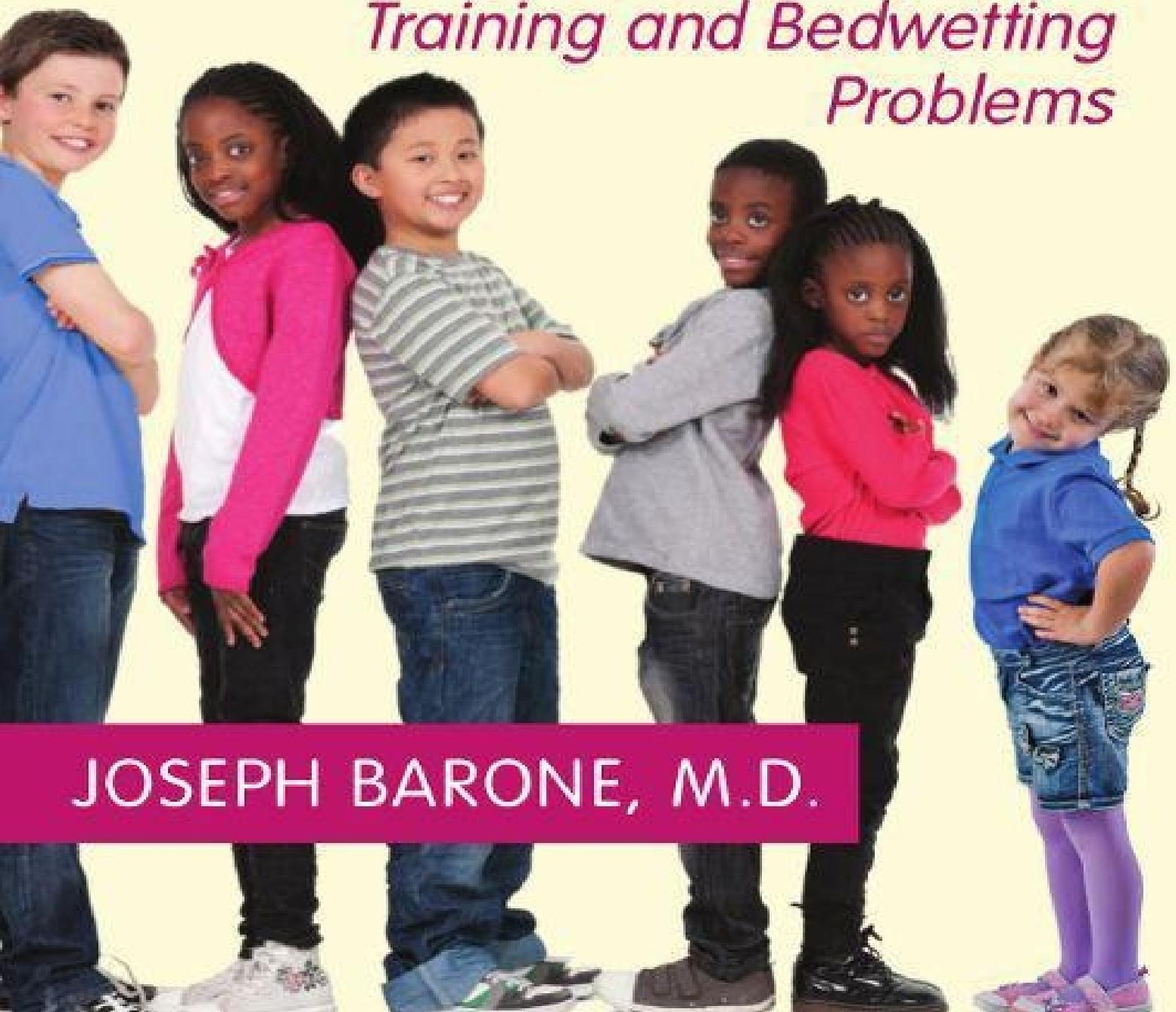


It's not your fault!

*Strategies for Solving Toilet
Training and Bedwetting
Problems*



JOSEPH BARONE, M.D.

It's Not Your Fault!

It's Not Your Fault!

