

THE
NEW
PUBERTY

HOW TO NAVIGATE
EARLY DEVELOPMENT
IN TODAY'S GIRLS

LOUISE GREENSPAN, MD, AND
JULIANNA DEARDORFF, PhD



RODALE

INTRODUCTION

WELCOME TO THE NEW PUBERTY

Is She Entering Puberty Early?

ISABEL'S TRANSITION INTO PUBERTY WAS like that of millions of other girls, from a purely physical standpoint. After Isabel complained of discomfort in her left nipple, her mother noticed a bump under it that started to grow bigger. Within a few weeks, the same thing happened to her right nipple. The pediatrician noticed that Isabel's height had edged out of the average range since her last visit, and she was now taller than most of her peers. When the doctor examined Isabel's breasts, she confirmed that Isabel was developing breast tissue even though she had no pubic hair yet.

All of this would have reflected an ordinary start of puberty had it not been for one significant difference: Isabel wasn't a preteen with dreams of dancing with her current crush. She was just 7½ years old. When the doctor ordered a bone age x-ray, which would reveal how "old" Isabel was from a physiological standpoint, the results indicated that Isabel's bones were as biologically mature as those of a 9-year-old. (An image of the wrist and hand can determine if there's been long-term estrogen exposure, which causes early maturation.)

Further testing demonstrated that the hormones responsible for triggering her physical changes were coming from her pituitary gland, the initiator of puberty, which signals certain hormones to instigate the process. To rule out any rare anomalies like a brain tumor that could have sparked puberty, the doctor also ordered an MRI. Fortunately, it didn't reveal any abnormalities, so Isabel was deemed to be an otherwise healthy girl beginning puberty during the phase of her life when she was still playing house with her dolls.

Welcome to the new puberty.

If you've found yourself in panicky discussions with other parents or been reading media coverage about girls developing faster these days and entering puberty at an earlier age than previous generations, the reports are true. Indeed, a growing number of young girls are being catapulted into early physical development long before they are socially and emotionally ready for the change. According to the National Institutes of Health, puberty typically happens between ages 8 and 13 for girls, ending with sexual maturity and the ability to reproduce. Just a generation ago, less than 5 percent of girls started puberty before the age of 8; today, that percentage has more than doubled. In fact, our longitudinal study as part of the Breast Cancer and the Environment Research Program (BCERP), which assessed the onset of puberty in more than 1,200 girls who have been tracked since 2005 across three cities and was published in the medical journal *Pediatrics* in 2010, found that by age 7, more than 10 percent of Caucasian girls in America had started growing breasts, along with almost 25 percent of African American girls and 15 percent of Hispanic girls. And by age 8, those percentages had spiked to 18, 43, and 31, respectively. This begs the question: *What's going on?*

We'll answer that important question in this book. What hasn't changed is that puberty typically starts with breast development, then armpit and pubic hair, acne, a growth spurt, and, finally, menstruation. While it's easy to start wondering how environmental chemicals or

dietary choices may be affecting our children's development, the new puberty reflects a much more complex set of circumstances than most people think. And it's often not nearly as dramatic as some feature stories would have you believe. Although many journalists have portrayed extremes, profiling 5-year-olds with the body odor of a teenager and shopping for bras with their mothers before heading to kindergarten, such examples are truly exceptional. The facts of early puberty for most girls are much less intimidating. In fact, even the words "puberty" and "normal" are grossly misunderstood by many people because popular perceptions of what is meant by these terms don't reflect the scientific literature. The good news is that despite the media's somewhat sensationalistic slant on this rapid turn of events for modern girls coming of age, this book aims to quell fears that going through puberty early is necessarily "bad" (or that there's something "wrong").

That said, traditional wisdom about how to help a child through puberty falls short when it comes to caring for a girl facing this transition early in her life. Parents, teachers, and professionals who work with children need much more than advice on how to talk about physical changes and sex; they require a host of skills that will help them teach girls how to appreciate and love their changing bodies and nurture their evolving identities, and also to help girls manage the eventual health risks their early puberty might carry. (Often these conversations don't even mention the birds and the bees.)

