

A Lifetime of Health Literacy

How to Raise a Health Literate Child



The healthcare system is hard to navigate.
Our best chance to manage our health
better is to learn early and practice often.
Here's how parents can raise children who
are more health literate.



Table of Contents

04 Introduction

05 **Why Health Literacy Matters**

Story: A Family's Fork in the Road – Vanessa teaches her son, Bryan, how to understand the flu and how our healthcare system works.

06 **What Is Health Literacy?**

Story: A Tale of Two Teens – Learn how having healthy habits and different healthcare experiences can better prepare young adults to care for their health.

08 **Society's Responsibility to You**

09 Steps Toward Health Literacy

10 **Raise Your Health Literacy**

Activity: How is Your Health Literacy? – Take a short quiz to measure your health literacy level.

11 **Inspire Your Children to Own Their Health**

Story: A Better Bedtime Routine – Marcus and Jamal explain to their daughter Toni why it's important to have a healthy bedtime routine.

12 **Be Honest, Not Overwhelming**

Story: Think Positive, Be Real – Over the course of her life, Aki worries about her father's habit of smoking cigarettes.

13 **Focus on Hard and Soft Skills**

Activity: Can You Check the Boxes? – Review a checklist to help your child build their health literacy skills.

14 **Use Plain Language**

Activity: Hunting for Good Health – Host a treasure hunt to learn what language your child connects with.

15 **Reach Out in Ways That Are Meaningful**

Activity: Video Games for Good? – Juan's plays an educational video game to help him better understand how to take care of his Type 1 diabetes.

- 16 **Consider the Context of Kids' Lives**
Story: Take a Shot at Health Literacy – Sally and Danny learn from how vaccines are created and how they work from their pharmacist.
- 17 **Foster a Sense of Shared Healthcare Decision Making**
Activity: Color You Impressed – Make healthcare decisions
fun: Team up with your child to color a picture.
- 19 **Encourage Interactions with the Healthcare System**
Activity: Navigate Healthcare Together – Help your child begin their health literacy journey by completing a maze together. (maze)
- 20 **Develop a Digital Strategy**
Activity: Is Your Child a Savvy Media Consumer? – Take a quiz with your child to learn how they consume content on apps and websites. (quiz)

21 Conclusion

22 Citations

Pursue a Lifetime of Health Literacy



Why Health Literacy Matters

One in four parents has low health literacy, according to the CDC.¹

The U.S. Centers for Disease Control and Prevention defines health literacy as “the degree to which individuals have the ability to find, understand, and use information and services to inform health-related decisions and actions for themselves and others.”²

The U.S. healthcare system is complicated. No matter what your education level or your job is, navigating the healthcare system can be difficult for you and your loved ones. Rumors and false information make this an even greater challenge. Health literacy can help us guard against misinformation. It can also help prepare us to manage a complex healthcare system.

When we begin teaching children health literacy skills at an early age, we may help lower their health risks later in life.³ By becoming engaged in their health and developing skills to reduce disease, children can better understand the healthcare system and take ownership over their health.

Health literacy offers a lifetime of empowerment.⁴ Prepared children can become adults who make sound decisions. They discuss their health with confidence. They set goals, exercise, and even tend to avoid drinking and driving.^{5,6} For society, health literacy improves participation in public health campaigns. It strengthens the community and influences the health of our neighbors.⁷

“There are massive public health ramifications of low health literacy, which is why we want to help make children more health literate earlier,” says Dr. Annlouise Assaf, a pharmacoepidemiologist who is Senior Director, Patient Health Activation Expert at Pfizer. “If health literacy is ingrained early and taught like other subjects, then it’s going to stay with them and only improve throughout the years.”⁸

Schools, healthcare providers, and community-based organizations all contribute to health literacy. But at a time when low health literacy comes with high stakes, parents may want to be more active in educating their children so they can become informed controllers of their own health.

In this eBook, we lay out tips and tricks to help you raise a health literate child. You will find clear and concise guidance. You will also find stories that illustrate best practices, along with fun activities for your family to do together.

Kick off your child’s pursuit of a lifetime of health literacy today! Because everyone should feel ready to shape their own health.



1 in 4 parents has
low health literacy,
according to the CDC.¹

A Family's Fork in the Road

When Vanessa's 5-year-old son, Bryan, came down with the flu for the first time, the busy mother wanted to get through the doctor's visit and the pharmacy quickly. Vanessa also realized she could use the experience to help Bryan understand how the flu and the healthcare system work.

At the clinic, Vanessa described the purpose of their visit. She asked the doctor to explain what was happening inside Bryan's body in simple language. Then she and the physician encouraged Bryan to ask questions. Vanessa repeated this process with the pharmacist, who quizzed the youngster on why it was important to take his medication. Then, each time Bryan took the pills, Vanessa asked why it was important.

By the time the flu cleared up, Vanessa had helped Bryan begin a lifelong journey toward health literacy.



ASK YOURSELF...

What's motivating you to raise a health literate child?

What Is Health Literacy?

Before we discuss how to raise a health literate child, it's important to establish a shared understanding of health literacy.

