







LET'S GUT HEALTH & TUMMY TROUBLES

lmost everyone has experienced a tummy ache or digestive discomfort, but there is a lot more to know about gut health than just the soothing solutions you eagerly seek when trouble arises. That's why Maria Despres, NP, WakeMed Children's - Pediatric Gastroenterology, wants to teach families more about gut health and help adults and kids understand why it is so important.

"The gut does so much more than it often gets credit for it's the unsung, unglamorous hero of the body," said Despres. "Beyond digestion, it supports neurodevelopment, strengthens the immune system, produces essential vitamins and helps absorb the nutrients we need."

Despres says the gut is in constant communication with the brain and central nervous system through something called the gut-brain axis, and that means it can directly influence mood, focus and stress levels.

Fueling Up to Feel Better

For older children and adolescents, the basics for a healthy gut make a big difference. "Regular meals, plenty of fiber, good hydration, and daily physical activity go a long way," said Despres. "Once kids are more on-the-go, it's helpful to continue to reframe food as energy." She recommends reminding teens that just like a phone or tablet needs to be charged, or a car needs gas, their bodies need to be fed - ideally with regular, nutritious meals. Despres says too many teens skip breakfast, which isn't good for the gut and can negatively impact brain power for academics and overall mental health.

Because the gut and brain are so connected, Despres says parents should know (and will likely notice) that when a child's digestion is off, their mood, sleep and energy levels can be off, too.













Changes with Ages & Stages

Kids are more sensitive to changes in diet, illness, and medications, so building a healthy gut early on can lay the foundation for strong immunity, steady growth, and a healthy brain and nervous system.

Newborns start out with a simple gut microbiome that begins to diversify in infancy. Until 12 months, most of a baby's daily nutrition should still come from breast milk or formula. "When initial solid foods are typically introduced around 4 to 6 months, they are mainly for sensory development and exploration at first, so think of them as extras rather than replacements for milk feeds," said Despres. "Start with single-ingredient purees and gradually expand to different fruits, vegetables, and whole grains to build a diverse gut microbiome and broaden taste preferences. The only food off-limits before age 1 is honey."

Variety & Consistency

Once you begin to transition a baby to solids, Despres says one of the best things you can do to support gut diversity is consistently introduce a wide variety of foods in the toddler years. She explains that this can also help prevent food allergies and aversions for young children. For toddlers, preschoolers and beyond, keep offering colorful fruits and vegetables, even if they don't eat them the first (or fifth) time.

Don't underestimate how perceptive children are – be mindful of your own routine and what is on your plate at family meals to model healthy eating habits!

The Balancing Act of Bacteria

The gut is home to billions of tiny bacteria, which are called the gut microbiota, and Despres says they keep everything running smoothly. She likes to tell families to think of it like the movie "Inside Out"— only instead of little emotions behind the scenes, you've got little bacteria running the show.

"When bacteria in the gut is balanced and working together, everything functions well," said Despres. "But if the balance is off it can throw the whole system out of whack, leading to gastrointestinal (GI) symptoms such as bloating or abdominal pain and other things you might not expect, including allergies and autoimmune conditions."

Hydration for A Healthy Gut

- · Water is the best!
- Sugary drinks, sodas and energy drinks can harm gut bacteria and disrupt hydration.
- Sports drinks should only be used for prolonged, intense activity.
- Caffeinated drinks can worsen reflux and sleep problems so it's best to limit them and avoid too close to bedtime.
- Whole fruits & veggies can be hydrating while also providing fiber
- If you offer juice, stick to 4 oz./day or less; choose 100% fruit juice without added sugar.

After Antibiotics

Antibiotics can upset the delicate balance of bacteria in the gut, and it can take a while for things to get back to normal. When a child is sick and prescribed antibiotics, follow these four steps for healthy recovery.

- Don't rush kids back to their normal diet – take things slow; follow your child's cues.
- Offer gentle, bland, easy-todigest foods (like the BRAT diet) until symptoms subside.
- Prioritize fluids for hydration this is extra important in the first few days.
- Talk to your pediatrician about giving probiotics during or after antibiotics treatment.

"It's usually a good idea to add in a solid multi-strain (10+) probiotic during the recovery period," said Despres. "Go ahead and ask about adding in probiotics when an antibiotic is prescribed."

COMMON CONCERNS & COMPLAINTS

Constipation Frustration

"While many may avoid talking about it, constipation is a common issue across all age groups," said Despres. "Almost every child will deal with it at some point." Constipation can cause stomach pain, decreased appetite and even behavior changes so it's important to address it right away. It will not go away on its own, and untreated constipation can lead to stool withholding, discomfort, and long-term bowel issues, including resistance to potty training and soiling accidents.

