National Health Observances for January.................................2
BetterSafe: Birth Defects Prevention Month..........................3
DayInDayOut: Cervical Cancer..............................................5
Take Charge: Blood Donation..............................................7
To Your Health: Sickle Cell Anemia......................................9
Inspiration...........................................................................11
National Health Observances

JANUARY | 2020

Birth Defects Prevention Awareness Month

Blood Donor Month

Cervical Cancer Screening Month

Cervical Health Awareness Month

Glaucoma Health Awareness Month

Winter Sports Traumatic Brain Injury (TBI) Awareness Month

Thyroid Awareness Month

Healthy Weight Week (19-31)

IV Nurse Day (25)
National Birth Defects Prevention Month
TIPS & SUGGESTIONS

Birth defects are structural changes that a baby is born with, ranging from mild to severe depending on which part of the body is affected. Sometimes these defects can be found while the mother is pregnant (in utero), others are not known until the baby is born and you may actually see something abnormal, and still others might go unnoticed for up to a year after delivery. Birth defects are very common and can affect the abilities or even lifespan of this new child. Depending on the severity, these can be devastating to families.

Not all birth defects can be prevented and sadly, scientists do not know what causes all of them. There are some known causes related to certain birth defects, such as alcohol leading to fetal alcohol syndrome. Others are gene mutations causing defects such as Down syndrome; or missing certain nutrients, such as folic acid, resulting in spina bifida.

OTHER KNOWN RISK FACTORS INCLUDE:

» Smoking, drinking alcohol, or using illegal drugs

» Certain prescription medications

» Certain medical conditions of the mother, such as diabetes or obesity

» Being an older mother, specifically over 34 years of age

» Having a family history of birth defects

• If you do have someone in the family with a birth defect, it is a good idea to meet with a genetic counselor before pregnancy. They can help you understand your chances of having a baby with a birth defect and help come up with a plan for the future.

Even though some birth defects cannot be prevented, there are some things women can do to ensure they have a healthy pregnancy and lower the chances of complications.

» Always talk with your doctor about medications you are on before becoming pregnant. And always discuss the safety of new medications that you may need during the pregnancy.
» Don't smoke, drink alcohol, or use drugs.

- There is no safe amount of alcohol during any time of pregnancy. Drinking alcohol can result in miscarriage, stillbirth, or many disabilities referred to as fetal alcohol spectrum disorders.

- Smoking cigarettes puts your baby at risk of having low birth weight, being born prematurely, and having certain birth defects such as cleft lip or palate. It also increases your baby’s chance of dying from SIDS (Sudden Infant Death Syndrome).

» Begin prenatal care as soon as you become pregnant and follow your doctor’s recommendations on how often the visits should be.

» As you start planning your family, begin taking folic acid for at least one month before you get pregnant. 400 micrograms daily is the recommended dose.

- This can help prevent major birth defects of the brain and spine, such as spina bifida.

- More than half of pregnancies are unplanned. Because of this, it is recommended that any sexually active woman of childbearing age should take folic acid daily.

» Make sure any medical conditions are controlled before pregnancy, such as high blood pressure, diabetes, or obesity.

- Obesity can result in having a baby with brain or spine defects, and heart defects.

- Uncontrolled diabetes can result in birth defects as well as complications for the mother and uncontrolled blood sugar levels in the baby.

» Remain up-to-date on vaccinations. Most vaccines are safe to take during pregnancy and some are highly recommended to keep you and your baby safe. Talk with your doctor about which vaccines you may need.

» Maintain a healthy diet.

» Exercise regularly.

There are many tracking systems in place so research can be done on babies born with birth defects. Scientists can then track which birth defects affect certain ethnic groups, which medications are involved, environmental factors, etc. With this information, they are able to identify risk factors, find opportunities to prevent defects, and help those living with birth defects live up to their full potential.
Cervical Cancer
AND THE ROLE OF HPV

As in all cancers, a mutation or genetic change occurs to healthy cells, turning them into abnormal cells. With cervical cancer, this happens in the cervix - the lower part of the uterus that connects to the vagina. Cancer cells grow at a rapid rate and do not die off like healthy cells, thus spreading the cancer throughout and invading other tissues (metastasizing). Additionally, the build-up of abnormal cells form a cancerous tumor.

WHAT CAUSES CERVICAL CANCER?

Researchers are not entirely sure of the exact cause of cervical cancer; they do know that Human papillomavirus (HPV) is a big contributor. Environment and lifestyle choices likely play a role as well because while HPV is very common, it does not always cause cervical cancer.

UNDERSTANDING HPV

Human papillomavirus (HPV) is the most commonly sexually transmitted infection (STI) in the United States. According to the CDC, HPV is so common that almost everyone who is sexually active will get HPV at some point in their life.

Oftentimes, HPV will go away on its own with no complications or health problems. Other times, it can cause genital warts or types of cancer - cervical (as we are discussing today), as well as cancer of the vagina, vulva, penis, anus, or back of the throat. Warts or cancer can appear years after you were initially infected with HPV. Luckily, there is a vaccine for this! All boys and girls, ages 11-12, should get a series of two vaccinations to prevent cancers caused by HPV.