Strategies for Solving Toilet Training and Bedwetting Problems

Joseph Barone, MD



RUTGERS UNIVERSITY PRESS

NEW BRUNSWICK, NEW JERSEY, AND LONDON

Library of Congress Cataloging-in-Publication Data

Barone, Joseph, 1959–

It's not your fault! : strategies for solving toilet training and bedwetting problems / Joseph Barone, MD.
pages cm

Includes bibliographical references and index.

ISBN 978-0-8135-6992-5 (paperback) — ISBN 978-0-8135-6993-2 (e-book)

1. Toilet training. 2. Enuresis. I. Title.

HQ770.5.B37 2015

649'.62—dc23 2014017495

A British Cataloging-in-Publication record for this book is available from the British Library.

Copyright © 2015 by Joseph Barone

All rights reserved

No part of this book may be reproduced or utilized in any form or by any means, electronic or mechanical, or by any information storage and retrieval system, without written permission from the publisher. Please contact Rutgers University Press, 106 Somerset Street, New Brunswick, NJ 08901. The only exception to this prohibition is “fair use” as defined by U.S. copyright law.

Visit our website: <http://rutgerspress.rutgers.edu>

Contents

[Introduction](#)

[About Me](#)

[About This Book](#)

[Chapter 1. Toilet Training Ingredients](#)

[Understanding your child's urinary system](#)

[The journey of a drop of water](#)

[The kidneys](#)

[How much water should my child drink?](#)

[The ureters](#)

[The bladder](#)

[How to determine your child's proper bladder size](#)

[The urinary stopper muscle](#)

[Review of the basics](#)

[Chapter 2. Toilet Training](#)

[What You Need to Know to Toilet Train Your Child Successfully](#)

[Why is development important for toilet training?](#)

[The evidence behind breastfeeding and development](#)

[Evidence-based potty training information](#)

[The history of potty training](#)

[Why are children potty training so late?](#)

[The parent-directed versus child-directed method of toilet training](#)

[What is the ideal time to toilet train your child?](#)

[How to spot signs of toilet training readiness](#)

[The most important thing to know about toilet training](#)

[How to Toilet Train Your Child](#)

[The basic equipment of toilet training](#)

[Daytime potty training](#)

[What about day care?](#)

[Nighttime potty training](#)

[What to do when things go wrong](#)

[Chapter 3. Bedwetting](#)

[How to stop bedwetting and become a bedwetting slayer!](#)

[How common is bedwetting?](#)

[Can bedwetting be treated?](#)

[Why do some parents wait so long to treat bedwetting?](#)

[How long does it take to outgrow bedwetting?](#)

[Bedwetting fact and fiction](#)

[Bedwetting alarms](#)

[How does the bedwetting alarm work?](#)

[Types of bedwetting alarms](#)

[Bedwetting companies](#)

[Before you begin to use the alarm](#)

[My secret method for stopping bedwetting](#)

[Is your child a zombie?](#)

[Wake up your zombie](#)
[Give your zombie a code word](#)

[Chapter 4. Daytime Wetting Problems](#)

[Basics of day wetting](#)
[How common are daytime wetting problems?](#)
[Urinary frequency and urgency](#)
[Lazy bladder in children](#)
[Giggle incontinence](#)
[Daytime potty problems could mean toilet training is incomplete](#)
[How to stop daytime potty problems in your child](#)
[A timed voiding strategy that works](#)

[Chapter 5. Medications](#)

[Nighttime urinary control medications](#)
[Desmopressin](#)
[Imipramine](#)
[Medications for daytime potty problems](#)
[Anti-cholinergic medications](#)
[Oxybutynin](#)
[Tolterodine and solifenacin](#)
[Oxybutynin patch](#)
[Alpha blockers tamsulosin and doxazosin](#)
[Antibiotics](#)
[ADD medications](#)
[Anti-inflammatories](#)

[Chapter 6. Tests and X-Rays](#)

[Urine analysis](#)
[Urine culture](#)
[Ultrasound](#)
[Biofeedback](#)
[Uroflow](#)
[VCUG](#)
[Urodynamics](#)

[Chapter 7. Bonus Expert Interviews](#)

[Dona Schneider, PhD](#)
[Eileen Creenan, RN](#)
[Patricia Whitley-Williams, MD](#)

[Chapter 8. Alternative Treatments](#)

[Are there good alternatives?](#)
[Acupuncture](#)
[Enemas](#)
[Hypnosis](#)
[Chiropractic](#)

[Chapter 9. Common Questions from Parents](#)

[Toilet training](#)
[Daytime wetting](#)
[Bedwetting](#)

[Conclusions](#)

[Glossary](#)

[Additional Resources](#)

[Index](#)

[About the Author](#)

Introduction

It's not your fault! That is what I tell frustrated parents who visit me because they are not able to toilet train their child. In most of these cases, the parents followed well-meaning but generally bad advice they discovered in a parenting book, on the Internet, or during a popular TV talk show.