Health literacy is not the same as literacy. In some cases, even highly educated people may struggle to grasp key health literacy skills.⁹

When the healthcare industry makes information easier to understand, it empowers patients to take action to maintain and improve their health. Strong health literacy skills can help people make

well-informed decisions for themselves and others.¹⁰

"That's really the difference between literacy and health literacy," says Emma Andrews, PharmD, Vice President of Patient Advocacy. "We need to communicate in a way that patients can act on that information to improve health."¹¹

Skills such as reading, writing, listening, speaking, and critical analysis all contribute to a person's health literacy.¹²

Some major themes include:¹³

- **NAVIGATION.** Knowing how to access care and complete medical paperwork opens new doors to health.
- **COMMUNICATION.** When patients can share information with healthcare providers, understand their words, and ask relevant questions, doctor's visits become easier and more effective.
- **MANAGEMENT.** Acting on medical information to prevent or manage disease supports long-term health.
- **MATH SKILLS.** Measuring and delivering medications is a powerful tool. So are the math skills that help you analyze risks and benefits.

This may sound like a lot for a youngster to master. The goal is to build a foundation to support skills that develop throughout a child's life. Over time, through repetition and education, healthcare organizations, government, and family members can help raise your child's health literacy level. There is no final destination. Becoming health literate is a lifelong process.¹⁴

Low health literacy is linked to worse health outcomes, more expensive care, and higher death rates.¹⁵ Becoming health literate, on the other hand, does wonders for everyone. Researchers have found that health literacy is tied to greater understanding of medical conditions and a lower risk of ending up in the hospital.¹⁶ Health literate people may even make more money.¹⁷

But how do kids develop health literacy?

STORY

A Tale of Two Teens

By the time Josh arrived at college, he had already booked medical appointments. He had also completed insurance paperwork and picked up prescribed medications on his own. As a child, Josh took health classes at his public school. He played educational video games that dealt with health and well-being. His library hosted entertaining events designed to instill healthy habits and critical thinking skills. His parents had made a point to talk about how to navigate the healthcare system. They also modeled health literacy by making annual wellness visits and taking daily steps to protect their health every day. These steps included daily walks and a healthy diet.

As a result, he left home with skills that helped him to weigh risks and protect his health. When he felt ill, he took action.

His roommate, Jerry, had limited experience with the healthcare system. He did not know when he should visit a clinic or how to pay for it. Jerry's parents didn't encourage him to ask questions or fill prescriptions. No one taught him how to care for his health.

When offered a drink or a cigarette, Jerry did not have the skills to assess the risk. He guessed his way through his first semester and returned home without having seen a doctor despite a persistent cough.

ASK YOURSELF...

When was the last time you talked to your child about their health or medications? How did the conversation go?

Society's Responsibility to You

You are not solely responsible for raising health literate children. The job is shared with the healthcare system, governments, schools, and community-based organizations.

To increase health literacy levels, experts recommend that:

- Schools use evidence-based health curricula to expose students to information and skills that will inspire strong decision making
- Governments and healthcare organizations fund health literacy programs
- The healthcare and education systems partner to ensure children experience health literacy through courses and lived experiences
- Public health officials and researchers measure health literacy among youths.¹⁸

While increasing health literacy is a collective responsibility, experts agree parents and guardians can make a difference. In addition to focusing on health literacy at home, putting your kids in contact with healthcare providers and clinic staff can also support a child's health literacy.

Only you can determine the right approach for you and your family. If you choose to take a proactive approach to improving your family's health literacy, here are 10 steps that can help you to raise a health literate child.

ASK YOURSELF...

Do you know what health literacy resources are available in your community?



Steps Toward Health Literacy



1. Raise Your Health Literacy

If nine in 10 adults struggle to comprehend public health information, how can they teach their kids?¹⁹

Researchers have found that low parental health literacy can result in many challenges for children. They include unmet medical needs, unnecessary emergency room visits, unsuccessful injury prevention, medication mistakes, poor nutrition, and more. Plus, young ones pick up habits — bad or good — from their adult role models.²⁰

Although strengthening your health literacy may seem tough, remember this: You are not alone.

Regardless of your health literacy level, you can make changes by speaking with your family's healthcare providers.

Experts recommend asking three questions:

1. What is my main problem?
2. What do I need to do?
3. Why is it important to do this?

Healthcare providers, their staff, and allies in the community (like librarians) are here to talk. They can point you to trustworthy information and other professionals who can help build up your toolkit.²¹

What's the goal of sharpening your skills and expanding your knowledge? Every caretaker deserves to feel empowered to manage their family's health. That's a vital step on the path to raising children who are health literate.²²

ACTIVITY

How's Your Health Literacy?

Healthcare professionals use many tools to measure health literacy levels among their patients. Take this three-minute assessment, based on the label from an ice cream container, to see where you stand.

[Take Ice Cream Label Assessment](#)



ASK YOURSELF...

What's one step you can take today to brush up your health literacy skills?

2. Inspire Your Children to Own Their Health

Most parents know the phrase: “Because I said so.” After a long day spent shuffling kids from one place to the next, it’s tempting to use this language. That’s OK, but sometimes choosing the harder route can pay off.²³

Because health literacy is about shared decision making, it’s helpful for kids to see why their choices matter. Experts also say that confirming a child’s understanding of a key concept is crucial to improving health literacy.²⁴

To raise kids who are health literate, consider explaining why a child should engage in a certain behavior, like drinking plenty of water, brushing their teeth, or taking medication or resting when sick. Afterward, don’t shy away from asking your kid why they think these actions are good for them.²⁵



STORY

A Better Bedtime Routine

By the time bedtime rolled around, Marcus and Jamal didn’t want to fight with their 3-year-old daughter, Toni. The dads had to wake up early for work. Toni disliked saying goodnight, which led her to push back against evening hygiene.

