the bathroom to remind child of the next steps





### POTTY CHART

I USED THE POTTY 🍑						
I DID A WEE 🧡						
I DID A POO 💩						
I WIPED MYSELF CLEAN 🧻						
I WASHED MY HANDS 🧼						

**I WILL GET**

# I can use the Potty!

This chart belongs to: \_\_\_\_\_

	I did it!	I did it!	I did it!	I did it!	I did it!
Monday					
Tuesday					
Wednesday					
Thursday					
Friday					
Saturday					
Sunday					



## Toilet Training Steps

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## Accidents

- Adults must plan for accidents
  - Create an **accident pack** (*wipes, underwear, plastic bag & extra clothes*)
- Have an accident plan:
  - Neutral tone/expression
  - Limit attention
  - Change diaper in the bathroom, close to the toilet





## Self-Initiation

Often kids will start self-initiation on their own.

- You may notice they:
  - Do the 'pee dance'
  - Use speech or symbol for 'toilet'
  - Take your hand and lead you to the bathroom
  - Stand by classroom / bathroom door looking distressed

If these occur DON'T ASK if they need to go to the bathroom – once you notice a signal it is time to go to the bathroom







## Self-Initiation

- If there are no signals then begin to extend the length of the toileting interval slowly by **5-10-15 minutes**
  - Give the child the opportunity to take the lead and produce a signal but if they don't produce it after 15 minutes take them to the bathroom
  - Don't want to lose the gains you made but still give them the chance to realize they need to go on their own
- Self-initiation is more difficult so **ensure reinforcers are used** during this stage - perhaps even more so than trip training



## Toilet Training Steps

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## Teaching Skills

Establish the following skills early

- Dressing: Diapers / underwear / Pants up & down
- Hand washing
- Flushing toilet
- Wiping

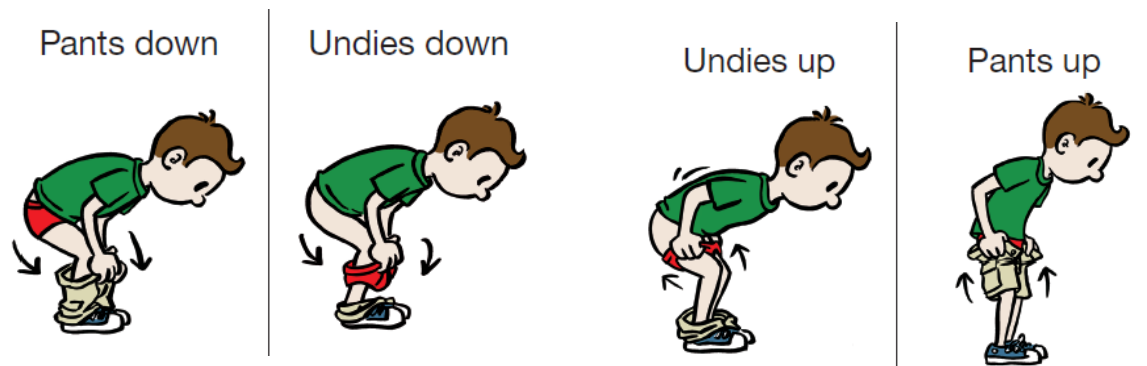
These goals should be focused on before / during toileting, not after the toilet training has been missed



# Teaching Skills

## Dressing

- Using visual aides
  - Schedule / symbols / sequence strips
- Modeling (e.g., *Using a doll*)
- \*\*Backwards chaining
  - Breaking down the steps of a task and teaching them in reverse order
    - Motivates and facilitates success





## Teaching Skills

### Backwards Chaining - Example

#### Pants On

- Hold pants by waistband
- Lower pants and lift left leg
- Put left leg into pant hole
- Put right leg into pant hole
- Pull pants up to knees
- Stand and pull pants to waist

Help your child perform **steps 1 through 5** and then let them complete the task by performing **step 6**

Gives the child immediate reinforcement and a feeling of success and increases their motivation





## Teaching Skills

Establish the following skills early

- Dressing: Diapers / underwear / Pants up & down
- Hand washing
- Flushing toilet
- Wiping

These goals should be focused on before / during toileting, not after the toilet training has been mastered



# Teaching Skills

- Incorporate into a daily routine
  - Before dinner, after playing outside etc.