Once, a mother of a thirteen-month-old told me that her friend, who regularly beat her at tennis, trained her perfect eleven-month-old by holding the baby over the toilet until blastoff. When the losing tennis player tried that method with her thirteen-month-old, she was crushed because that method did not work for her. She felt like she did something wrong and somehow failed her child and lost to her tennis friend yet again. Of course, I told her, "It's not your fault." After all, she did not do anything wrong, she was just given well-meaning but bad advice from her friend. This advice may work well for one person but not for another.

In this book, I want to provide evidence-based advice and share my twenty-year experience as a pediatric urologist. "Evidence-based advice" means that the advice is based on science and facts. It means that it is more than just someone's personal opinion—it is advice based on testing and research. Evidence-based advice is the best advice available, and you should demand the best advice for your child. When advice is evidence based, it should work for many people, not just for one person, as in the tennis player example.

I am not only a pediatric urologist; I am also a father of four with a perfect toilet training batting average, and that did not happen by "accident." I know my recommendations for toilet training work because they have been tested and have proven to be effective in the real world, as well as in a research setting. In fact, for the last ten years, I have spent thousands of hours gathering the large amount of information that is contained in this book. I want to pass that information on to you. And because my recommendations are evidence based, they work for everyone, not just that one tennis player.

The reason a lot of information on toilet training is misleading (or just plain wrong) is because very few scientific studies have been performed to help us better understand toilet training. Did you know that there are thousands of scientific studies on asthma but less than a few dozen studies on toilet training? With that kind of knowledge gap, we should not be surprised that, each year, over seven million children develop some kind of toilet training problem, like delayed toilet training, day wetting, or bedwetting. All of these common problems are discussed here, and following the toilet training advice in this book will prevent many of these problems from occurring in your child. In many cases, these problems could have been prevented if parents had access to evidence-based toilet training information instead of someone's personal opinion.

Even though toilet training is a natural process, understanding some simple but important facts will allow parents to successfully and quickly train their children and avoid mountains of problems and years of disappointment. I am excited to share the information contained in this book because it has resulted from a lifetime of work, study, experience, and fun. The message I want to get across is that all parents can successfully

and quickly toilet train their children, provided they have the essential, evidence-based information I provide here. And, if things do not go according to plan and a potty training problem occurs, you are covered: this book will tell you how to deal with common potty training problems like bedwetting or daytime wetting.

About Me

I would like to tell you a little bit about my training and experience so you can understand where—literally—I'm coming from. I am chief of pediatric urology at Rutgers–Robert Wood Johnson Medical School, located in New Brunswick, New Jersey. This position allows me to research urinary control problems in children and to find and develop new ways to think about these problems. I am like a detective trying to solve a mystery. I am also surgeon-in-chief at the Bristol-Myers Squibb Children's Hospital at Robert Wood Johnson University Hospital, also located in New Brunswick. It is there that my colleagues and I have our pediatric continence center and where we have treated thousands of children with urinary control issues, from the most common to the most complex.

I think that a person's background and experience can really influence how he views things, and they affect the way he responds to different situations. Understanding a little bit about me personally might therefore help you understand how I have developed the concepts and recommendations that are contained in this book. I also want you to be able to see me as a person, not only as a professional writing a textbook. I would like to connect to you on a personal level because the main purpose of this book is to help you properly toilet train your child and also to help you overcome any toilet training problems your child might have or develop in the future. I want you to feel confident and comfortable with my recommendations so you can take charge of the situation and make things better for you and your child.

As I mentioned in the introduction, I have real-life experience in toilet training as a father and husband. My wife Anne Marie and I have successfully toilet trained our children following the simple principles outlined in this book. I admit that we are at somewhat of an advantage since I am a pediatric urologist and Anne Marie is a registered nurse, but the purpose of this book is to transfer that knowledge to you so that you can be equally successful in your home with your family.