One night, Marcus realized that Toni didn’t understand why they bothered brushing their teeth, flossing, and washing their faces. He started to explain.

“When we brush our teeth, it’s like putting on armor against nasty monsters called cavities. When we floss, we help our gums grow strong. And when we wash our faces, we get rid of gross germs,” he told his daughter. “We do all of this every night so that we stay healthy.”

Marcus couldn’t tell whether his new approach made a difference. Night after night, he repeated the information. Eventually, Jamal began asking Toni about why they do the pre-bedtime routine.

“I brush my teeth and floss to keep my mouth safe!” she said. “I wash my face to stay clean! I do it all to stay nice and healthy.”

ASK YOURSELF...

What’s motivating you to raise a health literate child?

3. Be Honest, Not Overwhelming

Because health is complicated, it can be challenging to know how to approach sensitive topics. Lies, biases, and negativity could harm your child's health literacy. But walking the tightrope correctly could lead to breakthroughs.

First, consider limiting discussions to essential information. Anything further could overwhelm children. Remain accurate and truthful. There is no need to create confusion or distrust. When your child asks a question, provide a simple answer if you know it. If not, look it up from trustworthy sources or suggest they ask their healthcare provider. Consider your biases.

Health literacy experts also stress the significance of staying positive. Health issues can be scary, but the skills and behaviors that you're building can defend against disease. At the same time, failing to acknowledge risk can be harmful.²⁶



ASK YOURSELF...

Recall a time when your guidance changed your child's behavior. Why did it work?

STORY

Think Positive, Be Real

In fourth grade, Aki realized that her father, Michael, was at greater risk of dying from lung cancer because he was a smoker. She arrived home in tears and begged her dad to quit.

"Aki, I'm not going to die right now," Michael said. "But you are right. Smoking is bad. It could eventually make me very sick. It was my choice to start smoking, and I hope that you will never pick up a cigarette. You can make the smart decision."

In middle school, Aki learned more about smoking's negative effects. When she confronted her father, she interrogated him more deeply.

"What about your heart and lungs?" Aki asked. "How do you know you aren't already getting sick?"

"I do not know that," Michael responded. "Each cigarette increases my risk of becoming ill. I will quit to show you that you do not need to choose this path. Your future is up to you."

When Aki graduated high school, her father had overcome the addiction.

"This is best for my health," Michael said. "Smoking was slowly killing me. But I have already lowered my risk. Every day free from cigarettes, my breathing grows lighter and my body stronger."

Aki never took that first puff.

4. Focus on Hard and Soft Skills

Kids cannot cram health literacy information like they cram for final exams. There is nothing to pass or fail. Rather, health literacy is concept and practice that evolves. It depends on our skills and familiarity with our bodies and the healthcare system. The goal requires lasting skills and behaviors.

Together with teachers and other leaders, you might have already instilled effective behaviors. How much your kid knows depends on many factors.

Health literacy demands more than what's covered in health class. The ability to read, listen, and communicate is key. So are more advanced skills. Critical analysis, for example, can assist children in understanding what a healthcare provider's words mean for their health. Math skills can help kids to take the right medication dosage.²⁷

When they grasp these skills, children can begin to digest and apply more complicated topics. Consider the case of absolute risk versus relative risk.

- Absolute risk describes the likelihood of someone developing a disease within a given timeframe.
- Relative risk compares the odds among different groups of people, such as people who take a medication and those who do not.²⁸

Many adults lack the skills and behaviors associated with strong health literacy. But kids can learn early and practice early and often.

ACTIVITY

Can You Check the Boxes?

No matter your child's age, now is the right time to start building skills to support health literacy. This checklist can help you understand your youngster's needs. Mark all boxes that apply. Then use that information to answer the question.

My child currently can:

- ☐ Read at grade level
- ☐ Write at grade level
- ☐ Engage in active listening
- ☐ Demonstrate understanding of information
- ☐ Evaluate and analyze information
- ☐ Communicate their needs and desires
- ☐ Pose meaningful questions
- ☐ Recognize and apply mathematical concepts in everyday life
- ☐ Determine risk levels

ASK YOURSELF...

Which health literacy skills can your child improve upon? Why?

5. Use Plain Language

Is your little one tuning you out? Or is the message not getting through? This is a common challenge for parents. When it comes to health and well-being, it is critical that a child understands our words and concepts.

Success begins with speaking in their preferred language and at their grade level. Your message must also be concise and clear. Keep it simple. Avoid medical jargon, even if you understand the meaning. Use simple definitions to explain hard words and concepts. Use terms that make sense and captivate your child. Stress and summarize key points.

Sharing information is not the sole purpose. Growth in health literacy requires children to act. That means your language should empower kids to confirm and interpret what they learned.²⁹

ASK YOURSELF...

Recall a time when your child immediately understood what you were saying. Why did it work?

