

# Toilet Training: Common Questions and Answers

Drew C. Baird, MD, and Michael Bybel, DO, Carl R. Darnall Army Medical Center, Fort Hood, Texas  
Adam W. Kowalski, MD, Winn Army Community Hospital, Fort Stewart, Georgia

Toilet training is a significant developmental milestone in early childhood. Most U.S. children achieve the physiologic, cognitive, and emotional development necessary for toilet training by 18 to 30 months of age. Markers of readiness for toilet training include being able to walk, put on and remove clothing, and follow parental instruction; expressive language; awareness of a full bladder or rectum; and demonstrated dissatisfaction with a soiled diaper. Other readiness cues include imitating toileting behavior, expressing desire to toilet, and demonstrating bladder or bowel control (staying dry through a nap or through the night). Physicians should provide anticipatory guidance to parents beginning at about 18 to 24 months of age, noting the signs of toilet training readiness, and setting realistic expectations for parents. Parents should be counseled that no training method is superior to another. Parents should choose a method that is best suited to them and their child, and the method should use positive reinforcement. Complications of toilet training include stool toileting refusal, stool withholding, encopresis, hiding to defecate, and enuresis. These problems typically resolve with time, although some may require further investigation and treatment. Medical comorbidities such as Down syndrome, autism spectrum disorder, and cerebral palsy reduce the likelihood of successfully attaining full toilet training and often require early consultation with occupational therapists, developmental pediatricians, or other subspecialists to aid in toilet training. (*Am Fam Physician.* 2019;100(8):468-474. Copyright © 2019 American Academy of Family Physicians.)



Illustration by Jennifer Fairman

**Toilet training** is a significant developmental milestone in early childhood as a child gains mastery over a previously involuntary bodily function. It can bring a sense of accomplishment or frustration for the family, depending on the approach, its timing, the child's readiness for training, and the caregiver's and child's responses to the approach. This article answers commonly asked questions regarding toilet training to help the family physician best address parental expectations and concerns.

**CME** This clinical content conforms to AAFP criteria for continuing medical education (CME). See CME Quiz on page 465.

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**Patient information:** A handout on this topic, written by the authors of this article, is available at <https://www.aafp.org/afp/2019/1015/p468-s1.html>. Another handout is available at <https://familydoctor.org/toilet-training-your-child>.

## When Are Children Developmentally Prepared for Toilet Training?

*More than two-thirds of U.S. children achieve the physiologic, cognitive, and emotional development necessary for toilet training by 18 to 30 months of age.<sup>1</sup> Parents should set reasonable expectations for children who begin when they are younger than 18 months. As many as one-third of children may not be developmentally ready for toilet training until they are closer to 30 months.<sup>1,2</sup>*

## EVIDENCE SUMMARY

The ability to maintain continence involves a complex interplay between brain, genitourinary, and neurourinary development.<sup>3</sup> The age at which most children complete toilet training varies widely based on when parents initiate training, when children show signs of readiness for training, sex, race, socioeconomic factors, and cultural norms.<sup>2,4,5</sup> U.S. children typically start training between 18 and 36 months of age.<sup>2,6</sup> Non-Western nations complete toilet training

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much earlier. One longitudinal study comparing similarly healthy Vietnamese and Swedish children found that toilet training was started at six months of age in 89% of Vietnamese children and was achieved by 98% by 24 months of age, whereas just 5% of the Swedish group had started training by 24 months of age.<sup>7</sup> No harms from early training have been identified in healthy children who do not have significant developmental comorbidities. In the United States, race and socioeconomic status are independent predictors of parents' attitudes regarding the appropriate time to start, with black children beginning training at an average age of 18 months and white children starting at an average age of 25 months.<sup>2,5</sup>

### How Should Parents and Physicians Assess a Child's Readiness for Toilet Training?

*Parents and physicians should assess a child's readiness for toilet training by identifying the child's achievement of specific developmental milestones, as well as parental observations of a child's interest in toileting.*

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U.S. children achieve most toileting readiness skills between 22 and 30 months of age. Girls show readiness signs earlier than boys (24 to 26 months vs. 29 months, respectively).<sup>2,5</sup> Assessing readiness includes identifying the achievement of developmental milestones and toileting-specific readiness skills. Necessary motor skills include the ability to walk and to put on and remove clothes (90% achieve by 30 months of age).<sup>8</sup> The child should be able to follow simple instructions and communicate needs. Social awareness indicators of readiness include an interest in using the toilet (90% achieve by 24 months [girls] or 26 months [boys]<sup>2</sup>), imitating toilet use, and a desire to please parents. Finally, parents may observe basic problem-solving skills in their child that can indicate readiness to tackle the more complex cognitive aspects of successful toileting.<sup>1</sup>