I am fully trained and board certified in adult urology and pediatric urology. But I practice only pediatric urology, and almost 40 percent of my practice has to do with the management of children with different types of potty training and urinary control issues. These potty training issues might include problems like delayed toilet training, daytime urinary wetting, and bedwetting. This means that I have treated thousands of children with all kinds of urinary control issues over the years. There is virtually no problem that I have not seen and treated. I will address the more common of these problems in this book, and I will provide you with the same information and detailed advice that I provide to parents who come to my office for a formal consultation.

For the last fifteen years, I have also been medical director of the Pediatric Continence Center at the Bristol-Myers Squibb Children's Hospital at Robert Wood Johnson University Hospital. I developed this center fifteen years ago because I saw a need to have a place where common toilet training problems and questions could be studied and treated. Toilet training problems are very common, even if they are not talked about that much. Let's face it, talking about your child's potty training problem does not make for the best teatime conversation. The Pediatric Continence Center provides a place where these very

common problems can be openly discussed and addressed.

Our Pediatric Continence Center is now a major referral center for children with all kinds of urinary control problems, and we have specialized equipment and testing abilities at the center to examine children in more detail when necessary. You will learn about these tests later in the book, but I hope you will never need our services. The nursing director at the center who helps me care for our patients is Eileen Creenan. Eileen is a pediatric urology nurse with decades of experience treating children with different types of urinary control problems. We will hear more from Eileen later on this book, where I interview her and get a nursing perspective on common toilet training problems. She has managed thousands of children with me over the last fifteen years.

In addition to my experience as a pediatric urologist and clinician, I have written hundreds of scientific papers and done research on toilet training, daytime wetting, and nighttime urinary control problems in children. This is the evidence-based information that I mentioned in the introduction, and I often refer to it throughout this book. Some of my research provides the only evidence-based information available to help us understand toilet training and urinary control problems in children. It is truly valuable information because it is based, not on opinion, but on facts.

I started to do research in this area because there was a real need for good, solid evidence-based information on this topic. Even though toilet training is an important topic and a major milestone in child development, there have been very few studies done to understand how a child gains urinary control and what to do when things go wrong. I wanted to fix that situation by studying this topic and writing about my findings in this book. The research that I have done in the past has been evaluated and published in prestigious scientific journals. I would like to present that information to you using language that is understandable to moms and dads who may not be medically trained, parents who wish to properly toilet train their child or who want to help their child overcome a toilet training problem. I would like you to trust the evidence-based information that is presented in this book because it is backed by high-quality research and is not just a statement of personal opinion.

Because I have treated so many families whose children have different types of potty training issues, I understand how difficult these problems can be. I understand that hearing someone say that your child will “outgrow” a potty training problem can be frustrating. I know that most children and parents want these problems to go away as soon as possible and don’t want to wait years and years for the child to “outgrow” the problem. I have also seen parents become frustrated simply because there was no place to turn for good solid evidence-based advice or reliable information.

I have seen thousands of potty training problems cause difficulties for families, problems ranging from teasing between siblings to arguments between parents that have led to divorce. Yes, it can get that frustrating. Understandably, parents can grow apprehensive when their child cannot toilet train, and they may start to blame the child, themselves, or each other for the problems they are experiencing. These types of feelings are not abnormal, but they are not appropriate, either. It’s not your fault, but it’s not your child’s or spouse’s fault, either. I hope that by reading this book you will be able to successfully toilet train your child and to also better understand why your child might be

having a potty training problem. The information that is contained in this book will put you in a better position to help your child potty train; it's that simple. As you read this book, remember that the title is *It's Not Your Fault*. I selected this title because, if your child is having a toilet training problem, I want you to remember that it's not your fault. It's not your fault because you did not do anything wrong, and it is likely that no one ever told you what you needed to know in order to train your child properly. It's not your fault if no one ever told you what to do if a toilet training problem occurred in your child.

You will learn in this book that your child is not having these problems because he or she is "lazy" or "acting out." Your child does not want to have these potty training issues, but he or she may just not be able to train from a developmental standpoint. This book will help you understand what's going on so you can direct your energy on making the problem go away, rather than focusing on things that don't matter and can be potentially hurtful.