ACTIVITY

Hunting for Good Health

Share a laugh while discovering what types of language connect with your child. How? Host a treasure hunt.

1. Hide a treat or toy that your child enjoys.
2. Provide simple, understandable clues to focus their search.
3. Over time, deliver more specific guidance.
4. Use verbal and visual cues.
5. Use multimedia, such as a photo on your phone.
6. When the child finds the prize, ask them to describe how they succeeded.



6. Reach Out in Ways That Are Meaningful

When it comes to health literacy, boring lectures won't cut it. So, how do the experts ensure their messaging excites children?

They strive for conversations and content that are relevant and meaningful. Often, that means no print books or long articles. Instead, they use video games, pictures, and movies. The key is to find accurate, action-oriented, engaging material.³⁰

Parents and caregivers can use these same principles with their children. If you do not know where to start, ask your pediatrician for ideas. They spend every day treating and talking with children. That means they can point you to educational resources and tips for how to help hone your kid's health literacy skills.



STORY

Video Games for Good?

When Juan was diagnosed with Type 1 diabetes, the 7-year-old could not comprehend how the disease would affect his life. His mother tried her best to explain. So did the child's health-care provider. But Juan still resisted insulin, exercise, and healthy foods.

After several weeks, Juan's provider called Juan's mom. He said he had access to a new educational tool that used a video game to teach children about diabetes and chronic disease management. She agreed to bring Juan to the office.

Juan saw the game on the computer screen and rushed toward it. He embarked on a quest, using insulin to fight off monsters as in-game tips transmitted health tips. By the game's end, Juan had answered a dozen questions. He had learned something about himself. On the car ride home, he told his mom that he was excited for his next insulin injection.

ASK YOUR CHILD...

What's your favorite way to learn in school?
What about at home?

7. Consider the Context of Kids' Lives

Children reflect and act on their health more than you might know. Each day brings new opportunities and challenges to their well-being. This can burden families. But it also provides a launchpad toward health literacy.

"Education is not neutral and takes place in the context of people's lives," a researcher once noted. That means that adults can use children's

real-world experiences to explore new concepts and introduce skills. Conversations about nutrition, medical procedures, and administrative tasks may seem boring to kids. But when they experience something like this in their own lives, it can make an otherwise-abstract discussion feel real.

Be on the lookout for these chances. You never know whether a small opening will lead to a big discussion.³¹

STORY

Take a Shot at Health Literacy

It was summer when the twins Sally and Danny turned 12, and when that autumn came, their foster parents booked their annual influenza vaccination appointments. They were dedicated to safeguarding their family, but the kids were nervous. Sally and Danny barely remembered their past immunizations, and they had heard rumors about vaccines. On the drive over, the family discussed their positive experiences with vaccines and their proven health benefits.

When they arrived at the pharmacy, they asked the pharmacist about the vaccine. She described how scientists developed and tested the vaccine, its ingredients, and its potential effects. Danny and Sally wanted to know more.

"Is it safe?" Sally said.

"And will I get sick after I get my shot?" Danny added.

The pharmacist explained the risks of side effects compared to the risks of contracting the virus and even described how the Centers for Disease Control (CDC) provides new guidance every season for the influenza vaccine. She said that she typically advised young, healthy people to get vaccinated because it likely was safer than getting the flu. Sally and Danny each made a decision to get vaccinated.

When they got home, the kids asked to learn more about other immunizations.

ASK YOURSELF...

What routine activities can you use as a jumping-off point to hone your child's health literacy skills?

8. Foster a Sense of Shared Healthcare Decision Making

Considering that children act and reflect on their health, it might not surprise you to see them show interest in their care. Experts advise families to welcome that behavior. After all, health literacy is supposed to activate kids. It's all about shared decision making.^{32, 33}

Each child's and adolescent's development governs the extent to which they can make decisions in their best interests.³⁴ In most cases, adults decide what's best for younger children. Teenagers may have more agency in the process. A healthcare professional's input is always important.³⁵

