

WOUNDS

WHAT QUESTIONS SHOULD I AND MY FAMILY BE ASKING?

- Do I have an open part of my skin that looks like a wound?
 - Where is my wound located on my body? How many are there?
 - Is my wound painful, deep, or draining any fluid?
 - What is the size of my wound?
 - Does my wound need specific dressings to help it heal?
 - Are my long-term (chronic) diseases such as diabetes treated?
 - Does my wound need surgery?
 - Do I have urinary or bowel movement leakage worsening the wound?
 - Am I eating a well-balanced diet with and high protein?
 - Am I moving and changing my position every two hours if I am wheelchair or bed-bound?
-

WHAT ACTIONS CAN I TAKE FOR THIS AGENDA?

- Talk to your doctor if you notice a break in your skin or wound you think will need treatment
 - The main points to treat chronic wounds is having good nutrition, a cushion to reduce pressure, treating urine leakage, and moving every few hours
 - There are treatments such as using high oxygen or devices to help improve wound healing. However, the evidence for these is few but positive. Talk to your doctor if they are right for you or not
 - If you have diabetes, make sure it is well controlled. Older adults have different targets than others. Wear proper-fitting shoes and examine your feet every day to make sure there are no breaks in your skin
 - If you have a wound and get a fever, worse pain, or it gets bigger and is releasing fluids, go to the emergency department or call your doctor. The wound could be infected and you might need antibiotics
 - If you are comfortable doing so, take a picture of your wound on your phone to show your doctor. That way they can see how the wound has progressed or changed
-

WHAT IS A WOUND?

- A wound is an abnormal change in the structure and function of the skin and soft tissue of our body
 - An injury, trauma, or cuts can all cause wounds
 - However, some diseases can also cause wounds too
 - The breakdown of our skin which is a protective layer can increase the risk of the wound being infected
-

WHAT ARE EXAMPLES OF DIFFERENT KINDS OF WOUNDS?

- Trauma or injury from an accident
 - An open wound on the skin is also called an “ulcer”
 - Veins can be injured causing venous ulcers
 - Arteries can be injured causing arterial ulcers
 - Diabetes can cause diabetic foot ulcers
 - Surgeries can cause wounds if not healed properly
-

A WOUND IS AN INJURY TO THE SKIN THAT CAN ALLOW IT TO GET INFECTED

THERE ARE MANY CAUSES SUCH AS TRAUMA, LONG-TERM ILLNESSES, BEING BED-BOUND, BLOOD VESSEL DISEASES LIKE DIABETES, AND SURGERIES

SHOULDN'T ALL WOUNDS HEAL? WHAT ARE THE RISK FACTORS FOR WOUNDS TO NOT HEAL?

- Normally, wounds should heal with time if the body is normal and the wound is not too big
- However, there are some risk factors for causing wounds to not heal. If a wound does not heal it can become a long-term wound

- A long-term wound is known as a “chronic wound” meaning it is not healing correctly
 - Risk factors for chronic wounds are:
 - Wound infection
 - Actively smoking
 - Older age
 - Not moving much (immobility)
 - Uncontrolled diabetes
 - Blood vessel diseases
 - Malnutrition (not getting essential nutrients)
 - Medications that weaken or change the immune system such as chemotherapy, radiation, or steroids
-

HOW DOES DIABETES CAUSE WOUNDS TO HAPPEN?

- Diabetes is a complex disease. Put simply, the high blood sugars (glucose) can cause parts of your body not to work correctly
 - That is why it is important to treat diabetes and make sure blood sugars are not too high or too low
 - Diabetes can cause wounds to form and worsen by:
 - Weakening the immune system making it less able to fight infections
 - Weakening the blood vessels overall and to wounds so it heals less
 - Decreasing the sensation in your nerves so you do not feel when a wound is forming. If that happens, a wound can be left ignored and get worse
-

CHRONIC WOUNDS ARE THOSE THAT DO NOT HEAL PROPERLY

SMOKING, OLD AGE, INFECTIONS, IMMOBILITY, AND POOR NUTRITION ARE REASONS WHY WOUNDS MAY NOT HEAL

IF I DO HAVE A WOUND, WHAT ARE IMPORTANT POINTS I SHOULD KEEP TRACK OF?

- Know the location and number of wounds
 - Photography may be helpful to see changes over time with pictures of the wound
 - Note if any fluid is coming out of it such as blood
 - Wound size and depth can help to know how severe the wound is
 - Learn the basic stages of wounds
-

WHAT ARE THE STAGES OF A WOUND?