I don't really want to spend much more time on my background, but I do feel it is important to at least briefly describe myself to you. I want to share my experience with you so that you understand that this book is based on years of scientific and clinical experience and not just my personal opinion or another review of the information that is available on the Internet. This book contains unique information that has not yet been published and is not readily available to the public. I hope that you will be able to use the information in this book to successfully toilet train your child or to fix your child's existing toilet training problem. I have no doubt that, if you read this book, you will have a better understanding of toilet training and toilet training problems in children than many doctors.

Joseph G. Barone, MD

Professor and Chief, Division of Urology, Rutgers–Robert Wood Johnson Medical School

Chief of Pediatric Urology and Surgeon-in-Chief, The Bristol-Myers Squibb Children's Hospital at Robert Wood Johnson University Hospital

To make an appointment, please call 732–235–8853.

The Division of Urology website is at www.rwjurology.com.

You can follow the Division of Urology on Twitter at www.twitter.com/rwjurology.

Please join my network on LinkedIn at www.linkedin.com/in/baronejg.

About This Book

This is an evidence-based book on toilet training and toilet training problems. So what exactly does that mean? It means that the information that is contained in this book is backed by scientific studies and is therefore the best information that we have on the topic. Evidence-based information is not easily available on the Internet or in most books; it tends to be found in medical and scientific books and journals. Sometimes it can be difficult to understand, so in this book I would like to provide this information to you using language free of medical jargon.

Most of the information that is readily available to you on potty training is based on someone's personal experience or advice. Maybe someone used one method of toilet training for his child that worked, or maybe a doctor prefers one method of toilet training for her patients. This kind of information is just plain old advice that is not based on any kind of study. Just because it worked for them does not mean it is going to work for you. If we consider evidence-based information, it is more likely that that information will work for most people, including you.

I have organized this book into several logical chapters. The first chapter provides you with the basic information that you need to know about your child's urinary system. I tried not to get too scientific here, and I hope it is fun reading for you. I decided to put this chapter first because it provides you with the basic information you need to know to understand the rest of this book and to toilet train your child successfully.

The second chapter is really exciting because it will help you learn how to toilet train your child using the latest available evidence-based information. This is an extremely important part of the book, and I am really thrilled to be able to share this information with you. I recommend only the best information available, and I make sure that this information is backed by scientific study. This means that the information is evidence-based, high-quality information for your child.

In the third and fourth chapters I discuss common potty training problems that can occur in some children, bedwetting and daytime wetting. These problems occur when toilet training is not totally successful. Let's face it, nothing in life is perfect, so we need to know what to do if a child does not toilet train as well as we had wished. These valuable chapters will provide you with the hope and guidance needed to overcome any toilet training problem.

In the fifth and sixth chapters, I discuss medications and common tests that doctors order for children with persistent potty training problems. Testing and medications are not needed for most children with potty training problems, but I would like you to have this information, just in case. I want to share all of my knowledge with you.

To get different perspectives on the topics discussed in this book, I interviewed three other experts in the toilet training field, and in the seventh chapter I provide you with their takes on the subject. Each expert shares a slightly different viewpoint based on her unique background in public health, pediatrics, and nursing. I am certain you will enjoy reading what these experts have to say about toilet training.

Finally, I conclude with a chapter on alternative treatments for toilet training problems

and a chapter covering the most common questions I am asked by parents. I include the chapter on alternative treatments because I want you to know that there are options for potty training problems that most doctors are not familiar with. But I have been careful to include only those alternative treatments that might be beneficial for your child. But most of these alternative treatments have not been studied scientifically, so we can't consider the information in this one chapter to be evidence-based information.

Throughout the book, you will see highlights called "Dry Spots." These "Dry Spots" are meant to draw your attention to the most important potty training information that is available anywhere. Most of this information is missing from the vast majority of potty training books on the market, which I find amazing. When you come across a "Dry Spot," please take a little extra time to read that information and reflect on it. All "Dry Spot" information is backed by science, which means that it is highly accurate and is the kind of information that you can trust for helping your child.

And one more thing: throughout the book I have switched between using female and male pronouns when I talk about children and toilet training and continence problems—it's less clunky than saying "he or she" or "him or her" for each example. But please remember that both boys and girls can have toilet training and incontinence problems.

So let's begin with the first chapter, which discusses the different parts, or ingredients, of your child's urinary system that are needed for potty training. I truly hope you will enjoy this book, and please feel free to contact me with any questions or comments that you might have about this book or potty training.