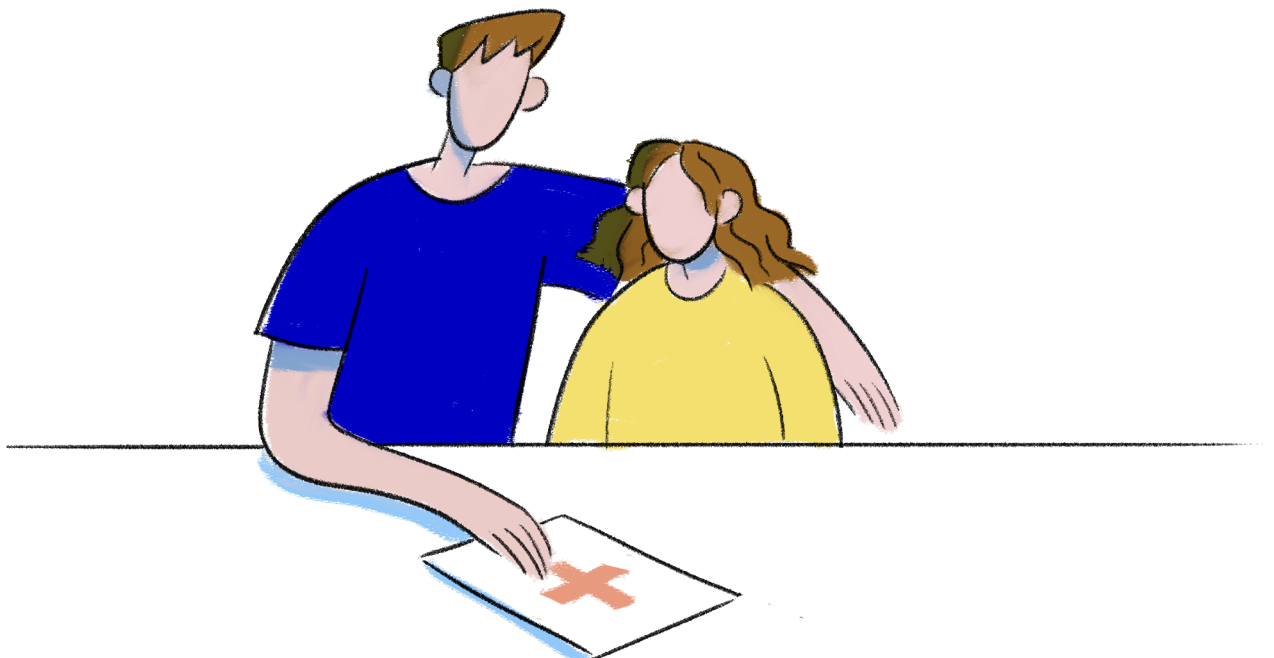
Upon entering high school, teens may understand their personal and family medical histories. It's a good time to ensure they have healthcare provider contact information. Knowing how to fill a prescription can help, too.

Before they turn 18, kids may want to consult with their guardians to choose an adult primary care physician. Acquiring health insurance coverage, obtaining referrals to specialists, and accessing medical records could all come into play.

In just a few years, children may go from visiting the doctor alongside their guardian to moving out. But remember: Each kid is different. The sooner they begin to own their health choices, the more prepared they will be to make decisions that matter.³⁶

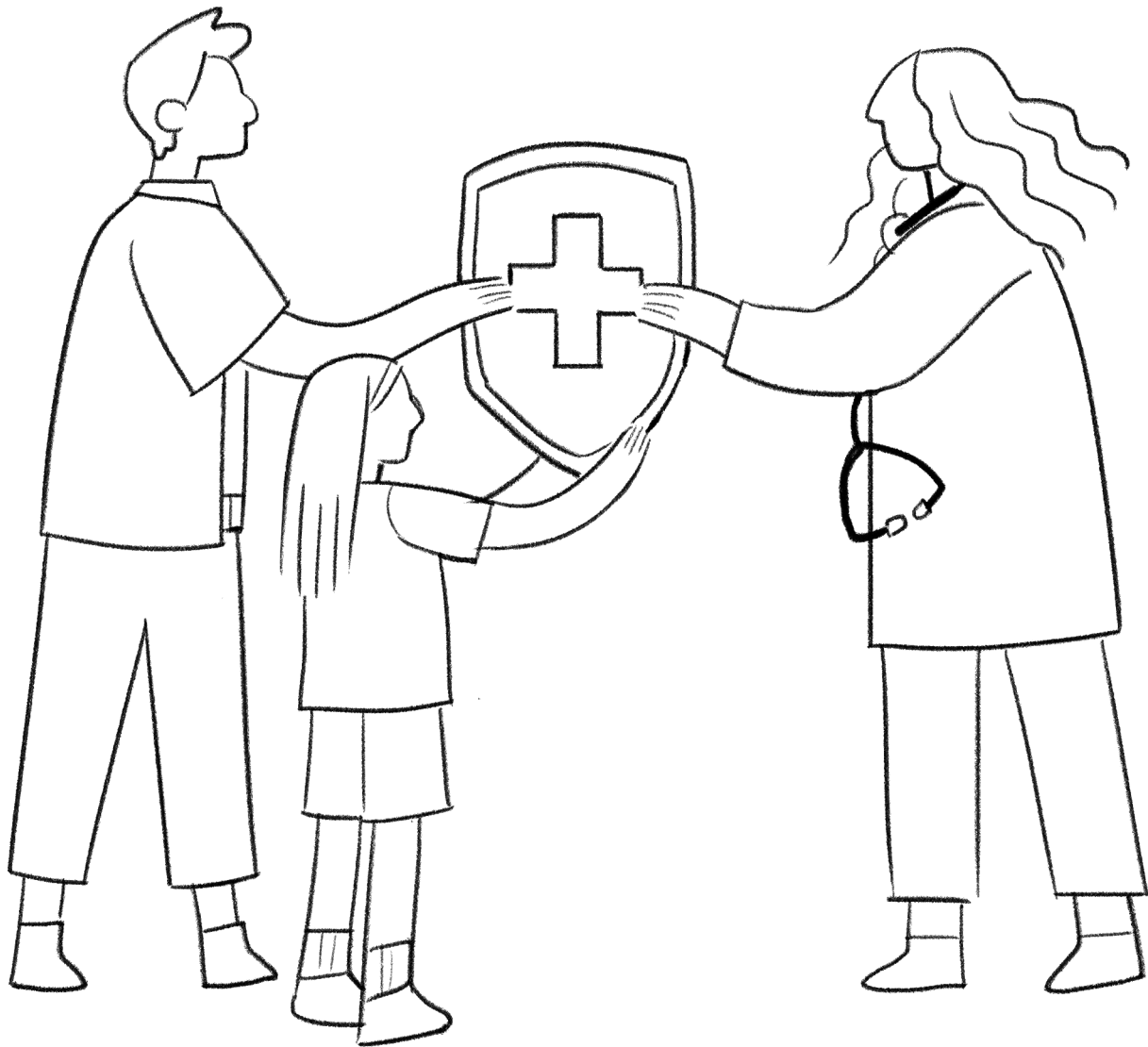
ASK YOUR CHILD...