» Risk factors for cervical cancer
» Early sexual activity
» Multiple sexual partners (or having a partner with multiple partners)
» Having other STIs (sexually transmitted infections)
» Having a weakened immune system
» Smoking
» Long-term use of birth control pills

SIGNS AND SYMPTOMS OF CERVICAL CANCER

Early stages of cervical cancer do not typically have any signs. As the cancer progresses, you may see:

» Pelvic pain or pain during intercourse
» Watery, bloody vaginal discharge with a foul odor
» Vaginal bleeding outside of your menstrual period (after sex, in between periods, after menopause)
» Back pain
» Fatigue
» Weight loss
» Swelling of one or both legs
» Difficulty urinating

PREVENTION
» Get the HPV vaccination
» Have routine pap smears/tests (get these every three years, assuming the results are normal)
» Practice safe sex
» Don’t smoke

TREATMENT OPTIONS
Treatment depends on the type and stage of cancer you’ve been diagnosed with.

Options are:

» Radiation
  » Uses high-energy waves to kill cancerous cells. It can be aimed at the cervix from the outside of the body (external beam radiation) or placed into the vagina brachytherapy).

» Chemotherapy
  » Drugs that fight the cancer cells. These can be pills but are most commonly given through an IV into your vein.

» Surgery
  » Cryotherapy: Freezes the cancer cells; used for early stages.
  » Laser surgery: Burns cancerous cells; used for early stages.
  » Conization or a Cone Biopsy: The small, cancerous section of the cervix is removed.
  » Hysterectomy: The uterus and cervix are removed. Ovaries, fallopian tubes, and nearby lymph nodes may also be removed if they are cancerous.

Alternative methods are available and may include herbs, supplements, special diets, acupuncture, or massage. The effectiveness of these options has not been proven and their safety is unknown; if you’re curious about these, discuss them with your doctor so you can make an informed decision.

When caught early, cervical cancer is very treatable and the survival rate is high. Routine pap smears are so important to detect precancerous changes and begin treatment before cervical cancer even develops. The majority of Americans diagnosed with cervical cancer have either never had a pap smear or it has been more than 5 years since their last pap smear. Take care of yourself and make your health a priority!

THE HPV VACCINE...
» Does not contain harmful ingredients.
» Does not cause fertility problems.
» Is for both boys and girls. Two shots given 6-12 months apart, complete by the age of 13.
» Is safe and effective.
» Should ideally be given before becoming sexually active.
Blood Donation
THE POWER OF SAVING LIVES

In the United States, someone needs blood every 2 seconds. They may be battling cancer or have sickle cell disease; they may have been involved in a car accident or be a burn victim; they may have just received a heart transplant or maybe it’s a premature baby whose life hangs in the balance. Your blood donation can save their life.

BLOOD TYPES AND WHY THEY MATTER

We all must receive a blood type that is compatible with our own, so that our immune system doesn’t fight back or reject the transfusion. There are 8 common blood types, which depend on the presence or absence of antigens A or B and an Rh factor. The Rh factor is a protein on the red blood cells which is either present (+) or absent (-), usually referred to as positive (+) or negative (-).

The 8 common blood types are: A+, A-, B+, B-, O+, O-, AB+, AB-. The ‘O’ type means that neither the A or B antigen is present on the red blood cells.

Let’s leave it to the experts to know which blood types are compatible and which transfusion can be given. But it is important for you to know that those with the blood type O- are considered Universal Donors, which means their blood type can be transfused to anyone. Because of this, O- blood is transfused in all emergency scenarios when the recipient’s blood type is unknown and is thus in highest demand and shortest supply.

Also important to know is that O+ blood type is the most common (37% of the population), which means this type is also in high demand.

That being said, it doesn’t matter which blood type you are, it can help someone! There are a variety of ways you can donate.

» Whole blood donation. This is the most common and simplest way we can donate. The entire (or whole) amount is donated and any blood type can donate. Whole blood is usually given to trauma patients or those having surgery.

» Power Red donation. You donate a concentrated amount of red cells. This is a process that separates the red blood cells from the other blood components, returning the plasma and platelets back to you. Ideal donors are O+, O-, A-, B-. Red cells are given to trauma patients, newborns, emergencies while giving birth, those with sickle cell anemia, or those experiencing blood loss.
Platelet donation. Platelets are cells in your blood that form clots and stop bleeding. Ideal donors are A+, A-, B+, O+, AB+, AB-. Platelets are often used for cancer patients or organ transplants, as well as other surgical procedures.

Plasma donation. An automated process that separates plasma from the other blood components. Donors must be AB+ and AB-. Plasma is used to stop bleeding in emergency or trauma situations.

WHAT ARE THE REQUIREMENTS FOR DONATION?

We want everyone to donate! But we also want to keep everyone safe. Therefore, there are some requirements that must be met, depending on which type of donation you’d like to give.