Families should reach out to their child's primary care physician for medical advice and support early on when a child seems constipated. "Gentle laxatives, along with diet and lifestyle changes, are often needed to resolve the issue," said Despres. "Consistency is key, and treatment may require weeks to months of steady support."

Reflux Reality

Many times, the first run in with reflux is during infancy, which is often a normal process that happens because the esophagus is still immature. Once it resolves, most kids don't experience reflux again until they are in school, but Despres says it can come back with a vengeance and is frequently related to stress or specific dietary habits.

Anxiety & Abdominal Pain

Recurrent abdominal pain is common in schoolage children and teens. In many cases, the pain is linked to stress, anxiety, or irregular bowel habits rather than a serious medical issue.

Serious Symptoms

Pay attention to what's going on with kids when they complain about their stomach. The symptoms below warrant a call and likely a visit to their pediatrician.

- Blood in vomit
- Stools with blood or mucous or if greasy-looking
- · Persistent vomiting or diarrhea
- Unexplained weight loss or poor growth
- GI complaints accompanied by frequent fevers, night sweats, or unusual fatigue
- Ongoing severe pain that limits routine activities or interferes with daily life.

A trip to the Emergency Department is warranted if your child's belly pain is sudden and severe – especially if it's on the lower right side, which can be a sign of appendicitis. If a child's pain is paired with other concerning symptoms such as a fever, blood in stool or vomit, persistent vomiting, a swollen belly or an inability to stay awake, these are red flags that require emergency evaluation.

THE STRESS CONNECTION

Children today face increasing pressures — socially, academically, in family life and in sports. For the developing brain, this can sometimes feel overwhelming. And since the gut and brain are connected, many kids Despres sees with functional GI disorders are experiencing symptoms that stem from or are worsened by stress.

"Unfortunately, children may not have the awareness or language to grasp the stress-gut connection or explain how their body is internalizing stress," said Despres. "Parents and caretakers should prioritize letting kids be kids with time for fun along with open dialogue and relaxation because those things are just as important for gut health and overall well-being as the food children eat – it takes a holistic approach."

"Always trust your parent gut! If something feels off, it's worth a conversation with your child's pediatrician."



PROBIOTICS & PREBIOTICS

You've probably heard about both probiotics and prebiotics, but what is the difference and what are good sources? Despres breaks it down to the basics of what we need to know and shares what foods to eat for both.

Probiotics are live, "good" bacteria that help keep the gut balanced. You can get them through supplements or by eating fermented foods like yogurt and kefir.

Prebiotics on the other hand, are the non-digestible fibers that feed those good bacteria and help them grow. Foods like bananas, onions, garlic, oats and whole grains are excellent sources of prebiotics.

Probiotics are the healthy bacteria; prebiotics are the food and nourishment they need to thrive. Both work together to support a strong, diverse gut microbiome.

Probiotics can be helpful for some kids, but they're not necessary for everyone. Despres says the main job of probiotics is to help replenish and rebalance the gut microbiota, so they tend to be most beneficial for children in the following situations:

- Recent condition caused vomiting and/or diarrhea (like a stomach bug)
- Taking or recently taken prescribed antibiotics
- Struggling with allergies and/or eczema
- Dealing with a chronic condition like constipation or functional abdominal pain

If things seem out of balance, talk to your child's doctor for advice regarding their specific condition and needs.



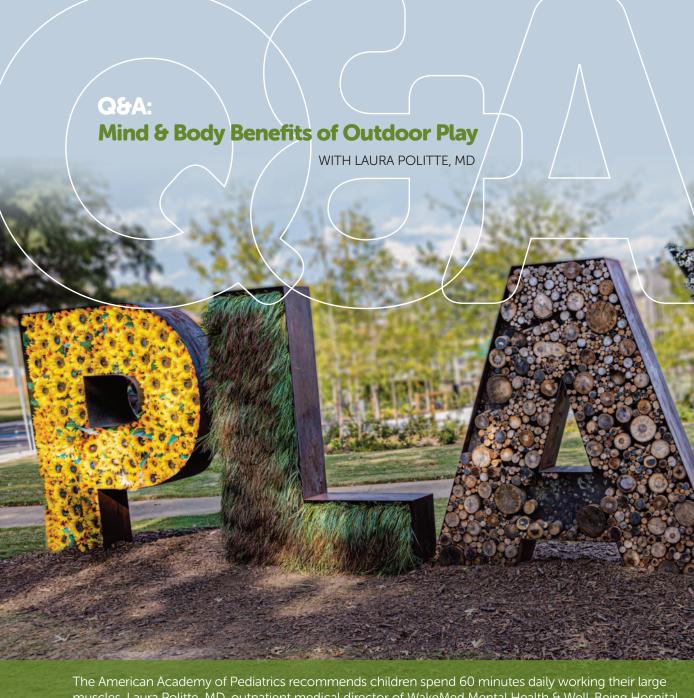
MEET THE EXPERT

Maria Despres, NP, WakeMed Children's - Pediatric Gastroenterology

Maria Despres is a nurse practitioner with clinical interests in the gut-brain axis, functional gastrointestinal disorders and the role of nutrition and mental health in supporting overall well-being. She completed her undergraduate degree at Southern New Hampshire University in Manchester, NH and received her master's at Duke University in Durham, NC.

