Health Matters





E-EXERCISE?

While home for school, kids still need physical activities.





HOT SPOTS

The best — and worst — sites to exercise while distancing.

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PICTURE
OF HEALTH
Social media
can promote
motivation.
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Courtesy photo

ABCs of DNA

Local health professionals weigh in on the benefits of genetic testing for everyday people.

HARRY SAYER STAFF WRITER

s anyone in the medical field can tell you, the human body is incredibly complex. Beyond the thousands upon thousands of variations in height, eye color, skin color, hair color and athletic ability are the millions of variables that make up our genetic structures.

For decades, medical professionals and scientists have learned more about our bodies through genetic testing, a procedure in which we examine our DNA structure.

It looks at whether your body has changes — mutations — in its genes that point to a specific illness or condition. Some changes can point to cancer, while others can suggest if your family has a history of certain conditions.

It's an immensely complicated topic, one that isn't always clear to discover health conditions. Finding a gene mutation through genetic testing, for example, has a fairly direct association with some form of cancer. For a different health issue, such as diabetes, there are other environmental and genetic factors at play that can make an association more ambiguous.

"Our understanding of genetics has become a lot better, and the application of genetics has become more relevant to patients," said Nicole Wood, a certified genetic counselor with Sarasota Memorial Cancer Institute. "It's become less of a theorized 'This is how these results may impact you at some point' and more practical 'These are the results.' And these are what we can do with that information

and have a direct impact on their health and their well-being."

Finding that balance between your body and nature and nurture is an ongoing craft, and scientists and health professionals are relying on genetic testing more every day.

Sarasota Sports Medicine, a medical clinic founded in 2012 by Orioles chiropractor Ken Kaufman, has started utilizing genetic testing to create more specialized nutrition and exercise routines for its members. The hope is that instead of trying different diets and programs that might not be right for certain people, genetic testing can show the best breakdown proteins, micronutrients, carbs and other factors for individual people.

"The genetic testing gives us a tool and gives the client the tool to know, 'OK, this is what I need to do,'" Kaufman said. "Somebody follows a certain diet and invariably runs into a brick wall and won't progress as fast as they had hoped. And so they abandon it because they think, 'Maybe this isn't for me.' Whereas now with a genetic test, they know psychologically, this is the one for me."

The hope is that the more precise nutrient and exercise regimens can result in faster and more noticeable improvements, through knowing what food groups and nutrients you're deficient in and understanding what types of exercise are more productive.

Sarasota Sports Medicine has partnered with Nutrigenomix, a genetic test provider, for the fitness and nutrition tests. The test gauges nutrient metabolism, weight management, body composition, eating habits and more.

Genetic testing remains a complicated subject, so we asked local health professionals to share insight on the topic.

What is the test like?

Although the genetic information the tests parse through is complicated, the actual way they

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are administered is not. Genetic testing is done most frequently through blood samples and cheek swabs, two relatively safe practices. The collected DNA is delivered to a laboratory where technicians look for a specified criteria, be it a possibility of cancer, autism or other conditions. Wood said results then take typically two to

three weeks to come back.
"The genes that we would evaluate are different, but we're still measuring the DNA from the white blood cells in your blood or the lymphocytes in your cheek," Wood said. "We have 20,000 genes in each of ourselves. So when we send off a sample, regardless of what it is — blood, skin, saliva all of that information is contained in every single one of the cells. So we just tell the lab what we want them to focus on."

A common mistake Wood recommends patients avoid is eating or drinking before a cheek swab test. Technicians are looking to parse through your DNA, not so much burger genes.

What are the benefits?

Being aware of your body gives you more ability to take care of yourself. Knowing you're susceptible or positive for certain conditions can push you toward treatment and prevention plans. A negative result likewise can offer peace of mind. Knowing if you are, or are not, susceptible for genetic conditions can also be an important part of family planning.