- Using visuals (Symbols, schedules, sequence strips)



- Use music or songs
- Modeling
- Reinforcement & Repetition



## Teaching Skills

Establish the following skills early

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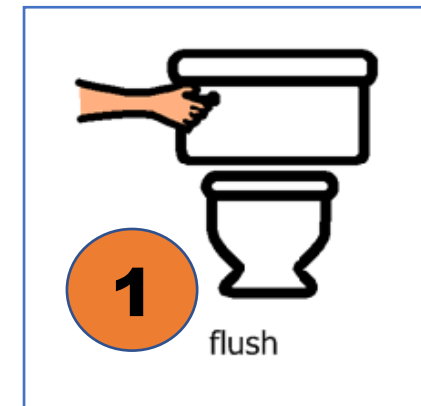
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## Teaching Skills

- Using visuals
  - Symbols, schedules, sequence strips



- Modeling
- Use music or songs
- Reinforcement & Repetition





## Teaching Skills

Establish the following skills early

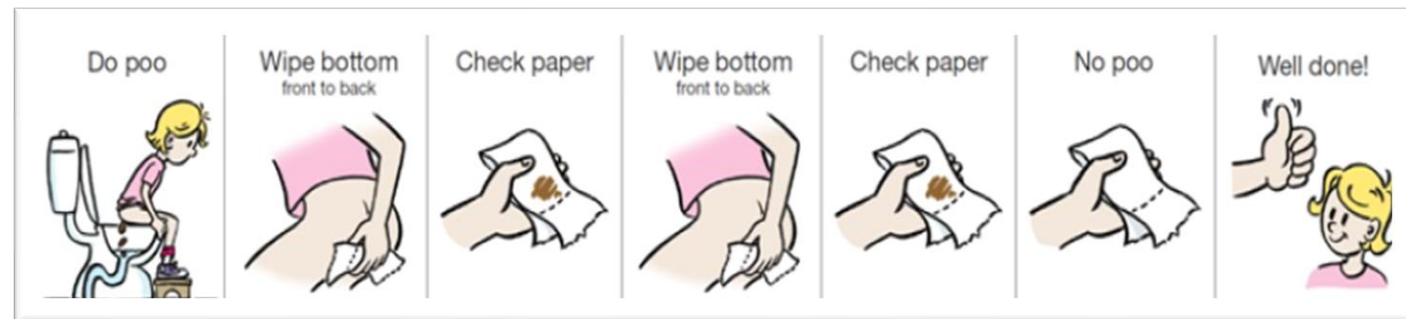
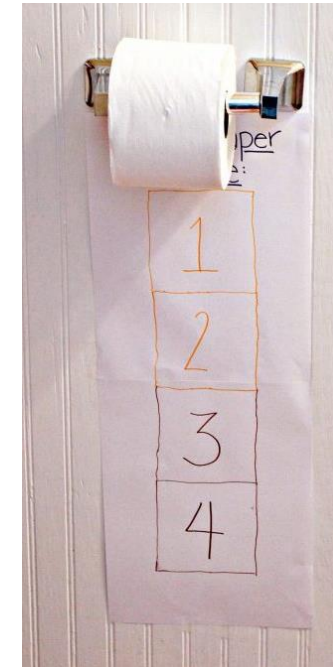
- Dressing: Diapers / underwear / Pants up & down
- Hand washing
- Flushing toilet
- Wiping

These goals should be focused on before / during toileting, not after the toilet training has been mastered



## Teaching Skills

- Wiping comes gradually – usually the last skills accomplished, so start early!
- Ensure toilet paper is within reach
- Visual cue - how much toilet paper to use
  - Toilet paper stop line or a picture
- Use a mirror
- Use play (doll)



Handwriting Without Tears® | hwtears.com

1 one	2 two	3 three	4 four	5 five	6 six	7 seven	8 eight	9 nine	10 ten
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Handwriting practice chart showing numbers 1-10 with corresponding dot patterns and illustrations. Above the numbers are various icons: a car, an umbrella, a violin, a fish, a pair of hands, a ball, and a horse.



