Family History – An Early Warning for Your Child

[Announcer] This podcast is presented by the Centers for Disease Control and Prevention. CDC – safer, healthier people.

[Curt Shannon] I'm your host, Curt Shannon, and today we're talking about the importance of documenting a family history. Joining me on the phone is Dr. Tracy Trotter, a practicing pediatrician from San Ramon California, and here in the studio is Dr. Paula Yoon, an epidemiologist with CDC. Dr. Yoon, can you tell us what a family history is, and why it's important for your child?

[Dr. Yoon] In medicine, family history is about the health of your family and your relatives. For example, did your father have diabetes? Did your sister have breast cancer? And, at what age did Aunt Dora start having heart trouble?This is the information that makes up a family health history. There are lots of factors that contribute to your family history – the most important is genetics. But environment, behavior, and cultural factors are also important. Families share not only their genes, but they also may live in the same area and be exposed to similar environmental factors, such as pollution. Families may also have similar exercise habits, whether that means running marathons or marathon sessions of sitting on the couch. Cultural factors, such as what type of foods we eat and how they are prepared can also affect our health and can be shared among family members. Family history incorporates all of these factors. So your father's genes may have contributed to his type 2 diabetes and you may share some of those genes, but the fact that he never exercised and ate fast food every day also influenced his health, and you may share some of those habits, as well.

[Curt Shannon] Dr. Trotter, you want to add to this?

[Dr. Trotter] Sure. We've been talking mostly about conditions like type 2 diabetes and heart disease that usually affect people in adult life. But we use that information to screen children as well. A family with high cholesterol might practice--get their children screened earlier than not. But we also use family history for children's health in a more specific way. And family history can help your child's doctor make a diagnosis if the child is already showing a sign of disease. A family history may also indicate that your child's at an increased risk of getting a disease and your child's doctor might suggest screening tests for your child, based purely on your family history. Many genetic disorders first become evident in childhood and being aware of a family history of genetic conditions can mean that if the child's affected, the condition can be detected much earlier. The child can then receive treatment earlier and early treatment for genetic conditions frequently benefits your child's health in the long run. So family history is also very important if you're considering having a baby. The family history can tell you if you as prospective parents have a higher risk of having a child with a birth defect or genetic disorder. And there are steps that you can take to reduce that risk of having a child born with a birth defect. For example, a well-known preventive mechanism is consuming 400 micrograms of folic acid daily, before and during a

pregnancy, which is known to reduce the woman's risk of having a baby with spina bifida, whether or not she has a family history. And with a positive family history, we might increase that dose as well.

[Curt Shannon] Can you give us some examples of when a family history can help shed light on a medical condition or problem?

[Dr. Trotter] Sure. In my own practice, I had a new patient who was a 4-year old girl that had been diagnosed oh, somewhere around 18 months of age, with the diagnosis of autism spectrum disorder, and when I saw her for her 4-year visit, her mother related to me that in the previous six months, her sister's two boys had been diagnosed with the genetic disorder called Fragile X Syndrome. This new history prompted genetic testing that was specific for the gene, which is called *FMR1*, responsible for Fragile X, and this lead to the subsequent diagnosis of Fragile X in this girl, my patient. And further testing of the family revealed both the mother and an older sister of hers were at risk of having children with Fragile X Syndrome. So for this family, the family history update that the mother gave me focused the evaluation, saved thousands of dollars and a lot of frustration for the family in finding out a diagnosis, and ultimately led to the correct diagnosis and provided a basis for both prognostic and reproductive counseling. So having a child with a birth defect or genetic disorder can shed light on the health of parents or older children.

So not only can we go in the direction of a parent who has high cholesterol and then we want to test the children early, we might find something in the children that would allow us to test the parents early. Parents or older children often have a genetic condition which has caused or could in the future cause health problems and the reasons have gone undiscovered until the initial diagnosis. An example of that is mothers of boys with Duchenne's Muscular Dystrophy might find themselves to be at risk of having heart problems and so should talk with their physician about their own heart health.

[Dr. Yoon] Although people don't usually think of diseases like heart disease and type 2 diabetes affecting children, those children with a strong family history of these conditions may begin developing these conditions in childhood, even though they appear perfectly healthy. Children with family histories of chronic diseases would really benefit from starting good lifestyle habits right away, such as exercising and eating a healthy diet. And if parents know their children are at increased risk, perhaps they might be motivated to help their child make these changes. Since conditions like heart disease and diabetes can affect the whole family, everyone in the family would benefit from better health habits. And doing these activities together could really help everyone stick with them—and maybe make them more fun, too!

[Curt Shannon] How can someone make sure they're getting a complete family history for their child?

[Dr. Yoon] Well, one approach which works well, especially for common conditions like heart disease and diabetes, or even cancer, is to first write down the names of your child's close relatives. These would include mother, father, brothers, sisters, grandparents, aunts, uncles, and even nieces and nephews. Remember to include relatives from both the mother's and the father's side of the family. Then, go through the list and write down any major conditions that each relative had and make a note when the relative was first diagnosed with that condition. There are also tools that can help you collect your family history, such as the Surgeon General's "My Family Health Portrait." This is a web-based tool can help you organize the information. It even draws a family tree with each relative and the conditions that they had. You can find this link, along with several other good family history tools, on the CDC website – www.cdc.gov.

[Dr. Trotter] Your child's doctor may ask you to fill out a family history form for your child. Take the time to fill that form out carefully. It could be a paper form; it could be a computer desk in the doctor's office; it could be a website. It really makes a difference in your child's health for us to know this information. You should even consider collecting your family history information before your child's appointment, for instance, by using the "My Family Health Portrait" that Dr. Yoon just spoke about. You might have to call relatives to find out more about their health conditions. For most common conditions, you need only to consider your child's close relatives. However, for such genetic conditions such as cystic fibrosis and sickle cell disease, you might need to consider more distant relatives. Family members may be diagnosed with new conditions between health care visits. Be sure to update your family history periodically and please share this information with your child's doctor. Also, take advantage of family gatherings to collect family history information. In fact, Thanksgiving is National Family History Day.

[Curt Shannon] Once it's collected, what should families do with their family history information?

[Dr. Yoon] It's very important to discuss your family health history with your child's doctor. Your doc—your child's doctor will review this family history information and try to identify any conditions where your child could be at increased risk because of the family history. The doctor should discuss these conditions with you and any relevant interventions or screening tests that might benefit your child or even other family members.

[Dr. Trotter] Well-child exams are also a very good time to discuss any family history concerns, or most importantly, new information you have, with your child's doctor. Families considering having another child should take that as an opportunity to share this family information with the mother's doctor as well.

[Curt Shannon] Is there a takeaway message you'd like to leave with our listeners?

[Dr. Trotter] Absolutely! Family members share their genes, their environment, lifestyles, and habits, and family history can reveal conditions for which your child is at risk. If you don't have a family history for your child, please take the time to complete one, using the tools on the CDC website – www.cdc.gov.

[Dr. Yoon] And it's important to remember that just because you or your family has a family history of a disease, it doesn't mean that you will definitely get that disease. It's not your destiny. It means that you're at increased risk for the disease, but there are things that you can do to reduce your risk. Screening, early intervention, and lifestyle changes, particularly healthy eating, exercising, and maintaining a healthy weight might help prevent or even delay the onset of common chronic conditions. Knowing your family history really can help your child, and you, and the whole family.

[Curt Shannon] Thank you, Dr. Trotter and Dr. Yoon, for taking the time to discuss this important subject.

[Announcer] To access the most accurate and relevant health information that affects you, your family and your community, please visit www.cdc.gov.