Having an idea of what diseases you have a higher risk of, especially when cross-referencing it with a family history, can give someone repose or push them to making changes in their lives to avoid developing illnesses in the future.
People at risk for an inherited cancer gene often have family members diagnosed with can cer before the age of 50, so Wood recommends being tested before

What are the risks?

It should be noted that the procedure for prenatal testing has a small but real risk of miscarriage.

There are also limitations. Although a test can show the possibility of having a condition, it has no way of telling you if you will show symptoms, the severity of those symptoms or whether it will worsen over time.

How much does it cost?

Genetic testing can be covered by health insurance plans, though some customers pay out-ofpocket to avoid their coverage being affected.

Sarasota Sports Medicine offers the genetic test with a consultation and a report of findings for

Can you figure it out yourself

using at-home DNA tests?
At-home DNA tests, also known as direct-to-consumer tests, are something of a different breed than the testing done at health institutions. Rather than visiting a hospital or clinic and having the test be done by a medical professional, these tests are sold to consumers directly — you might have seen them advertised online and can buy them in stores. There, you send in a DNA sample and have the results sent back to you. A particularly popular subset of at-home kits are ancestry tests, which track your genetic lineage.

It's easier, but Wood said the evidence from those tests is more anecdotal. "It's not used for medical purposes, but it is interesting for a lot of people," she said.

The validity of genetic tests sold directly to customers can be harder to ascertain.

Laboratories that have healthbased testing fall under federal regulations known as the Clinical Laboratory Improvement Amendments, as well as state restrictions. The CLIA rules are meant to control quality of testing procedures and personnel to ensure proper validity. Wood does note there are lab-

created hereditary cancer tests you can purchase online that are useful if you don't have a genetic counselor nearby.

The U.S. National Library of Medicine states many direct-toconsumer tests are not CLIAcertified and currently have little regulation, and it might be best to consult with a health professional before ordering one.

Why is genetic testing more beneficial than just knowing your family history?

It's hard to know everything about our family's health. Wood said it's far safer to deal with science.

"We walk through their personal risk factors for cancers and talk about their family history and as much detail as we can," Wood said. Nobody knows everything about their relatives. So we work [with what] we have, but we try and get as much detail there as possible."

For those trying to start a family and wanting to know what diseases or conditions their children could carry, Wood recommends getting tested. For more ambiguous maladies, such as diabetes or Alzheimer's disease, knowing the family history might end up being the most beneficial.



Sarasota Sports Medicine Founder Ken Kaufman has started incorporated nutrition and workouts based off his genetic test result

What You Need to Know **ABOUT CANNABIDIOL & CBD PURITY**

Gerry Letendre, RPh, MBA, CHt



Sarasota Specialty Pharmacy and Wellness Center is a proud member of PCCA (Professional

Compounding Centers of America). Only PCCA members have access to the highest-quality ingredients for compounded pharmaceutical formulations. This includes prescription Cannabidiol. Why should you care? The answer to that question will make you think twice about where you buy your CBD

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It isn't a controlled substance according to the U.S. DEA, and it has a delta-9 tetrahydrocannabinol (THC) content specification of less than 0.1%. Because our cannabidiol powder is synthetic, there is not a concern that it would contain pesticides or other plant components. The assay on our most recent lot showed 100.3% cannabidiol.

For clarity, PCCA's Cannabidiol (>98% Powder) is:

- Not hemp oil
- Not medical marijuana and is not extracted from marijuana
- Not a full-spectrum mixture of cannabinoids
- Not an over-the-counter (OTC) drug and not for OTC compounding
- · Not a dietary supplement
- > Is by prescription ONLY

ATTENTION PHYSICIANS

If you are a physician and would like to know more about prescribing CBD for your patients, please contact Gerry (owner and lead pharmacist) directly for more information or recommendations on formulas.

Having cannabidiol powder available for use as an API in compounding is valuable to patients, prescribers and pharmacists. Finally, prescribers can have confidence in the quality and dosing accuracy of the cannabidiol being used by their patients and can be more personalized in their approach. Most importantly, the patient will be treated under medical supervision and can be monitored appropriately

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