Toileting-specific readiness skills include awareness of the need to eliminate and discomfort with soiled diapers, communicating the need to eliminate, and demonstrating increasing bladder and bowel control (staying dry/clean through a nap or overnight). The median ages for staying

dry during the day are 32.5 months for girls and 35 months for boys.<sup>2</sup>

*Table 1* lists signs of readiness for toilet training, although there is no consensus on which specific signs must be present.<sup>1,2,9,10</sup> Although some children attain readiness skills before 24 months, many do not. A 2012 systematic review on readiness signs for toilet training in Western society found that by 30 months of age, 15 of 21 accepted readiness signs are present in the average child, and the last six are in development.<sup>11</sup>

### How Should Physicians Counsel Parents on Toilet Training?

*Physicians should approach counseling on toilet training by understanding parental perceptions and goals, as well as assessing readiness in the child. Counseling discussions should begin when the child is about 18 to 24 months of age. From these discussions, the physician can help parents*

TABLE 1

#### Signs of Readiness for Toilet Training

- Asks to wear "big kid" underwear
- Can put on and take off clothes (generally achieved by 30 months of age)
- Can walk to and from the toilet (generally achieved by 15 months of age)
- Facial expressions, postures, words, or behaviors that indicate the child is about to urinate or defecate: grimacing, grunting, or squatting when needing to defecate; holding the groin, tugging at diaper, or crossing legs when needing to urinate (75% achieve by 26 to 29 months of age)
- Imitates parental behavior
- Regular, predictable bowel movements and nighttime bowel control
- Shows discomfort with soiled diapers and wants to be changed
- Shows interest in using the toilet; demonstrates desire to learn to control bladder and bowel function (75% achieve by 24 to 26 months of age)
- Stable posture while sitting on the toilet
- Stays dry for two hours at a time or during naps (75% achieve by 24 to 26 months of age)
- Sufficient expressive language skills to communicate the need to void (with words or agreed-upon gestures)
- Sufficient receptive language skills to follow simple (one- and two-step) instructions

*Information from references 1, 2, 9, and 10.*

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*develop reasonable expectations about the training process.*

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Because of the ages at which toilet training readiness skills are obtained by children, parental counseling should begin when the child is about 18 to 24 months of age.<sup>1,11,12</sup> Parents should be informed that intensive toilet training (parent asking toddler to use the toilet more than three times per day) before 27 months of age is not associated with complications such as constipation, stool withholding, or stool toileting refusal.<sup>13</sup> It is important for physicians to recognize external factors that can challenge the training process and affect parental and child readiness for training (e.g., daycare, split households, developmental delays, disabilities or chronic illnesses, parental motivators such as travel plans or upcoming birth of another child).

Throughout training, parents should remain positive, patient, and encouraging; use praise and reward systems; and understand that accidents and setbacks are common. Negative language and punishment should be avoided, and temporary (one- to three-month) breaks are acceptable to avoid negative attitudes and conflicts.<sup>1</sup>

### What Are the Differences in Toilet Training Methods?

*Methods of toilet training currently used in the United States can be categorized as child-oriented (Brazelton method) and structured behavioral approaches (Azrin and Foxx method, Elimination Communication/Assisted Infant Toilet Training). As methods have evolved, clinicians have noted that different methods may be better suited for different patients.<sup>14</sup> Parents should be counseled that no training method is superior to others, and the approach should be individualized based on how the child learns best and the family's particular needs.*

### EVIDENCE SUMMARY

**Brazelton Method.** The child-oriented toilet training approach, which emphasizes toilet training as the child's effort to gain self-control of their body, was designed in 1962 by T. Berry Brazelton.<sup>12,15,16</sup> The American Academy of Pediatrics and the Canadian Paediatric Society guidelines on toilet training adopt many

aspects of this approach.<sup>1,10</sup> Parents should look for signs of toileting readiness before training is initiated. This approach stresses gradual and stepwise training in which parents wait for the child to show when he or she is ready for the next step and avoid undue pressure to advance.<sup>17</sup> A 1997 prospective cohort study of 482 patients showed that 61% of children were toilet trained by 36 months of age and 98% by 48 months when the Brazelton method was used.<sup>15</sup> Duration of training was not described.