What do you want to know about your body and your health?



Color You Impressed

Bringing your child into healthcare decision making can be fun. When you move in sync and respect each other's unique qualities, everything flows better. Team up with your toddler to color in the lines. Together, you can create a picture of perfect health.



9. Encourage Interactions with the Healthcare System

It might be a lifelong process to comprehend the confusing U.S. healthcare system. It is never too early to show kids the ropes, even if they are not ready to contribute to decision making. Children learn a lot just by observing.

When it's time for a checkup, parents can take steps to ensure their kids are active participants:

- Search for a healthcare provider together using your health insurance company's directory
- Direct your child to listen as you book the appointment
- Have them help complete paperwork in the waiting room
- Invite your kid to direct questions to their clinicians
- Call in and pick up your prescription with your child at your side

These steps might seem small, but to a child, each event is new. And every interaction is a chance to learn and grow.³⁷

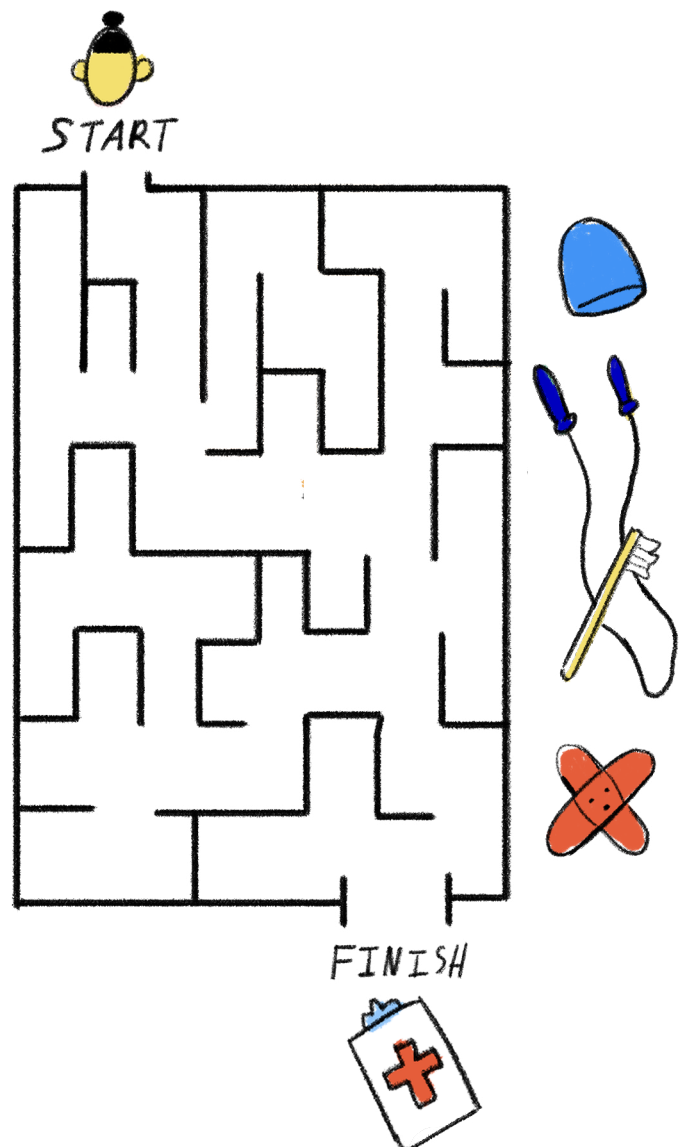
ASK YOUR CHILD...

What is your favorite part of going to the doctor?

ACTIVITY

Navigate Healthcare Together

Almost everyone has a hard time understanding the healthcare system. But knowledge, skills, and experience can simplify the process. Partner with your child to complete this maze and begin their journey to health literacy.

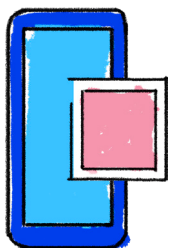


10. Develop a Digital Strategy

As much as 87 percent of health-related social media posts may contain misinformation, studies have found. Falsehoods cover everything, from viruses and vaccines to eating disorders.³⁸ These rumors and lies can reach children, who are particularly vulnerable to believing bogus information.³⁹ They also spend a lot of time online; teenagers spend more than seven hours a day on their devices.⁴⁰

With so much questionable content online, how can parents guide their kids to the truth about their health?

The first step is to consult your healthcare provider. Ask about reliable sources of information.⁴¹ But doctors cannot watch over your child's shoulder as they browse the internet. Policy experts say governments, technology companies, and schools must take the lead on increasing critical thinking skills in children.⁴² In that sense, digital literacy can help protect health literacy.