1

Toilet Training Ingredients

Understanding Your Child's Urinary System

I always was a firm believer in understanding the basics of anything we are trying to learn more about. We would not be able to bake a tasty, moist, delicious chocolate cake if we did not understand some basic units of measurements, like what a cup, pinch, or teaspoon is. Imagine how terrible a cake would taste if the recipe called for a a pinch of salt but we used a cup instead. Likewise, how could we help our child with the toilet training process if we don't have a basic understanding of what makes toilet training possible in the first place?

In this chapter we are going to discuss the different parts of the urinary tract and especially learn about the parts that are needed for potty training. We will learn about the kidneys, ureters, bladder, and the stopper muscle that control urination. These are all the ingredients that are needed for successful toilet training, just like flour, sugar, and chocolate are needed in order to bake a tasty cake. After you learn how all of these ingredients come together to make potty training possible, you will be in a better position to understand how to potty train your child and how to deal with any potty training problems that might develop later.

The Journey of a Drop of Water

Water and urine are big ingredients in the toilet training process. Potty training is all about making sure that urine goes into the potty at the right time and place. Basically, water comes into your child's body when she takes a drink or eats food. That exact same water eventually will find its way into the potty. The trick is to get it to go into the potty at the correct time. Your body transforms all water that is drunk into urine, so the more you drink, the more urine you will produce. But here is something that you might find interesting: if you don't drink anything, your body will still make some urine. Because of this fact, you will eventually become dehydrated, or dried out, if you don't drink because your body will still produce small amounts of urine no matter what.

When we potty train our children, we want the urine produced to come out when it's supposed to and not at other times, like when your child is at school or sitting on the new sofa you just purchased. So if your child drinks a lot of water during the day, or before bedtime, then that water is going to have to come out, and it will possibly come out at the wrong time and place.

Dry Spot

It makes good sense to avoid fluids two hours before bed to reduce the risk for bedwetting.

After your child drinks fluid, that fluid is sent on to the kidneys for processing, to be turned into urine. It does not matter if your child drinks milk, juice, or water; the body will eventually turn the liquid consumed into urine. So a cup a milk before bed is not any

different than giving your child a cup of water before bed. Both milk and water are liquids, and the kidneys will turn those liquids into urine. Since the kidneys are the organs that will transform liquids into urine, we need to understand a little about the kidneys to understand potty training and potty training problems.

The Kidneys

The kidneys are two bean-shaped organs located on each side of your child's back. They are essential ingredients for toilet training. The kidneys are very smart, and they can determine exactly how much water should be kept in the body and how much is excess water that needs to leave the body in the form of urine.

The amount of urine that needs to stay in the body depends on many different things, such as the size of your child, if your child is sweating, or if your child is playing hard at a sporting event. If your child is active and sweating, the kidneys will preserve water so the body does not become dehydrated. If the body loses too much water and becomes dehydrated, bad things can happen, like headaches and even fainting. This is why we want children to drink plenty of water when they are active, especially if it is hot outside. They need to stay hydrated in order to prevent problems from developing.

To keep your child healthy, you should encourage your child to drink water during the day. This is sometimes hard to do because children don't always have access to water at school and they have active schedules, running from one event to the next. And many schools don't allow children to have a water bottle at their desks, and some schools are stingy with bathroom breaks, too. In some cases, things can be so bad that I will write a note to the school nurse requesting that a child be allowed to have a water bottle on his desk to prevent dehydration.

How Much Water Should My Child Drink?

This is a question that parents often ask. The right amount of water to drink depends a lot on the size and age of your child and how much exercise she is doing, but I want to give you a rough guide to follow. If your child is between two and three years of age, one pint of water per day should be fine. If your child is between four and eight years of age, two pints of water a day should be a good baseline. If your child is between nine and sixteen years of age, you probably want to double that amount and encourage your child to drink four pints of water a day. These are general guidelines that can give you an idea about how much water your child should be drinking. A few pints of water per day is not a lot when you think about it, but many children are not big water drinkers, and getting children to drink even this limited amount might not be easy.