Whole blood donation
- Must be at least 16 years old
- Must weigh at least 110 pounds
- Can donate every 56 days
- Must be in good health and feeling well

Power Red donation
- Females must be 19 years old, 5’5”, and 150 pounds
- Males must be 17 years old, 5’1”, and 130 pounds
- Can donate up to 3 times a year; up to 2 times a year for males under 18 years
- Must be in good health and feeling well

Platelet donation
- Must be at least 17 years old
- Must weigh at least 110 pounds
- Can donate every 7 days or up to 24 times per year
- Must be in good health and feeling well

Plasma donation
- Must be at least 17 years old
- Must weigh at least 110 pounds
- Can donate every 28 days or up to 13 times per year
- Must have type AB blood
- Must be in good health and feeling well

Each blood donation can save up to three lives. Each year, 6.8 million people donate—which sounds great but that’s actually only 3% of eligible donors! January is National Blood Donor month—let’s all vow to make a difference. Let’s all give the greatest gift of all—life.

TIPS FOR DONATION:

- Eat a healthy meal, focusing on iron-rich foods before and after, such as fish, red meat, beans, and spinach
- Drink extra (nonalcoholic) fluids the day before and for 24 hours after you donate
- Don’t take aspirin 2 days before your donation, especially if you’re donating platelets
- No heavy lifting or vigorous exercise for 24 hours after you donate
- Take multivitamins with iron if you donate frequently
Sickle Cell Anemia

FIGHTING FOR OXYGEN

Sickle Cell Anemia or Sickle Cell Disease, is an inherited, lifelong disease. It is a form of anemia, where the red blood cells cannot sufficiently carry oxygen through the body. In Sickle Cell Anemia (SCA), there is an abnormal protein in the red blood cells, causing them to become sticky and misshapen, looking like crescent moons or sickles. These rigid and irregularly shaped blood cells get stuck in blood vessels, blocking blood flow to vital organs.

HOW DOES SOMEONE GET SICKLE CELL ANEMIA?

Some people carry the defective hemoglobin S gene - this is what causes SCA. If you carry just one, you have the sickle cell trait but not the actual disease and usually live a normal, healthy life. But that gene can be passed on to your child. If your partner happens to also have the sickle cell trait, it gives your child a 25% chance of inheriting both hemoglobin S genes, thus having SCA.

This is most often diagnosed at birth, as a newborn screening program is mandatory throughout the United States. This is done through a blood draw from the newborn’s heel within 48 hours of life and tests for multiple abnormalities.

SCA can affect any race but is most prevalent in African Americans. About 1 in 13 black or African American babies are born with sickle cell trait. About 1 in 365 actually has sickle cell disease/anemia. It also affects many people from Hispanic, southern Europe, Middle Eastern, or Asian Indian backgrounds. It affects both males and females equally.

HEMOGLOBIN S GENE

Normal red blood cells are round and flexible, carrying oxygen easily throughout the body, living about 90-120 days. When the hemoglobin S gene is present, abnormal proteins form within the red blood cells, causing them to lose their shape. They become very rigid and do not travel easily through blood vessels, often bursting apart. Their life cycle is only 10-20 days in comparison to the healthy blood cells and the body has a very difficult time keeping up with new red blood cell production. So not only are the red blood cells insufficient but there are not enough of them. This leads to anemia and fatigue.

In addition to a severe lack of energy, these sickle-shaped cells stick to the blood vessel walls, blocking blood flow and oxygen delivery. This causes severe pain, called pain crises or sickle cell crisis, often leading to hospitalization for treatment and pain control.
SIGNs, SYMPTOMS, AND COMPLICATIONS

As stated earlier, SCA is typically diagnosed at birth, but symptoms do not usually appear until 5-6 months of age because the newborn is still carrying healthy fetal blood cells until this point. A lot of the complications from SCA occur because the sickle cells block blood flow to certain areas of the body. Other complications stem from infections, the breakdown of red blood cells, and severe pain.

» Jaundice (yellowing of the skin)
» Icterus (yellowing of the eyes)
» Fatigue or fussiness
» Dactylytis (painful swelling of the hands and feet)
» Delayed growth
» Frequent infections
» Vision problems

TREATMENT

» Pain medications
» Antibiotics to prevent infection
» Vaccinations are very important to prevent infection
» Blood transfusions
» Bone marrow transplant (or stem cell transplant), which is the only potential cure for SCA. However, it is extremely high-risk and difficult to find a matched donor. It is typically only done in children <16 years old with severe symptoms.

PREVENTION

There is no way to actually prevent getting SCA. If you have the sickle cell trait, it is very important to see a genetic counselor and understand the risks of pregnancy and passing it on to your child. They can discuss options with you regarding possibilities, treatments, and reproductive options.

Living with sickle cell anemia is a very heavy diagnosis. It is important to see your doctor regularly and practice healthy habits to avoid a sickle cell crisis. Maintaining a strong support system is crucial as well, as this can be taxing on your mental wellbeing. Following your treatment plan and managing symptoms can control this disease and help you live a fulfilling life.
COURAGE
IS WHAT IT TAKES TO STAND UP AND SPEAK;
COURAGE
IS ALSO WHAT IT TAKES TO SIT DOWN AND
LISTEN.

- SIR WINSTON CHURCHILL