Despres believes in building strong partnerships with families and exploring the full story behind a condition. Her goal is to create a safe space where kids and families feel heard, valued, and supported throughout their care journey.

When not helping patients, Despres is drawn to creative, hands-on leisure activities. She especially enjoys gardening, home improvement projects and spending time with her husband and two kids



The American Academy of Pediatrics recommends children spend 60 minutes daily working their large muscles. Laura Politte, MD, outpatient medical director of WakeMed Mental Health & Well-Being Hospital, agrees with that and also wants families to know that the benefits of time spent exploring and playing freely outside go far beyond physical health and can significantly improve mental health.

Why is time outside important for health and well-being?

There are many benefits to time outdoors! Besides getting vitamin D from sun exposure, outdoor light is a natural mood booster. We also tend to be more curious and physically active outdoors, which are important for physical and mental health.



North Carolina has more than 200 Environmental Education Centers with outdoor experiences for the public. Visit **eenorthcarolina.org** to plan your adventure and explore nature up close.



"Everyone needs a healthy dose of outdoor time and the freedom to explore and let their mind and bodies wander."

Dr. Laura Politte
outpatient medical director
WakeMed Mental Health & Well-Being Hospital





How do kids benefit from simply being outside?

The sights, sounds and smells of nature have natural grounding benefits that can help get us out of our heads and feel more present in our bodies, leading to less stress and anxiety. There is a sense of awe and wonder that we get from being in a beautiful natural setting that is so helpful for putting everyday problems into perspective.

What is the connection between physical movement and mental health?

Physical activity has so many mental health benefits. Vigorous movement (like the kind that raises your heart rate and makes you feel a little out of breath) releases brain chemicals called endorphins that make us feel good. Exercise has even been found to have benefits equal to medication for depression.

Being active together outdoors with your kids is a great way to connect and help the whole family de-stress. It doesn't have to be complicated – whether you take a hike,

explore a park, have fun at a playground, or just throw a ball around – the key is fitting in that daily activity.

When kids are idle and use screens instead of actively playing outside, what are they missing out on developmentally?

Active time outdoors helps children develop and build fine and gross motor skills. Being outside also helps teach kids to enjoy less stimulating activities — to just exist without being directly entertained, which is important for developing attention, concentration and perseverance.

I tell my patients that video games and online content are designed to be addictive. They're highly stimulating (think flashing lights, rapid movements, fast-paced delivery) and hard to stop. When we over-rely on electronics for entertainment, we lose the opportunity to develop creativity, connect with others, and incorporate physical movement into play.

Natural Skill-Building for Kids

When kids explore outdoors, they learn to interact with the world while enhancing physical capabilities and developing essential skills. "Prioritizing outdoor time for kids gives them natural opportunities to build and refine various skills." said Dr. Politte.

Consider the popular childhood activity of climbing trees. Kids use their hands, feet, bodies and minds to reach new heights. This type of activity not only helps fine-tune motor skills but can also help with proprioception development, which is the awareness of your body's position and movement that influences how kids move, balance, interact with their environment, and even regulate emotions.

As kids explore and play freely, they push, pull, tumble, build, lift and participate in a variety of movements that enhance coordination and get their hearts pumping. They also learn to assess risks, create plans and take action.

Dr. Politte explains that when kids face challenges during play, they learn to problem solve, overcome hurdles, experience success and build confidence – all while experiencing a range of emotions and processing their feelings.

"Kids need the freedom to run, jump swing and navigate uneven surfaces and new places," said Dr. Politte. "By observing kids at play, parents can witness their skill-building while also assessing and responding to risks in a supportive way when there are serious dangers or when an activity or level of risk is not age appropriate."

Remember to keep the focus on fun and join in the adventure sometimes, especially if the kid(s) invite you to participate – you never know what you will accomplish together.

How does spending free time exploring the outdoors help children?

Many studies show that being outside is a natural way to calm anxiety and boost mood, especially settings that involve running water such as creeks and rivers. Kids are naturally curious and creative and outdoor settings offer a multitude of outlets for these gifts.

From caterpillar houses to mud pies factories and games of hide and seek, nature provides kids with an endless supply of free play. Creativity, curiosity, and ingenuity are critical life skills that aren't easily taught in a classroom, and unstructured play is a great way to develop these. And it's cost-free!