 No poop	 Clean hands	 Wipe bottoms from inside	 Clean hands proper
 No poop	 Sit down	 Loudly cheer	 Get up







# Toilet Training Steps

- Preparation (materials – social stories, books, clothing, etc.)
- Environment (*positioning, equipment, adaptations, sensory*)
- Toilet schedules
- Rewards
- Visual Supports
- Accidents
- Teaching Skills (*dressing, handwashing, flushing, wiping*)
- Generalizing to other toilets
- Expectations





# Teaching Skills

## Generalization to other toilets

Use a social story to prepare your child for using other restrooms

- Maintain a relaxed no-stress attitude
- Begin using family members & friends washrooms
- Keep a copy of the visual schedule for outings
- Explore public bathrooms
- Sensory strategies



## Auditory Sensitivities

- Ear plugs
- Noise canceling head phones
- Ear buds
- Visual schedule



## Tactile Sensitivities



Toilet Seat Covers



Portable / Foldable Toilet Seats



Disposable Floor Toppers





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## Expectations

Evidence suggests avoiding the following strategies:

- Insist the child 'keep trying' or remain on toilet after first attempt is unsuccessful
- Threats, punishment or reprimands for incontinence
- Excessive conversation or nagging throughout the day
- Rushing the process

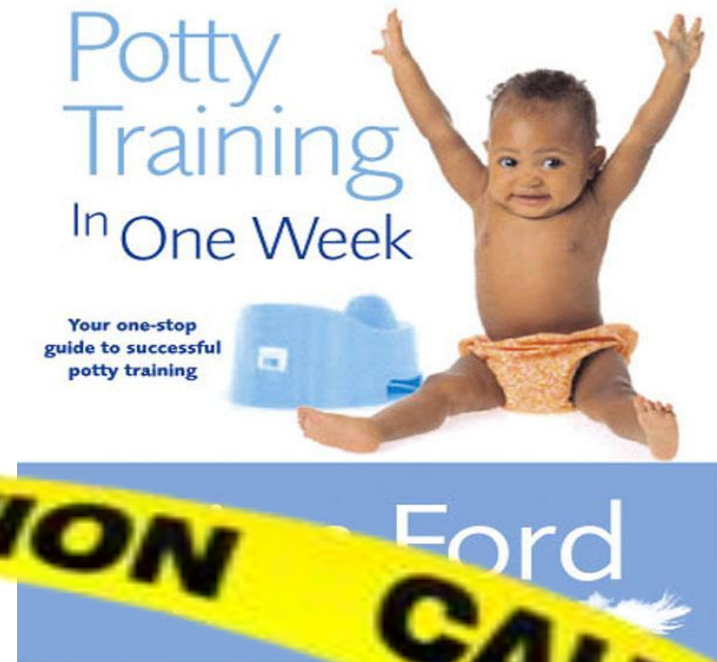
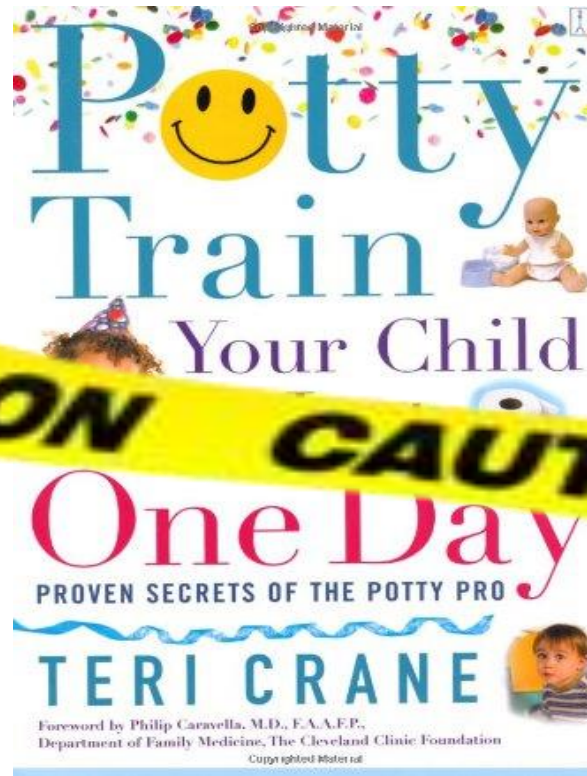
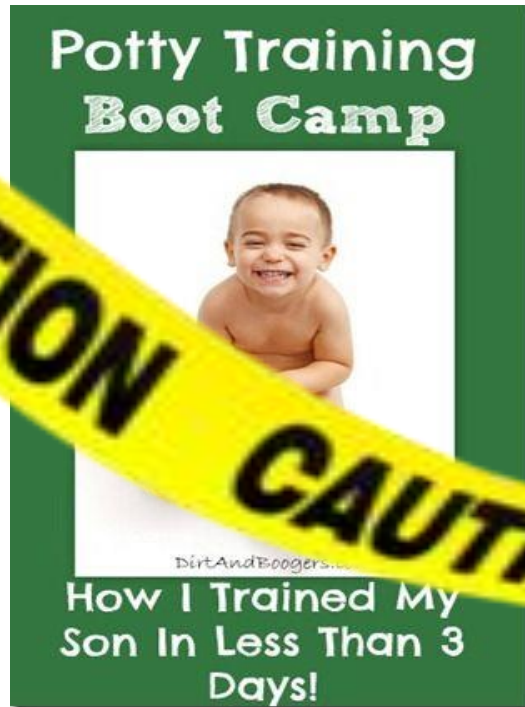