**Azrin and Foxx Method.** The Azrin and Foxx method was developed in 1974 and is a one-day toilet-training approach that uses educational principles of operant conditioning. This involves repetition and positive reinforcement of correct toilet training tasks with praise and snacks, as well as punishments such as cleaning up accidents and concentrated repetition of correct tasks when there are failures. The authors asserted that training can start at 20 months of age if toileting readiness signs are present, including instructional readiness, which is determined by having the child complete eight of 10 directed actions (Table 2).<sup>17</sup> Table 3 compares the Brazelton method with the Azrin and Foxx method.<sup>11,15,17</sup>

**Elimination Communication/Assisted Infant Toilet Training.** Elimination communication,

TABLE 2

### Instructional Readiness Tasks for Toilet Training

- Ask child to bring you a familiar object (e.g., a toy)
- Ask child to imitate you in a simple task (e.g., playing pat-a-cake)
- Ask child to place a familiar object with another (e.g., "Put the doll in the wagon.")
- Ask child to show you his/her eyes
- Ask child to show you his/her hair
- Ask child to show you his/her mouth
- Ask child to show you his/her nose
- Ask child to sit down on a chair
- Ask child to stand up
- Ask child to walk with you to a particular place (e.g., another room)

**Note:** Toilet training can start at 20 months of age if toileting readiness signs are present and the child can complete eight of these 10 instructional readiness tasks.

*Information from reference 17.*

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also called natural infant hygiene, instructs parents to look for cues that the child is about to eliminate (e.g., crying, straining, grunting). When these occur, parents vocalize a sound (e.g., soft whistle, hum) that the child learns to associate with elimination. Once this association is established, parents can make the sound

as they position the child on the toilet, thereby encouraging elimination into the toilet. Despite its historical and continued use in resource-limited areas of the world, the effectiveness of this approach has not been well studied.<sup>18</sup>

Assisted infant toilet training is similar to elimination communication except that instead

**TABLE 3**

### Comparison of the Brazelton and the Azrin and Foxx Toilet-Training Methods

Brazelton method	Azrin and Foxx method
<p><b>Equipment</b></p> <p>Potty chair</p> <p>Snacks, treats, or rewards (optional)</p>	<p><b>Equipment</b></p> <p>Doll that wets pants</p> <p>List of real or imaginary characters admired by the child</p> <p>Potty chair with removable or replaceable collection bin</p> <p>Short t-shirt</p> <p>Snacks, treats, or rewards</p> <p>Training area with minimal distractions and interruptions</p> <p>Training pants</p>
<p><b>Method</b></p> <p>Begin training when specific physical and psychological milestones are met (usually about 18 months of age; introduce the potty chair and teach the child to associate it with the toilet)</p> <p>Ask the child to sit on the potty chair fully clothed; he/she may sit in close proximity when a parent is using the toilet; use the potty chair in any room or outside to accustom the child to sitting on it; allow the child to get off the chair at any time; talk or read a story during sits</p> <p>After one to two weeks of fully clothed sits, remove diaper and have the child sit on the potty chair; do not insist that he/she use the potty chair at this point</p> <p>If the child soils his/her diaper, take him/her and the diaper to the potty chair and empty the diaper into the chair; explain that this is where stool goes</p> <p>Once the child understands, take him/her to the potty chair several times daily</p> <p>As the child becomes more confident, remove diaper for short intervals; place potty chair in close proximity to the child and encourage independent use; provide gentle reminders as needed</p> <p>After these steps are mastered, use training pants, instructing the child on how to pull them up and remove them</p>	<p><b>Method</b></p> <p>After a productive sit, have the child empty the potty chair basin and replace it</p> <p>As the child masters the task, praise only for successful sits</p> <p>Check pants before naps and meals for the following three days; praise the child for dry pants; for wet pants, have the child change him- or herself and perform additional positive practice sessions</p> <p>Consequences for accidents: omit reinforcements; reprimand verbally; have the child change wet pants by him- or herself; perform 10 positive practice sessions</p> <p>Demonstrate correct steps for toileting using a doll: when the doll wets, have the child empty the potty chair basin into the toilet, flush, replace the basin, and wash hands</p> <p>Do not reinforce refusal or other uncooperative acts</p> <p>Encourage the child to go to the potty chair, pull down his/her pants, sit for several minutes, then get up and pull up pants; if the child urinates or defecates in the potty chair, reward with praise or a treat</p> <p>Give the child enough fluids to cause a strong, frequent desire to urinate</p> <p>Provide immediate positive reinforcement (e.g., food, drinks, hugs, small toys) for asking about, approaching, or sitting on the potty chair; manipulating pants; or urinating or defecating in the potty chair</p> <p>Start by having the child sit on the potty chair for 10 minutes; after several productive sessions, reduce duration</p> <p>Teach the child to differentiate between wet and dry; perform pants checks every three to five minutes and reward dry pants</p> <p>Tell the child that a real or imaginary person “is happy that you are learning to keep your pants dry”</p> <p>Work toward having the child request to use the potty chair</p>