87% of health-related social media posts may contain misinformation, studies have found

ASK YOUR CHILD...

What are your favorite apps and websites?

Until then, caregivers can take steps to prepare kids to safely surf the internet by:

- Talking regularly with the goal of promoting critical thinking
- Understanding their information habits
- Making sure they are aware of online risks and the consequences of sharing or consuming inaccurate information
- Encouraging reflection and discussion of what they see online.⁴³

Although the internet has its weaknesses, many trustworthy educational websites and apps are available. These resources promote health knowledge and critical thinking skills among children and adolescents. Guardians who seek out dependable digital sources might just find that their kids learn something.

ACTIVITY

Is Your Child a Savvy Media Consumer?

Many adults find it difficult to comb through biases, falsehoods, and misinformation in digital media. It's no wonder that kids can fall down a rabbit hole. To understand how your child views the media they encounter, partner with them to complete this quick quiz.

[Take The Quiz](#)

Pursue a Lifetime of Health Literacy

As your child ages, many outside factors will influence whether they take control of their health. Schools, family and friends, governments, and healthcare organizations will likely play meaningful roles. But as parents, guardians,

and caregivers, you can create an environment that nurtures health literacy. If all goes well, your child may one day regard your commitment to their health and empowerment as one of your greatest gifts.



Citations

1. Health literacy: implications for child health. American Academy of Pediatrics. Available at <https://publications.aap.org/pediatricsinreview/article-abstract/40/6/263/35293/Health-Literacy-Implications-for-Child-Health>. Accessed Jan. 23, 2022.
2. What is health literacy? Centers for Disease Control and Prevention. Available at <https://www.cdc.gov/healthliteracy/learn/index.html>. Accessed Jan. 23, 2022.
3. Health literacy in childhood and youth: a systematic review of definitions and models. BMC Public Health. Available at <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-017-4267-y>. Accessed Jan. 23, 2022.
4. The role of health literacy in empowering patients. SpringerBriefs in Public Health. Available at https://link.springer.com/chapter/10.1007/978-3-319-58344-0_4. Accessed Jan. 23, 2022.
5. Health literacy and physical activity: a systematic review. Journal of Physical Activity and Health. Available at <https://journals.humankinetics.com/view/journals/jpah/17/12/article-p1259.xml>. Accessed Jan. 23, 2022.
6. Shaping alcohol health literacy: a systematic concept analysis and review. Health Literacy Research and Practice. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6960007/>. Accessed Jan. 23, 2022.
7. Health literacy and public health: a systematic review and integration of definitions and models. BMC Public Health. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3292515/>. Accessed Jan. 23, 2022.
8. Why raising health literate children is important. Pfizer. Available at https://www.pfizer.com/news/articles/why_raising_health_literate_children_is_important. Accessed Jan. 23, 2022.
9. What is health literacy? Centers for Disease Control and Prevention. Available at <https://www.cdc.gov/healthliteracy/learn/index.html>. Accessed Jan. 23, 2022.
10. History of health literacy definitions. Office of Disease Prevention and Health Promotion. Available at <https://health.gov/our-work/national-health-initiatives/healthy-people/healthy-people-2030/health-literacy-healthy-people-2030/history-health-literacy-definitions>. Accessed Jan. 23, 2022.
11. Andrews, Emma. Interview by Jack Murtha. Aug. 10, 2021.
12. What is health literacy 101. Institute for Health Advancement. Available at <https://www.healthliteracysolutions.org/health-literacy-101/what-is-health-literacy>. Accessed Jan. 23, 2022.
13. 3 Steps to Boost Health Literacy. Contemporary Pediatrics. Available at <https://www.contemporarypediatrics.com/view/3-steps-boost-health-literacy>. Accessed Jan. 23, 2022.
14. Andrews, Emma, and Assaf, Annlouise. Interviews by Jack Murtha. August 2021.
15. Promoting health literacy for children and adolescents. Pediatrics. Available at <https://publications.aap.org/pediatrics/article-abstract/138/6/e20161937/52638/Promoting-Health-Literacy-for-Children-and>. Accessed Jan. 23, 2022.
16. Health literacy: report of the Council on Scientific Affairs. Ad Hoc Committee on Health Literacy for the Council on Scientific Affairs, American Medical Association. Available at <https://pubmed.ncbi.nlm.nih.gov/10022112/>. Accessed Jan. 23, 2022.
17. Promoting health literacy for children and adolescents. Pediatrics. Available at <https://publications.aap.org/pediatrics/article-abstract/138/6/e20161937/52638/Promoting-Health-Literacy-for-Children-and>. Accessed Jan. 23, 2022.
18. Promoting health literacy for children and adolescents. Pediatrics. Available at <https://publications.aap.org/pediatrics/article-abstract/138/6/e20161937/52638/Promoting-Health-Literacy-for-Children-and>. Accessed Jan. 23, 2022.
19. Understanding literacy & numeracy. Centers for Disease Control and Prevention. Available at <https://www.cdc.gov/healthliteracy/learn/understandingliteracy.html>. Accessed Jan. 23, 2022.
20. Parental health literacy and health knowledge, behaviours and outcomes in children: a cross-sectional survey. BMC Public Health. Available at <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-020-08881-5>. Accessed Jan. 23, 2022.

