

1. **You say Genetics & I say Genomics**
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Wellness News quiz:

1. Genomics is a term that describes the study of all the genes in a person, as well as interactions of those genes with each other and with that person's environment. True/False
2. Electric fans may provide comfort, but when the temperature is in the high 90s, fans will not prevent heat-related illness. True/False
3. For safer health care it is recommended that you taking a relative or friend with you when visit a doctor to help you ask questions and understand the answers. True/False.
4. Who said - "Music gives a soul to the universe, wings to the mind, flight to the imagination, and life to everything."

Answers are below in the reading material.

1. You say Genetics & I say Genomics: both have a wellness impact - interaction of genes, environment and lifestyle

Sequencing the human genome has generated new interest in examining the role of genetic variation in health and disease. Until recently, human genetics was useful mainly for clinical diagnosis of hereditary disorders. Now genomics - the science of the human genome - promises to provide new **insight into the interactions of genetic susceptibility with environment and lifestyle** that maintain health or cause disease. Family history bridges genetics and genomics by encompassing the effects of shared genes, shared environments, and complex gene-environment interactions.

What is genetics and what is genomics?

Genetics is the study of inheritance, or the way traits are passed down from one generation to another. Genes carry the instructions for making proteins, which in turn direct the activities of cells and functions of the body that influence traits such as hair and eye color.

Genomics is a newer term that describes the study of all the genes in a person, as well as interactions of those genes with each other and with that person's environment.

What does genomics have to do with my health?

Genomics plays a part in nine of the 10 leading causes of death. All human beings are 99.9 percent identical in genetic makeup, but differences in the remaining 0.1 percent may hold important clues about the causes of disease.

It is hoped that the study of genomics will help us learn why some people get sick from certain infections, environmental factors, and behaviors, while others do not. Better understanding of the interactions between genes and the environment will help us find better ways to improve health and prevent diseases.

Human Genome Project (HGP)

The project was completed in 2003 by the U.S. Department of Energy and the National Institutes of Health with input from other countries around the world. The Human Genome Project (HGP) identified all of the genes in human DNA. More information about this project can be found at the HGP Web site.

2. Dealing with Extreme Heat

Heat-related deaths and illness are preventable yet annually many people succumb to extreme heat. Historically, from 1979 to 1999, excessive heat exposure caused 8,015 deaths in the United States. During this period, more people in this country died from extreme heat than from hurricanes, lightning, tornadoes, floods, and earthquakes combined. In 2001, 300 deaths were caused by excessive heat exposure.

People suffer heat-related illness when their bodies are unable to compensate and properly cool themselves. The body normally cools itself by sweating. But under some conditions, sweating just isn't enough. In such cases, a person's body temperature rises rapidly. Very high body temperatures may damage the brain or other vital organs.

Several factors affect the body's ability to cool itself during extremely hot weather.

When the humidity is high, sweat will not evaporate as quickly, preventing the body from releasing heat quickly.

Other conditions related to risk include age, obesity, fever, dehydration, heart disease, mental illness, poor circulation, sunburn, and prescription drug and alcohol use.

Because heat-related deaths are preventable, people need to be aware of who is at greatest risk and what actions can be taken to prevent a heat-related illness or death. The elderly, the very young, and people with mental illness and chronic diseases are at highest risk. However, even young and healthy individuals can succumb to heat if they participate in strenuous physical activities during hot weather. Air-conditioning is the number one protective factor against heat-related illness and death. If a home is not air-conditioned, people can reduce their risk for heat-related illness by spending time in public facilities that are air-conditioned.

Summertime activity, whether on the playing field or the construction site, must be balanced with measures that aid the body's cooling mechanisms and prevent heat-related illness. This pamphlet tells how you can prevent, recognize, and cope with heat-related health problems.

What Is Extreme Heat?