*Information from references 11, 15, and 17.*

## SORT: KEY RECOMMENDATIONS FOR PRACTICE

Clinical recommendation	Evidence rating	Comments
Anticipatory guidance and parental counseling about toilet training should begin at 18 to 24 months of age, just before most children demonstrate developmental signs of readiness. <sup>1,11,12</sup>	C	Expert opinion and consensus guidelines in the absence of clinical trials
The American Academy of Pediatrics and the Canadian Paediatric Society recommend a child-oriented approach to toilet training. <sup>1,10,11</sup>	C	Expert opinion and consensus guidelines in the absence of clinical trials
Consultation with an occupational therapist, developmental pediatrician, or other subspecialist is recommended to aid in toilet training of children with developmental or physical disorders (e.g., Down syndrome, autism, cerebral palsy). <sup>33-37</sup>	C	Expert opinion and consensus guidelines in the absence of clinical trials

**A** = consistent, good-quality patient-oriented evidence; **B** = inconsistent or limited-quality patient-oriented evidence; **C** = consensus, disease-oriented evidence, usual practice, expert opinion, or case series. For information about the SORT evidence rating system, go to <https://www.aafp.org/afpsort>.

of positioning the child over a toilet, he or she is repositioned in the caregiver's arms to allow for easy elimination. A case report showed that initiation of this method can begin at one to three months of age, with completion by one year.<sup>19</sup> Assisted infant toilet training has not been well studied in developed nations.

Several toilet training apps use cartoon characters, memory games, timers, stories, and virtual sticker charts to enhance the training process. However, current evidence is too limited to make a recommendation on their use.

### How Should Physicians Counsel Parents About Common Complications?

*Complications in toilet training are opportunities for family physicians to review the training process with parents and rule out secondary causes. Parents should be advised to ensure a calm and supportive environment, not blame the child, avoid advancing training, and consider alternative training approaches.*

#### EVIDENCE SUMMARY

There are several complications that can arise during toilet training; most resolve over time.<sup>20-26</sup>

**Stool Toileting Refusal.** Stool toileting refusal occurs in children who become distressed and unwilling to use the toilet. It can be due to pain

from constipation, local skin irritation or infection, or psychosocial issues (e.g., fear regarding defecation, using the toilet, or flushing; disruptions in routine, environment, or family dynamics; confusion about the training process; performance anxiety).<sup>1</sup> Studies suggest that stool toileting refusal occurs in up to 20% of children, and one-fourth of these cases require intervention.<sup>13,15,21,22</sup> It is associated with higher rates of stool withholding and involuntary fecal soiling (encopresis),<sup>23</sup> and it is more common in children who begin training after 3.5 years of age.<sup>15</sup> After ruling out organic causes, clinicians should encourage parents to avoid any advances in training for a few weeks and observe the child to identify potential psychosocial contributors.<sup>1</sup> One prospective study found that although parents' use of positive statements did not reduce stool toileting refusal or other complications, it did shorten the duration of stool toileting refusal and led to earlier training completion.<sup>21</sup>

**Stool Withholding, Constipation, and Encopresis.** Stool withholding is a more extreme version of stool toileting refusal in which the child deliberately avoids defecating and often progresses to constipation. Persistent constipation can overstretch the rectum, reduce the child's ability to sense the need to defecate, and lead to encopresis. Encopresis affects 1% to 4% of school-aged children, occurring three to six times more often in