- A stage of a wound tells you how severe the wound is. The greater the number of the stage the more severe it is. There are usually four stages
 - You will need to see a healthcare provider to better stage your wound
 - Keep in mind some wounds cannot be staged
 - The four wound stages are:
 - Stage 1: The skin is unbroken but you can see redness
 - Stage 2: The skin is broken and below the skin is seen
 - Stage 3: The skin is broken and you can see below the skin with fat
 - Stage 4: The skin is broken and you can see bone, joint, or muscle
-

TRY TO KNOW THE SIZE OF YOUR WOUND AND IF IT IS DRAINING ANY FLUIDS

NOTE IF ANYTHING HAS CHANGED SUCH AS WORSENING PAIN OR IF IT IS GROWING

HOW DO I KNOW IF MY WOUND IS INFECTED?

- Having an infected wound can be serious. If left untreated, the infection can cause a lot of injury to your skin and surrounding area

- It can also get into your blood and cause a serious condition called “sepsis”. If so, you will need antibiotics
 - All wounds should be brought to the attention of your doctor especially if you are concerned about infection
 - The best way to know if the wound is infected is your healthcare provider taking a sample or “swab” to see if there are abnormal bacteria on your wound. Keep in mind that most wounds already have bacteria on them as they live on healthy skin too
 - Some factors that point towards infection are:
 - Fever and chills
 - The wound is painful or has new worse pain
 - The wound site is bigger than two centimeters
 - The wound is deep and you can see bone
 - A large amount of fluid coming out such as blood
-

WHAT IS A PRESSURE ULCER?

- Pressure ulcers are a type of long-term (chronic) wound. As the name suggests, it happens in high-pressure areas of our body such as the heels, legs, buttocks, and lower back
 - It mainly happens in those that do not move much. Examples are those who are wheelchair or bed-bound
 - The more immobile one is the greater the risk of getting a pressure ulcer
-

A WOUND IS LIKELY INFECTED IF THERE IS NEW AND WORSENING PAIN, YOU CAN SEE OR REACH THE BONE, OR IT IS BIGGER THAN TWO CENTIMETERS

A PRESSURE ULCER IS A WOUND THAT HAPPENS FROM NOT MOVING THAT PART OF YOUR BODY. BEING WHEELCHAIR OR BED-BOUND ARE RISKS

HOW IS A PRESSURE ULCER TREATED AND PREVENTED?

- Similar to the treatment of other chronic wounds, pressure ulcers need to have good blood flow and prevent infections to heal correctly
 - Preventing pressure ulcers can be done by moving often. If one is wheelchair or bed-bound, have someone help move you to offload the pressure about every two or three hours
 - Another important point is making sure your bed has the correct cushions to lower the pressure on your body parts. We can do this by using foams, gels, and other devices
 - Treating urine or bowel movement leakage (incontinence) can also decrease infections
 - Treating long-term (chronic) diseases and getting the essential nutrients in your diet will help your wound heal better too
 - Refer to the "[nutrition](#)" agenda for details
-

References

1. Robert L Kane et al. Essentials of Clinical Geriatrics 8th edition (2018) Jeffrey B. Halter et al.
2. Hazzard's Geriatric Medicine and Gerontology 7th edition (2016)
3. Jayna Holroyd-Leduc et al. Evidence Based Geriatric Medicine (2012)
4. Atiyeh BS, Ioannovich J, Al-Amm CA, El-Musa KA. Management of acute and chronic open wounds: the importance of moist environment in optimal wound healing. *Curr Pharm Biotechnol* 2002; 3:179.
5. Schultz GS, Sibbald RG, Falanga V, et al. Wound bed preparation: a systematic approach to wound management. *Wound Repair Regen* 2003; 11 Suppl 1:S1.
6. Broughton G 2nd, Janis JE, Attinger CE. The basic science of wound healing. *Plast Reconstr Surg* 2006; 117:12S.
7. Gould L, Abadir P, Brem H, et al. Chronic wound repair and healing in older adults: current status and future research. *J Am Geriatr Soc* 2015; 63:427.
8. Armstrong DG, Boulton AJM, Bus SA. Diabetic Foot Ulcers and Their Recurrence. *N Engl J Med* 2017; 376:2367.
9. Lipsky BA, Berendt AR, Cornia PB, et al. 2012 Infectious Diseases Society of America clinical practice guideline for the diagnosis and treatment of diabetic foot infections. *Clin Infect Dis* 2012; 54:e132.
10. Armstrong DG, Lipsky BA. Diabetic foot infections: stepwise medical and surgical management. *Int Wound J* 2004; 1:123.

11. Lazarides MK, Giannoukas AD. The role of hemodynamic measurements in the management of venous and ischemic ulcers. *Int J Low Extrem Wounds* 2007; 6:254.
12. Atiyeh BS, Ioannovich J, Al-Amm CA, El-Musa KA. Management of acute and chronic open wounds: the importance of moist environment in optimal wound healing. *Curr Pharm Biotechnol* 2002; 3:179.
13. Schultz GS, Sibbald RG, Falanga V, et al. Wound bed preparation: a systematic approach to wound management. *Wound Repair Regen* 2003; 11 Suppl 1:S1.