## Expectations

- Check your expectations
- Set realistic & achievable goals
- Expect accidents!
- Regression might occur – this is ok!
- Success in one environment will not automatically generalize to others - this may take time



# Expectations





## Rapid Toilet Training

Bootcamp version of toilet training

- Technically challenging & intensive
- Can take anywhere from 2 days to 2 weeks and sometimes more
- Children are given lots of liquids and salty snacks that encourage kids to drink more liquids
  - Kids need to drink enough that they have to pee every 30 minutes
- Follow the premise that the more kids sit on the toilet more opportunities for them to eliminate and increase likelihood of being trained



# Rapid Toilet Training

## PLAN

- Liquid every half hour (*full cup*)
- Requires kids to sit on toilet for 30 min at a time
  - That may not always be easy / behavioral issues / tone and fatigue issues / control issues
- Usually training is from when they wake up to about 5pm – ideally till bed time



# Rapid Toilet Training

## Benefits of RTT

- Fewer accidents because you are in the bathroom most of the time
- Can toilet train kids in a short time
- Use some strategies similar to the traditional 'long' way:
  - Rewards, praise, neutral expression/affect, dealing with accidents
- May work for kids who withhold for extended period of times and only pee in pull ups



# Rapid Toilet Training

## Drawbacks of RTT

- May not always consider the medical component of DS and may not take into account the regressions kids w/ DS may experience due to their medical issues (*celiac disease, GI issues, hyponatremia etc.*)
- Lots of setup required (*activities, rewards*) and a lot of work in a short amount of time
- Based on kids eating / drinking – this may be delayed for a lot of our kids with DS whether it be an oral motor or sensory issue (*cannot or may not eat salty snacks or take liquids*)
- Difficult to generalize to other settings
- A lot of data tracking
- Can be expensive





## Take Home Messages

- Wait until child & parent's are ready
- Plan
- Take it slow
- Use praise & play
- Motivate
- Consistency is key
- Accept accidents
- Be patient
- Have fun!