Temperatures that hover 10 degrees or more above the average high temperature for the region and last for several weeks are defined as extreme heat. Humid or muggy conditions, which add to the discomfort of high temperatures, occur when a "dome" of high atmospheric pressure traps hazy, damp air near the ground. Excessively dry and hot conditions can provoke dust storms and low visibility. Droughts occur when a long period passes without substantial rainfall. A heat wave combined with a drought is a very dangerous situation.

During Hot Weather: to protect your health when temperatures are extremely high, remember to keep cool and use common sense. The following tips are important:

1. **Drink Plenty of Fluids:** During hot weather you will need to increase your fluid intake, regardless of your activity level. Don't wait until you're thirsty to drink. During heavy exercise in a hot environment, drink two to four glasses (16-32 ounces) of cool fluids each hour. **Warning:** If your doctor generally limits the amount of fluid you drink or has you on water pills, ask how much you should drink while the weather is hot.

2. Don't drink liquids that contain alcohol, or large amounts of sugar—these actually cause you to lose more body fluid. Also avoid very cold drinks, because they can cause stomach cramps.
3. **Replace Salt and Minerals:** Heavy sweating removes salt and minerals from the body. These are necessary for your body and must be replaced. If you must exercise, drink two to four glasses of cool, non-alcoholic fluids each hour. A sports beverage can replace the salt and minerals you lose in sweat. However, if you are on a low-salt diet, talk with your doctor before drinking a sports beverage or taking salt tablets.
4. **Wear Appropriate Clothing and Sunscreen:** Wear as little clothing as possible when you are at home. Choose lightweight, light-colored, loose-fitting clothing. Sunburn affects your body's ability to cool itself and causes a loss of body fluids. It also causes pain and damages the skin. If you must go outdoors, protect yourself from the sun by wearing a wide-brimmed hat (also keeps you cooler) along with sunglasses, and by putting on sunscreen of SPF 15 or higher (the most effective products say "broad spectrum" or "UVA/UVB protection" on their labels) 30 minutes prior to going out. Continue to reapply it according to the package directions.
5. **Schedule Outdoor Activities Carefully:** If you must be outdoors, try to limit your outdoor activity to morning and evening hours. Try to rest often in shady areas so that your body's thermostat will have a chance to recover.
6. **Pace Yourself:** If you are not accustomed to working or exercising in a hot environment, start slowly and pick up the pace gradually. If exertion in the heat makes your heart pound and leaves you gasping for breath, STOP all activity. Get into a cool area or at least into the shade, and rest, especially if you become lightheaded, confused, weak, or faint.
7. **Stay Cool Indoors:** Stay indoors and, if at all possible, stay in an air-conditioned place. If your home does not have air conditioning, go to the shopping mall or public library—even a few hours spent in air conditioning can help your body stay cooler when you go back into the heat. Call your local health department to see if there are any heat-relief shelters in your area. Electric fans may provide comfort, but when the temperature is in the high 90s, fans will not prevent heat-related illness. Taking a cool shower or bath or moving to an air-conditioned place is a much better way to cool off. Use your stove and oven less to maintain a cooler temperature in your home.
8. **Use a Buddy System:** When working in the heat, monitor the condition of your co-workers and have someone do the same for you. Heat-induced illness can cause a person to become confused or lose consciousness. If you are 65 years of age or older, have a friend or relative call to check on you twice a day during a heat wave. If you know someone in this age group, check on them at least twice a day.
9. **Adjust to the Environment:** Be aware that any sudden change in temperature, such as an early summer heat wave, will be stressful to your body. You will have a greater tolerance for heat if you limit your physical activity until you become accustomed to the heat. If you travel to a hotter climate, allow several days to become acclimated before attempting any vigorous exercise, and work up to it gradually.

10. Monitor Those at High Risk: Although any one at any time can suffer from heat-related illness, some people are at greater risk than others.