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boys than in girls.<sup>27</sup> Continued encopresis should be investigated to rule out secondary causes such as cow's milk protein allergy, spinal cord anomalies, congenital megacolon, or Hirschsprung disease.<sup>1,24</sup> Encopresis and difficulty achieving full toileting control are more common in victims of child abuse; the physician should keep this in mind if there are other concerns for abuse.<sup>25,26</sup> A 2014 *American Family Physician* article reviewed constipation and encopresis in children.<sup>24</sup>

**Hiding to Defecate.** There is little research on the incidence, age of onset, or other significant associations in children who hide to defecate, although it is commonly observed before and during toilet training. One prospective study found that two-thirds of 378 children (average age: 22 months) hid to defecate at some point during training and were more likely to have stool toileting refusal, frequent constipation, and stool withholding.<sup>28</sup> These children completed training four months later. Parents should be reassured that the prognosis is thought to be good, and that the behavior often resolves spontaneously.

**Enuresis.** Forty percent of U.S. children continue to have nighttime bedwetting (enuresis) after daytime continence is achieved.<sup>1</sup> Timing of toilet training may affect the subsequent risk of enuresis. One study examining 112 patients with bladder dysfunction suggested that toilet training with associated constipation and initiating toilet training before 24 months or after 36 months of age were associated with more enuresis.<sup>29</sup> A longitudinal study of 8,000 British children showed that beginning training after 24 months was associated with enuresis.<sup>30</sup> Enuresis has been discussed in depth in a previous *American Family Physician* article.<sup>31</sup> Inability to achieve at least daytime continence by five years of age is unusual and warrants further investigation into secondary causes (e.g., infection, urinary tract anatomic abnormalities, metabolic disorders, bladder dysfunction).<sup>32</sup>

Certain developmental disorders can make toilet training more difficult; they are also associated with a lower likelihood of achieving full toilet training and maintaining continence at an older age. To address toilet training and other developmental issues, family physicians should consult with occupational and physical therapists, behavioral therapists, or developmental pediatricians when caring for children with Down syndrome, cerebral palsy, or autism.<sup>33-37</sup> Children with Down

syndrome do not express interest in toilet training until an average of three years of age, and most do not become toilet trained until 5.5 years of age. The National Down Syndrome Society recommends that parents wait to introduce toilet training until three years of age, and it has specific guidelines for the approach to training.<sup>33</sup> In children with cerebral palsy, the median age for attaining daytime bladder and bowel continence is 5.4 years. Nighttime continence may take several more years to achieve, and more severe learning disabilities and mobility limitations are associated with greater delays.<sup>34,35</sup> Autism spectrum disorder has also been linked with challenges in toilet training.<sup>17</sup> In one study, bladder training lasted an average of 1.6 years and bowel training took 2.1 years; parents initiated training an average of 2.5 years before the age of autism diagnosis.<sup>36</sup> Most studies on toilet training in children with autism spectrum disorder used the Azrin and Foxx method, or a variant of it.<sup>37</sup>

**Data Sources:** A PubMed search was conducted using the key phrases toilet training and potty training (publication dates from January 1949 to July 2019). The search included systematic and clinical reviews, meta-analyses, reviews of clinical trials and other primary sources, and evidence-based guidelines. Also searched were the Cochrane database, National Guideline Clearinghouse, Essential Evidence Plus, and the Ovid database. References from these sources were consulted to clarify the statements made in publications. Search dates: January to July 2019.

### The Authors

**DREW C. BAIRD, MD, FAAFP**, is the director of the Family Medicine Residency Program at Carl R. Darnall Army Medical Center, Fort Hood, Tex., and an assistant professor of family medicine at the Uniformed Services University of the Health Sciences, Bethesda, Md.

**MICHAEL BYBEL, DO**, is the research director of the Family Medicine Residency Program at Carl R. Darnall Army Medical Center and an assistant professor of family medicine at the Uniformed Services University of the Health Sciences.

**ADAM W. KOWALSKI, MD**, is a family physician at Winn Army Community Hospital, Fort Stewart, Ga.

*Address correspondence to Drew C. Baird, MD, FAAFP, Carl R. Darnall Army Medical Center, 113 Drovers Run, Belton, TX 76513 (email: drew.c.baird.mil@mail.mil). Reprints are not available from the authors.*

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**This article** updates a previous article on this topic by Choby and George.<sup>9</sup>

**The opinions** and assertions contained herein are the private views of the authors and are not to be construed as the official policy or position of the U.S. Army, the Department of Defense, or the U.S. government.

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