## Resources

Odin Books <http://odinbooks.com/>  
School Specialty [www.schoolspecialty.ca](http://www.schoolspecialty.ca)  
Continence Victoria [www.continencevictoria.org.au](http://www.continencevictoria.org.au)

Pictello - Talking visual story creator	App \$27.99
Potty Time With Elmo	App \$3.99
Daniel Tiger's Stop & Go Potty	App \$2.99
Potty Time	App Free



## Toileting Equipment

### Padded Toilet Seats / Toilet Rings

Toys R Us / Walmart \$15 - \$20

### Children's Pottys

Toys R Us / Walmart \$25 - \$50

### Step Stools

Single Step \$10 - \$15

Double Step \$15 - \$30

Toys R Us / Walmart / Dollar Store

### Floor Toppers / Toilet Seat Covers

Walmart / Dollar Store \$10 - \$15



## Contact Us

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## Resources

American Academy of Pediatrics. (2006). Toilet training readiness. Retrieved from <https://www2.aap.org/sections/scan/practicingsafety/module7.htm>

Bakker, E. Van Gool, J.D., Van Sprundel M., Van Der Auwera, C., Wyendaele, J.J. (2002) Results of a questionnaire evaluating the effects of different methods of toilet training on achieving bladder control. *BJU International*, 90: 456-461.

Bakker, E., Wyndaele, J.J. (2000). Changes in the toilet training of children during the last 60 years: the cause of an increase in lower urinary tract dysfunction?. *BJU International*, 86: 248-252.

Bruni, M., Cameron, D., Dua, S., & Noy, S. (2010). Reported sensory processing of children with down syndrome. *Physical & Occupational Therapy in Pediatrics*, 30(4), 280-293. doi:10.3109/01942638.2010.486962

Continence Society of Australia (2010). One step at a time: A parent's guide to toilet skills for children with special needs. Victoria, Australia: Commerece Press.

Cunningham, Cl. (2006). Down Syndrome: An Introduction for Parents and Carers (3rd Edition). Souvenir Press.



## Resources

Dolva, A., Coster, W., & Lilja, M. (2004). Functional performance in children with down syndrome. *The American Journal of Occupational Therapy : Official Publication of the American Occupational Therapy Association*, 58(6), 621-629. doi:10.5014/ajot.58.6.621

Garland, T. (2014). *Self-regulation interventions and strategies*. Eau Claire, WI: PESI Publishing & Media. Shelly J. Lane, PhD, OTR/L, FOATA, Isabelle Beaudry-Bellefeuille, MScOT; Examining the Sensory Characteristics of Preschool Children With Retentive Fecal Incontinence. *Am J Occup Ther* 2015;69(Suppl. 1):6911500194p1. doi: 10.5014/ajot.2015.69S1-PO6099.

Largo, R.H., Molinari, L., von Siebenthal, K., Wolfensberger, U. (1999). Development of bladder and bowel control; significance of prematurity, perinatal risk factors, psychomotor development and gender. *Growth/Development*, 158:115-122.

O'Donnell, S., Deitz, J., Kartin, D., Nalty, T., & Dawson, G. (2012). Sensory processing, problem behavior, adaptive behavior, and cognition in preschool children with autism spectrum disorders.

*The American Journal of Occupational Therapy: Official Publication of the American Occupational Therapy Association*, 66(5), 586. doi:10.5014/ajot.2012.004168

Powers, M. K., Brown, E. T., Hogan, R. M., Martin, A. D., Ortenberg, J., & Roth, C. C. (2015). Trends in toilet training and voiding habits among children with down syndrome. *The Journal of Urology*, 194(3), 783-787. doi:10.1016/j.juro.2015.03.114



## Resources

Tobias, N. (2001). Toilet training and the child with special needs. *Development Disabilities: Special Interest Quarterly*, (24)4, 1-3.

Tsai, S. (2015). Toilet Training: Go for it [PowerPoint Slides].

Wheeler, M. (2007). Toilet training for children with Autism or other developmental Issues. A comprehensive guide for parents and teachers. Arlington, TX: Future Horizons, Inc.

Whitaker, S. (2013). Achieving optimal independence: When to start toilet training some food for thought. [PowerPoint Slides].

Yack, E., Aquilla, P., & Sutton, S. (2002). Building Bridges: Through sensory integration. Arlington, TX: Future Horizons, Inc.