Dr. Politte, pictured above with her three children, enjoys getting outdoors and exploring parks with her family.

We asked them to join us at Gipson Play Plaza, Raleigh's newest play destination, for a fun exploration of the Woodland Garden, which features meandering paths, flowering understory and two giant granite boulders.

<u>Gipson Play Plaza</u> 715 Biggs Drive, Raleigh 27603 dixpark.org/qipsonplayplaza According to the CDC, youth in the United States use e-cigarettes (vapes) more than any other tobacco product.

While most adults know that tobacco and nicotine products are dangerous, new products are being frequently introduced by manufacturers making it challenging for parents to keep up with all the things youth may be tempted to try. Many adolescents think vaping is harmless so it's important to learn the facts and talk about the dangers of vaping and nicotine.

"Vaping has its own dangers and can be even more addictive and harder to quit than traditional cigarettes," said Kevin Davidson, MD, WakeMed Pulmonology, who identified and reported cases of vaping related lung injury in North Carolina in 2019. His findings were published in the CDC Morbity and Mortality Weekly Report. Click here to read the findings.

What is Vaping?

When someone uses a battery powered device (often called ecigarettes or vapes) to heat liquid into a vapor (aerosols) that is then inhaled into the lungs.

The devices used for vaping look like writing pens, highlighters, flashlights, flash drives or other common household items. They are known by several names, including but not limited to e-cigarettes, vapes, vaporizers, e-hookahs, tank systems and mods/pods.



Let's Clear the Air

There are a lot of misconceptions about vaping, but one thing is clear – young people need to know the health risks and should be encouraged not to experiment with e-cigarettes (vapes). Advertising that promotes vaping as a safer alternative to traditional cigarettes has contributed to the confusion and lack of awareness about the dangers of vaping.

Many are introduced to vaping by school peers, and they do not know what they are inhaling. They often believe e-cigarettes are safe and don't realize they are vaping nicotine. The truth is that one vaping session can deliver more nicotine to the airways than smoking one cigarette. Studies show that adolescents who vape are more likely to become addicted to nicotine and start smoking.

Caretakers and community leaders need to work together to provide teens with accurate information. The American Academy of Pediatrics has identified the use of e-cigarettes by youth as a significant public health concern. Educational toolkits about vaping are available at aap.org.



The Allure

"We are very concerned about targeting kids to get them addicted to nicotine at younger ages by marketing towards them and incentivizing use with flavors that would appeal to children," said Dr. Davidson.

Various reasons reported by youth for vaping:

- Boredom
- Curiosity
- Being Hooked (Addicted)
- Popular with Peers
- Taste/Flavor(s)
- · Weight Management

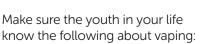
NOVEMBER: LUNG CANCER AWARENESS MONTH



<u>Click here</u> to learn more about helpful resources.

The Dangers

Research is being conducted to determine the long-term effects of vaping for young people, but the link has already been made between adolescents who vape and an increased risk of respiratory symptoms consistent with asthma and bronchitis. Vaping can also lead to cases of severe lung disease that can lead to hospitalization and even death.



- E-liquids that are used for vaping contain many chemicals that are dangerous to the body, including nicotine.
- Nicotine exposure affects the way the brain grows and develops.
- Kids are more likely to become addicted to nicotine because their brains are not mature.
- Vaping affects learning, mood, and impulse controls.

A conversation guide to help parents talk to youth about vaping concerns is provided online by the American Lung Association.

Helpful Links

lung.org healthychildren.org





WE KEEP IT MOVING

WITH MOBILE CRITICAL CARE SERVICES

WakeMed's Mobile Critical Care Services (MCCS) team is always on the go, making sure patients of all ages get where they need to be for the best care. As WakeMed's footprint has grown, the demand for patient transports has also expanded. In Fiscal Year 2024 alone, the MCCS fleet and support vehicles traveled more than 1 million miles – transporting over 22,000 adult patients and more than 1,500 pediatric patients.

A new look, same mission...kids! The MCCS team is hitting the road in style this fall in the newly designed Children's transport vehicle (pictured right). Behind the new design is a dedicated team bringing specialized pediatric care on the road. Keep an eye out for our fresh, new ride as we continue to bring expert care to children across our community and beyond, one mile at a time.





Grateful Patients

Want to recognize your care team? Please consider sharing a little about your family's experience by emailing foundation@wakemed.org.

You can also express your gratitude with a gift to the WakeMed Foundation designated for WakeMed Children's.

<u>Click here</u> to learn more about how you can show your support.



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If you choose to participate, you and your WakeMed care team will receive confidential results about your genetic risk for certain cancers and a cause of heart disease so that you and your family can plan for a healthier future.



Scan here to learn how you can join PreciselyYou and discover why your DNA matters.