Girls who enter puberty early fall into two categories: There are the rare girls with known disorders like Central Precocious Puberty, wherein a girl's pubertal process starts abnormally early for unknown reasons or due to a defect in the nervous system, and then there are the bulk of the girls, who simply develop on the early side of the normal curve. But defining this "normal curve" has been a moving target for us in the medical community. Continual shifts in our scientific thinking about what characterizes a healthy normal-but-early puberty have not only provoked some debate among the experts who study it, but

also led to much confusion and misinformation among the public. Throughout this book, we will dispel myths that have unfortunately begun to circulate over the last decade, since “early puberty” became a popular topic for discussion.

Take a moment to consider some of the questions that are probably on your mind as you begin this book. Is soy really an estrogenic time bomb? Do hormones in meat and dairy hurt a girl’s reproductive health? Can early puberty be stopped or reversed? *Should* it be? What’s causing girls to start their pubertal process at younger ages today? How could things have changed so much in just one generation? These are questions we field routinely—from parents, teachers, school administrators, doctors, and health professionals—and we trust you’ll be as surprised and reassured as they have been by our answers. For those who are seeking immediate solutions for guiding and nurturing rapidly developing girls, either because you work in some capacity with such girls or because you have a daughter of your own, we will provide highly practical strategies (e.g., lists of things to do or avoid and scripts for talking to girls) for supporting children going through this experience. Whether you care for a girl who is years away from puberty or one who is already in the throes of this important transition, this book will help you prepare for whatever lies ahead. We understand the unique set of challenges that arise when puberty begins for a girl who hasn’t even begun to fathom what that means or what’s ahead of her.

Before we present an overview of the upcoming chapters, let us tell you a little about ourselves. We’ve been working in the trenches of child and adolescent health in both clinical and research settings for years, nearly our entire professional lives, and between us, we have covered every angle of the early puberty phenomenon. In 2005, we—Louise Greenspan, a pediatric endocrinologist, and Julie Deardorff, a clinical psychologist—teamed up to study the complex nuances inherent in the new puberty, which eventually inspired us to write this manual for managing its potential effects, from blessings in disguise

to serious hazards. People affected by early puberty, from panicked parents to educators and leaders in health care, have long urged us to combine our wisdom to create a scientifically grounded and practical book that addresses their concerns. And this is just what we've done. Even though we're still in the midst of our research and unveiling new insights every day, we've accumulated plenty of knowledge over the past decade to create an essential guide that can equip you with the information you need to traverse this terrain. Some of our most helpful information stems from the encounters we have had with individuals and families who live and breathe this new reality daily.

We should also add that aside from our professional jobs as doctors and scientists, we are mothers of girls, too. We go home every day to young daughters who are entering puberty themselves. We compare our notes and observations all the time from a deeply personal perspective, for we've pondered all of these emotional and sometimes thorny issues as parents as well as providers. And we practice the rules we preach in this book in the hope that our own loved ones will enjoy a most fulfilling, good long life.

WHAT YOU'LL FIND IN THIS BOOK

The two of us have now been collaborators for nearly 10 years. Over the last decade, we have forged many partnerships with researchers who specialize in such diverse fields as diet and obesity, chemical exposure and endocrine-disrupting chemicals, physical activity, and social justice and poverty issues—all of which lend clarity and insight to this befuddling topic. Among the projects we've been privileged to take part in are the CYGNET study and, of course, this book, in which we step outside academia to share with you what we've learned. It's been a thrilling journey, one that has taken many intriguing twists and turns through the years as new theories come into play and science tries to tease out details from very difficult questions—some of which cannot be answered through a standard scientific experiment. We are, after all, dealing with a multifaceted subject incorporating many forces. It took years for the collaborative group of epidemiologists, nutritionists, toxicologists, and clinical scientists (as we both are) on CYGNET and in BCERP to develop a common language for talking about puberty, growth, development, and even “environmental” concerns. To the toxin experts, environmental exposure initially meant chemicals in the diet, air, water, and household products; to us, this also encompassed the neighborhood and family environments, as well as the environmental factors that influence risk for overweight and obesity. Once we got on the same page about how to define the problem, though, there was no stopping us.

In the fall of 2013, a major new paper from CYGNET and our partners participating in the BCERP was published that further established that girls are starting puberty earlier. We had tracked breast development—a key marker for the start of puberty—among 1,239

ethnically diverse girls from 2004 to 2011. This was an important study because previous ones hadn't followed the same girls over time as they progressed through puberty while measuring the multitude of factors that we were assessing. We found the average ages for the onset of breast development were approximately 8 years 9 months for African American girls, 9 years 3 months for Hispanic girls, and 9 years 8 months for Caucasian and Asian American girls.