21. Health literacy: are you in the know? Children's Hospital Colorado. Available at <https://www.childrenscolorado.org/conditions-and-advice/parenting/parenting-articles/health-literacy/>. Accessed Jan. 23, 2022.
22. Parents as Teachers Health Literacy Demonstration project: integrating an empowerment model of health literacy promotion into home-based parent education. Health Promotion Practice. Available at <https://journals.sagepub.com/doi/10.1177/1524839914538968>. Accessed Jan. 23, 2022.
23. Andrews, Emma. Interview by Jack Murtha. Aug. 10, 2022.
24. Andrews, Emma. Interview by Jack Murtha. Aug. 10, 2022.
25. Andrews, Emma. Interview by Jack Murtha. Aug. 10, 2022.
26. Health literacy principles checklist. Center for Health Guidance. Available at <http://centerforhealthguidance.org/health-literacy-principles-checklist.pdf>. Accessed Jan. 23, 2022.
27. What is health literacy 101. Institute for Health Advancement. Available at <https://www.healthliteracysolutions.org/health-literacy-101/what-is-health-literacy>. Accessed Jan. 23, 2022.
28. Calculating absolute risk and relative risk. Patient. Available at <https://patient.info/news-and-features/calculating-absolute-risk-and-relative-risk>. Accessed Jan. 23, 2022.
29. Health literacy principles checklist. Center for Health Guidance. Available at <http://centerforhealthguidance.org/health-literacy-principles-checklist.pdf><http://centerforhealthguidance.org/health-literacy-principles-checklist.pdf>. Accessed Jan. 23, 2022.
30. Health literacy principles checklist. Center for Health Guidance. Available at <http://centerforhealthguidance.org/health-literacy-principles-checklist.pdf><http://centerforhealthguidance.org/health-literacy-principles-checklist.pdf>. Accessed Jan. 23, 2022.
31. Making health information meaningful: children's health literacy practices. SSM – Population Health. Available at <https://www.sciencedirect.com/science/article/pii/S2352827316300349>. Accessed Jan. 23, 2022.
32. Health literacy: are you in the know? Children's Hospital Colorado. Available at <https://www.childrenscolorado.org/conditions-and-advice/parenting/parenting-articles/health-literacy/>. Accessed Jan. 23, 2022.
33. Making health information meaningful: children's health literacy practices. SSM – Population Health. Available at <https://www.sciencedirect.com/science/article/pii/S2352827316300349>. Accessed Jan. 23, 2022.
34. Improving shared health decision making for children and adolescents with chronic illness: a narrative literature review. Patient Education and Counseling. Available at <https://www.sciencedirect.com/science/article/abs/pii/S0738399118304117>. Accessed Jan. 23, 2022.
35. How should adolescent health decision-making authority be shared? AMA Journal of Ethics. Available at <https://journalofethics.ama-assn.org/article/how-should-adolescent-health-decision-making-authority-be-shared/2020-05>. Accessed Jan. 23, 2022.
36. Giving teens a voice in health care decisions. Nemours KidsHealth. Available at <https://kidshealth.org/en/parents/teen-health-care.html>. Accessed Jan. 23, 2022.
37. Health literacy: are you in the know? Children's Hospital Colorado. Available at <https://www.childrenscolorado.org/conditions-and-advice/parenting/parenting-articles/health-literacy/>. Accessed Jan. 23, 2022.
38. Prevalence of health misinformation on social media: systematic review. Journal of Medical Internet Research. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7857950/>. Accessed Jan. 23, 2022.
39. Digital misinformation/disinformation and children. UNICEF. Available at <https://www.unicef.org/globalinsight/media/2096/file/UNICEF-Global-Insight-Digital-Mis-Disinformation-and-Children-2021.pdf>. Accessed Jan. 23, 2022.

40. US teens use screens more than seven hours a day on average – and that’s not including school work. CNN. Available at <https://www.cnn.com/2019/10/29/health/common-sense-kids-media-use-report-wellness/index.html>. Accessed Jan. 23, 2022.

41. Health literacy: are you in the know? Children’s Hospital Colorado. Available at <https://www.childrenscolorado.org/conditions-and-advice/parenting/parenting-articles/health-literacy/>. Accessed Jan. 23, 2022.

42. Digital misinformation/disinformation and children. UNICEF. Available at <https://www.unicef.org/globalinsight/media/2096/file/UNICEF-Global-Insight-Digital-Mis-Disinformation-and-Children-2021.pdf>. Accessed Jan. 23, 2022.

43. Digital misinformation/disinformation and children. UNICEF. Available at <https://www.unicef.org/globalinsight/media/2096/file/UNICEF-Global-Insight-Digital-Mis-Disinformation-and-Children-2021.pdf>. Accessed Jan. 23, 2022.

Copyright ©2022 Pfizer, Inc.

With special thanks to all who contributed to this project, including: Jack Murtha, Shauna Elkin, Karen Day, Emma Andrews, Annlouise Assaf, Maddie Haaga, Michaela Fleming, Julia Westerman, Chelsea Ennis, Amber Gray, Anne Callahan, Adeline Kon, and Robin A. Rothman.