- Infants and children up to four years of age are sensitive to the effects of high temperatures and rely on others to regulate their environments and provide adequate liquids.
- People 65 years of age or older may not compensate for heat stress efficiently and are less likely to sense and respond to change in temperature.
- People who are overweight may be prone to heat sickness because of their tendency to retain more body heat.
- People who overexert during work or exercise may become dehydrated and susceptible to heat sickness.
- People who are physically ill, especially with heart disease or high blood pressure, or who take certain medications, such as for depression, insomnia, or poor circulation, may be affected by extreme heat.

Visit adults at risk at least twice a day and closely watch them for signs of heat exhaustion or heat stroke. Infants and young children, of course, need much more frequent watching.

Use Common Sense: Remember to keep cool and use common sense

- Avoid hot foods and heavy meals—they add heat to your body.
- Drink plenty of fluids and replace salts and minerals in your body.
- Dress infants and children in cool, loose clothing and shade their heads and faces with hats or an umbrella.
- Limit sun exposure during mid-day hours and in places of potential severe exposure such as beaches.
- Do not leave infants, children, or pets in a parked car.
- Provide plenty of fresh water for your pets, and leave the water in a shady area.

3. Five Steps to Safer Health Care

Patient safety is one of the Nation's most pressing health care challenges. A recent report by the Institute of Medicine estimates that as many as 44,000 to 98,000 people die in U.S. hospitals each year as the result of lapses in patient safety. The steps below what you can do to get safer health care. It was developed by the U.S. Department of Health and Human Services in partnership with the American Hospital Association and the American Medical Association.

1. Ask questions if you have doubts or concerns. Ask questions and make sure you understand the answers. Choose a doctor you feel comfortable talking to. **Take a relative or friend with you to help you ask questions and understand the answers.**

2. Keep and bring a list of ALL the medicines you take. Give your doctor and pharmacist a list of all the medicines that you take, including non-prescription medicines. Tell them about any drug allergies you have. Ask about side effects and what to avoid while taking the medicine. Read the label when you get your medicine, including all warnings. Make sure your medicine is what the doctor ordered and know how to use it. Ask the pharmacist about your medicine if it looks different than you expected.

3. Get the results of any test or procedure. Ask when and how you will get the results of tests or procedures. Don't assume the results are fine if you do not get them when expected, be it in person, by phone, or by mail. Call your doctor and ask for your results. Ask what the results mean for your care.

4. Talk to your doctor about which hospital is best for your health needs. Ask your doctor about which hospital has the best care and results for your condition if you have more than one hospital to choose from. Be sure you understand the instructions you get about follow-up care when you leave the hospital.

5. Make sure you understand what will happen if you need surgery. Make sure you, your doctor, and your surgeon all agree on exactly what will be done during the operation. Ask your doctor, "Who will manage my care when I am in the hospital?" Ask your surgeon:

- Exactly what will you be doing?
- About how long will it take?
- What will happen after the surgery?
- How can I expect to feel during recovery?
- Tell the surgeon, anesthesiologist, and nurses about any allergies, bad reaction to anesthesia, and any medications you are taking.

4. Quotes:

5.

"A violinist had a violin, a painter his palette. All I had was myself. I was the instrument that I must care for." -Josephine Baker

"Music gives a soul to the universe, wings to the mind, flight to the imagination, and life to everything." - Plato

"It's a job that's never started that takes the longest to finish." - J.R.R. Tolkien

"We must be willing to get rid of the life we've planned, so as to have the life that is waiting for us." - Joseph Campbell

"Suburbia is where the developer bulldozes out the trees, then names the streets after them." - Bill Vaughn

"The optimist proclaims that we live in the best of all possible worlds; and the pessimist fears this is true." - James Cabell

"Don't worry about the world coming to an end today. It's already tomorrow in Australia." - Charles Schultz

"Sometimes only poetry can say it. I think there's just this deeper language, and a way of putting your world back together again and breaking through barriers." - Laura Nyro

5. A Wellness Challenge - keep it simple: find and preserve the simplicity in well-being, live healthy by eating healthy and participating in regular, meaningful physical exercise. Not only does it sound simple, it is simple.