Now that we have documented evidence that girls are in fact developing breasts earlier, the conversation is focused on what is causing this change and what the health implications are. Generally speaking, puberty involves three momentous events for girls: breast development, pubic (and later armpit) hair growth, and eventually the beginning

of a menstrual cycle. These events usually happen in that order over the course of about 2 to 4 years. But there's an interesting discrepancy. While studies have revealed that the average age of breast budding has dropped significantly since the 1970s, the average age of a girl's first period, or menarche, in recent years has fallen only slightly, from 12 years 9 months to 12 years 6 months. How to explain this inconsistency? Why would the early signs of puberty

be starting earlier, but not necessarily menstruation? Put another way: Why would today's girls be experiencing an extended interval between the time their physical bodies begin to develop and when they reach full maturation and become capable of reproduction?

That's exactly what we're going to explore in this book, along with many other mystifying aspects of this phenomenon. And we won't be highlighting just what we've amassed in our own work. We draw on the ideas and "best practices" gleaned from the entire field, so you'll become privy to the knowledge of high-profile physicians and psychologists who specialize in this area and work daily with families, as well as of pioneer-

NEW PUBERTY FACT

Girls today tend to experience breast budding at a much earlier age than girls in the 1970s, but they don't necessarily get their first period that much sooner than their 1970 counterparts.

ing neuroscientists, epidemiologists, and behavioral researchers who spend their days buried in traditional lab experimentation and field-work to add clarity and perspective to this growing new reality.

In the first chapter, we'll describe the journey that science has taken to understand "the new puberty" as well as our own hunt for answers. Although much of the research has taken place over the past decade, we'll go back in time to post-World War II Europe to see how we can put the new puberty in perspective. By showcasing science from the past, we make relevant how to best manage the new puberty today and execute the strategies we recommend for doing that. In Part I, we'll address many of the questions that are foremost on the minds of parents, teachers, coaches, and other caregivers, such as why early puberty is occurring (and might be here to stay) and how to ascertain what could be triggering it. Then, in Part II, we'll cover everything you need to know about the appropriate actions to take, including whether to pursue medical intervention. We want to equip you with enough information to avert panic and give you step-by-step guidance to move forward with calm and confidence. You'll learn how to manage potential risks coming from the environment, how to establish healthy lifestyle habits in young girls, and how to talk openly to girls about what's happening in their changing bodies. Throughout the book, you'll learn vital skills for building and maintaining emotional closeness, which is essential to the bond between a parent and an early developing daughter.

Among the topics we're going to cover in the pages ahead:

- Why girls are developing faster today than just a generation ago. What are the six surprising potential sources of early puberty?
- The three biological origins of early puberty in the body. Why is knowing where in the body early puberty originates a critical key to shaping a girl's future health?
- What signs to look for to determine if a girl is going through early puberty and what steps to take if she is. Should a specialist

be consulted for medical intervention? What are the risks of taking a wait-and-see approach?

- What effects early puberty can have on a girl now and in the future. Why are early bloomers at a much higher risk for behavioral problems like drinking and drug use, as well as medical health challenges such as obesity, depression, eating disorders, and, later in life, reproductive cancers involving the breast and uterus? How can you help mitigate these risks? Will early puberty propel her to start having sex sooner? How is early puberty affecting her developing brain?
- How to initiate and continue to engage in difficult conversations with daughters in early puberty. Why is it essential for parents to have conversations with their girls about puberty and certain aspects of sexuality, no matter how uncomfortable they can be, and why is it important to avoid the “wait until they ask” approach espoused by many books on the subject? How can parents build and maintain emotional closeness with prematurely developing girls? How can you set special limits for a girl going through early puberty and handle the inevitable blowups of a preteen?
- What preventive steps a parent whose child is years away from puberty can take. What are the top 10 principles a parent can follow to build emotional closeness and reduce the risk her prepubescent daughter will go through puberty early?

In proposing a new definition of puberty for the 21st century, we’re going to demonstrate that early puberty cannot be blamed on a single trigger. Environmental toxins and foodborne chemicals are not the only potential culprits; strong social and socioeconomic forces and family stressors as commonplace as high levels of conflict can all come into play. The effects of obesity also can have an impact. Once equipped with the facts and a game plan, you’ll discover that taking charge of a

girl's pubertal experience is manageable (and doesn't entail an unrealistic change in lifestyle).