Now, if it is very hot outside and your child is playing sports or exercising, you will want to increase that amount to keep your child hydrated. You might even have to double the amount. But how else can you tell if your child is drinking enough water and is not dehydrated? Well, here are a couple of things you can look at. First, you can determine if your child is drinking enough water by looking at his urine. If the urine is clear or light yellow, without an odor, then chances are your child is drinking enough water. If it is dark yellow and smelly, more water is needed! Second, your child should not have a dry mouth. If your child's mouth is dry, then chances are more water is needed. And, third, your child's skin should be supple and soft and not dry.

However, you don't constantly have to monitor how much water your child drinks down to every ounce. You should just have a general idea of the volume of liquid that your child drinks in a typical day. The reason you don't have to worry too much about the exact amount your child is drinking is because the kidneys are like little computers that can figure out how much water needs to stay in the body and how much should leave. Just like you might monitor the water quality in your pool with one of those little dipsticks, the kidneys will constantly monitor the water quality in the blood. The kidneys constantly test the blood, and if the blood has too much water in it, the kidneys will take the water out of the blood by making more urine. If there is not enough water in the blood, the kidneys will preserve water.

So let's look at the kidneys in action. As an example, if it's very hot outside and your child is not drinking enough water, the kidneys will test the blood, and the kidneys' test strip will come back saying, "There is not enough water in the blood." In that case, the kidneys will say, "We need to conserve water, and no more water is leaving the blood!" The kidneys will save every drop of water it can to prevent dehydration, and only a very small amount of urine will be produced. Remember, even if we stop drinking the kidneys will still make a small amount of urine. But this is not healthy. The kidneys run on water, just like a car engine runs on oil. We all know what will happen to a car engine if there is not enough oil in the engine. The engine will continue to run for a while, but it will eventually shut down. Likewise, the kidneys will run for a time without water, but they will eventually shut down if they have to run for a long time without water. This is called kidney failure, and we never want that to happen. That is why it is important to drink a normal amount of water during the day and to increase that amount during periods of increased activity. We want to keep your child's kidneys healthy and strong, and we can do this by providing them with sufficient water to run on.

The Ureters

I am just going to mention the ureters only briefly because they are not really involved in potty training. They are kind of like those "optional ingredients" in recipes that can be left out if desired. But I do want you to at least know what the ureters are. Once a kidney makes urine, the urine flows down a little strawlike tube called the "ureter." The ureters do not have any particular function other than to move the urine from the kidneys into the bladder. Since the ureters are just innocent bystanders in all of this, let's just remember what they are and move on to the main ingredient in our potty training recipe, the bladder. The bladder is really important in the overall potty training process, and if you understand the bladder, you will be able to understand why your child might be having a potty training problem.

The Bladder

The main ingredient of the toilet training process is the bladder. If you want to potty train your child successfully, or if your child is having a potty training problem, you need to understand the bladder. The bladder is like a storage container for the urine. Think of it as like a balloon. As urine enters the bladder, the bladder expands to hold more urine. And, like most balloons, the bladder can only hold a certain amount of urine, depending on how big it is. For example, if your child's bladder is small, she will only be able to hold small amounts of urine. She may not be able to hold urine for two to three hours, like other

children. This is an important point to understand.

<i>Ingredient</i>	<i>Function</i>
Kidney	Makes urine
Ureters	Carry urine to bladder
Bladder	Stores and empties urine

As the urine flows into the bladder, the bladder will slowly fill until it can't hold any more urine. At that point, your child will either go to the potty, or the bladder will just empty on its own and your child will have an "accident." The bladder, including its size, is therefore a very important ingredient in the overall potty training process. If the bladder is small, then your child may have to go to the bathroom very often. Or, if your child's bladder is big, he may be able to hold urine for much longer periods of time. I have lots of patients who go to the bathroom every hour because their bladders can't really hold much urine and other patients who might go only a few times per day. If you understand the bladder, you can understand why some children can hold a lot of urine while others have to constantly go to the bathroom.

We sometimes say that the bladder in children who go to the bathroom all the time is too small. But we don't consider a small bladder to be a medical problem; instead, we consider it to be a developmental delay. This just means that your child's bladder has not grown along with the rest of him. But rest assured that, as your child grows, the bladder will eventually enlarge to a normal size and will catch up. So having a small bladder is not a terrible thing, and it is not a medical problem.