A quick note about boys: It's beyond the scope of this book to cover the pubertal process in boys today and whether or not they too are hitting puberty earlier than before. Boys typically experience puberty later than girls, entering this phase sometime between the ages of 9 and 14. Although some data suggest that they too are starting sooner today, the jury is still out, and future research will reveal the truth. Boys' biology is different, and they, therefore, respond differently to certain environmental factors; obesity, for instance, which may contribute to a girl's early puberty due to increased estrogen levels, might *delay* a boy's puberty due to the same increase in estrogen. The thinking used to be that late-blooming boys had a tougher time than early bloomers, but now there's evidence that early puberty can negatively affect boys in a number of ways, both behaviorally and emotionally. Although we won't address boys specifically in this book, much of the advice we provide—how to encourage healthy habits and build emotional closeness, for example—applies to them as well. So if you have a son or work with boys in some capacity, you'll still find useful advice in this book.

There's no doubt we have a lot to learn in the fields of science and medicine about how early puberty affects girls physically and psychologically, both now and in the long run. Many girls who start maturing by age 8 progress swiftly and have their first periods at about age 10, and some parents choose to medicate with drugs under a doctor's surveillance to slow it all down. Other girls progress through puberty more slowly (even if they start early), and most girls do fine under the proper guidance of parents who feel confident that their daughters will get through this early passage without major problems. Put simply, girls who start puberty early don't necessarily have a medical problem. You'd

NEW PUBERTY FACT

Just because a girl enters puberty early doesn't necessarily mean she has a medical problem.

be surprised by what patience, knowledge, and perspective can do to assuage worries and discomfort. The vast majority of girls who start puberty early do not require any medical treatment whatsoever. Once we take parents through what we call the process of normalizing, which is intended to reduce the anxiety caused by alarming statistics, rarely do we encounter families who continue to insist on drugs to delay puberty. Most parents adapt to the new normal and learn to cope with the pubertal shifts, helping their daughters adjust. Stated another way, this book is by no means an advertisement for medical intervention or a treatise on how our “toxic world,” as it’s often labeled in the media, is having an impact on our young generation. Instead, we strive to simply relay the facts and provide the context that a parent or caregiver needs to appreciate, understand, and effectively navigate the new puberty.

Like many girls who go through puberty early, Isabel—the 7½-year-old whose transition to puberty you read about earlier—had a happy outcome. Over time, her parents helped her cope with her changing body by engaging in continuous open dialogue that reinforced their emotional closeness, and they made a few lifestyle shifts at home to diminish some of the potential associated health risks and to prepare her for maturing early. This included paying closer attention to Isabel’s diet as well as her exercise and sleep habits to help optimize her body’s innate physiology and protect her from becoming overweight or obese. Although her parents assumed she’d get her period early too, it arrived when she was 11—only slightly sooner than the majority of her peers. Admittedly, Isabel was a challenging case for us doctors because at barely 7½ years old, she stood on the border that delineates those who are treated with medication and those who are not. Her parents initially wanted Isabel’s puberty halted with drugs, but in the end decided to let her body continue on its own course. When she turned 10, her parents struggled to encourage her to wear age-appropriate clothing in the face of social pressures from a group of older friends, but they weathered that storm using some addi-

tional tips featured in these pages that are proven to work on kids of this age who think they should be shopping at Forever 21.

We all want our children to grow into healthy, joyful, thriving adults. This is especially true when it comes to raising girls today, for we live in a society that increasingly celebrates accomplished women and those who maximize their talents and strengths. But doing so requires completing a successful journey through one of the most confusing time periods in a young girl's life: puberty. And when it happens early, it can be grueling—but it can also be rewarding.

At this point, you may be asking: Is my girl going through early puberty? On the next few pages is a questionnaire that you can use to help you determine whether or not your girl has started puberty. This will give you a general sense of where she lies on that pubertal continuum and yield a base for perusing the rest of the book. We also invite you to go to thenewpuberty.com for additional support and access to more resources that are continually updated. There, you'll find a comprehensive list of studies—many of which are mentioned in this book—and downloadable materials that will help you tailor the information in this book to your unique circumstances.

Let's get started.