But I would like you to focus on this point: the size of your child's bladder can determine how easy it is to potty train. If your child's bladder is small and can hold only a small amount of urine, it won't take long before it is filled and your child has to go potty. In this case, your child will need to go to the bathroom more often than other children. A small bladder could make it more difficult to potty train because your child may not be able to hold one or two hours' worth of urine without having an accident.

How to Determine Your Child's Proper Bladder Size

You can determine how big your child's bladder actually *is*, and you can also calculate how big it *should* be. The first thing you will need to do is to have your child urinate into some type of container that will measure how much urine he can hold. Something like a measuring cup will do. When you do this, you have to make sure that your child actually has to go to the bathroom and that the bladder feels full to your child. Take four measurements, in ounces, over the course of a few days and determine the average amount of urine recorded. To determine the average amount of urine recorded, just add up all of the volumes you recorded, and then divide that number by four. It's that simple. This number is a good estimate of your child's actual bladder size.

Dry Spot

Age plus two is the normal bladder capacity for your child in ounces. Compare this to

the average volume you obtained. This will help you to determine if your child has a small bladder.

Now that you know what your child's bladder size is, you can determine if it is normal, small, or large. You can determine if your child's bladder size is normal by comparing the average volume that you calculated to the normal bladder size for a child based on age. The formula for determining the normal bladder capacity based on age is simply the age of your child plus two. This gives you the normal bladder capacity in ounces. For example, a five-year-old child should have a seven-ounce bladder capacity (age five + two = seven ounces), and a seven-year-old should have a nine-ounce bladder capacity (age seven + two = nine ounces). Once a child reaches about eight years of age, the bladder capacity is ten ounces (age eight + two = ten ounces), and this represents maximum bladder capacity for most children and young adults. So all children ages eight and above should have a ten-ounce bladder capacity, since the bladder size does not increase much beyond that.

The Urinary Stopper Muscle

There is another ingredient involved with potty training that is important for urine control. In order for the urine to stay inside the bladder, the bladder has to have a way to hold in the urine. Think of the balloon again. If you blow a balloon up but don't tie it closed at the neck, then all of the air will rush out. Well, in order for the urine to stay inside the bladder, something called the "urinary sphincter muscle" has to be working properly to prevent the urine from running out of the bladder, just like air would rush out of a balloon. So in addition to being the proper size, the bladder also has to have a strong urinary sphincter muscle to prevent the urine from leaking out. In this book, I refer to the urinary sphincter muscle as the "stopper muscle."

In some children, this muscle might not work very well; it's kind of leaky, and the urine will sometimes drip out of the bladder when it's not supposed to. I think you can see how this type of leakage might have nothing to do with the bladder size. The bladder could be a normal size, but if the stopper muscle is not working well, the bladder never really has a chance to fill up all the way before it starts to leak. Having a weak stopper muscle could also make potty training more difficult.

If a weak stopper muscle is preventing potty training, then we need to try to make the stopper stronger and work more effectively. We use our own stopper muscles all the time without knowing it. It is the muscle that we use when we have to go to the bathroom but there is no bathroom available—we clamp down on our stopper muscle to keep the urine in the bladder. We don't just urinate on the floor whenever we get the urge to go; we hold onto the urine by squeezing the stopper muscle, and this prevents urination until a bathroom is available.

Understanding how the stopper muscle works may help you understand why it's possible for your child to have a perfectly normal sized bladder but still have potty training problems. In this case, the bladder might be normal size, but the stopper muscle is not working very well and can't keep urine in the bladder when it is supposed to. You can get a clue that your child's stopper muscle might be weak if the size of his bladder is normal but he is having trouble potty training.

Review of the Basics

We have learned a lot so far about the different ingredients that are necessary for potty training. Let's take a second to review the recipe briefly. We learned that the first ingredient, water, is turned into urine by the kidneys. The kidneys, our second ingredient, make urine based upon how much water is in the blood and how much water your child drinks. The kidneys send the urine down to the bladder, the third ingredient, through tubes called "ureters," the fourth ingredient. Once the urine reaches the bladder, the urine is stored until it's time to urinate. We learned that, in order for the bladder to hold urine, two things have to happen. One, the bladder has to be a normal size to hold a normal amount of urine. And two, the stopper muscle, the fifth ingredient, has to be strong to hold the urine inside the bladder. That's about it. That is all you really need to know to understand potty training. Now that we understand the basic ingredients of potty training, it is time to start cooking.