

Allogeneic Stem Cell Transplant: What to Expect During your Hospital Stay

The following guidelines apply to being admitted to 7 West and what to expect during your hospital stay.



Admission day:

- You will have an appointment the morning of your admission day with your transplant doctor to ensure that you are ready for your chemotherapy and transplant process to begin.
- You will then get a central line IV catheter, called a Hickman, placed in your chest. This will be done in Interventional Radiology with sedation.
- You will be admitted to 7 West after your line placement.

Note: If 7 West does not have any open beds at this time, you will be sent to the admit lounge until we have a clean, open room for you. We are aware you are coming in, but sometimes we have to wait for patients to be discharged, housekeeping has to clean the room, and then we can admit you.

Admission and hospital stay:

- We will take a tour of the unit with you. We will show you where the nutrition room, family lounge, and laundry room are. We will also show you where you can walk the halls.
- We will ask you several questions about your medications, screening questions, and other required documentation that has to be completed on admission day. Your home medications can go home with family. We will dispense all of your medications to you from our pharmacy. In the rare event that you take a medication that we don't stock, we will send your own home medication to pharmacy to verify it and then we can keep it locked up in the med cabinet in your room.



- We will show you how to order meal trays and guest trays from your room phone. You can order food from 6:30 am to 8:00pm.
- There is a fridge in your room for food, it does not have a freezer component. There is a freezer in our nutrition room for any frozen foods that you plan to bring. Be sure to put your name on that food.
- There is a small couch or chair that converts to a bed for an overnight visitor. Minors need to be accompanied by an adult visitor at all times.

Routine nursing care:

- We do vital signs every 4 hours at a minimum, even overnight.
- Each nurse you have will do a full assessment of you and your symptoms. They will listen to your heart and lungs, look in your mouth, ask you questions about pain, nausea, diarrhea, etc.
- Labs and blood samples will be taken daily around 4:00am or 5:00am.
- Weights are done every day.
- The doctor and other members of the transplant team will come by each day to examine you and update your treatment plan.

Day to day expectations of you:

- You need to shower every day with chlorhexidine soap that we will provide for you. This is to help prevent you from getting an infection.
 - We will show you how to use saran wrap to cover your central line to avoid it getting wet in the shower.
 - Do not use bar soap, use liquid soap only.
 - Do not use a loofah. Use a new washcloth each day.

- We will have you save all of your urine during your admission. We will show you how to do that and how to record it yourself.
- We will ask you to save your first bowel movement upon admission and at other times throughout your stay.
- You need to be walking in the halls at least 3 times a day.
 - You need to wear a yellow mask in the halls on 7 West and if you go off the floor for a test, we will have you wear a blue N-95 mask.
 - Once you are admitted, you cannot leave the unit. If you must leave, you will need to get nurse/doctor approval.
- We will encourage you to drink 4-5 large cups of water per day to keep you hydrated.
- Use salt and soda mouth rinse 4 times a day to keep your mouth clean and prevent mouth sores.
- Brush your teeth 2 times a day.
- We will have you use an incentive spirometer several times a day. This is a breathing machine that will help keep your lungs expanded and respiratory will show you how to use it.
- We will show you how to use Sequential Compression Devices (SCDs) on your legs to help prevent blood clots.
- Be sure to put your call light on when your IV pump is beeping, it does not automatically alert us to when this occurs.



Infection prevention:

- Wash your hands often, at a minimum: before eating, after using the bathroom, and every time you or your visitors come in and out of your room.

- No sick visitors allowed on 7 West or in your room.
- No real flowers or plants, no latex balloons. Fake flowers and non-latex balloons are allowed.
- Do not wear contact lenses. Eye glasses only.
- Your IV pole will be attached to your central line continuously while you are admitted on 7 West. We do not unhook you for showers. This is for infection control purposes and to keep your risk of infection as low as possible.
- Visitors should not use the bathroom in the room unless instructed otherwise. There are public restrooms and a shower located around the unit.
- Refer to your FDA Food Safety booklet or dietician for specific food related questions.
- Screening tests will be done upon admission and each week on Wednesdays to determine if you are a carrier of certain bacteria that can cause infection if it is spread. These screening tests are done using a swab on the inside of your nose, the other is a rectal or stool sample swab.
- If you are put into contact or droplet precautions (where staff wear gowns, gloves, and possibly a mask into your room) we will prohibit you from using certain areas on the unit. We will give you more information on this if you are put into precautions.

Safety and fall precautions:

- We will discuss fall precautions with you and give you a handout. Your safety is very important to us and there are multiple factors that could increase your risk of a fall.
- For your safety, please do not touch the buttons or manipulate your IV tubing on your IV pump.

Symptoms during your stay:

- Keep us informed of all symptoms you are experiencing. Use your call light as needed to alert us to any symptoms you are having or if you need anything, this is how your nurses can help you be more comfortable.
- Symptoms to alert your nurse about:
 - Feeling hot or chilled
 - Difficulty breathing
 - Chest pain/tightness
 - Nausea
 - Diarrhea
 - Mouth sores
 - Pain, headache
 - Nose bleed
 - Blood in urine or stool
 - Or any other symptoms that you may be experiencing

Blood counts:

- We will write your labs/blood counts on the whiteboard in your room every day.
- Your chemo will make your white blood cell count and neutrophils decrease. This is when you are at most risk for infections.
- If your hemoglobin becomes too low, we will give you blood/red blood cells.
- If your platelets become too low, we will give you platelets. If you have a nose bleed or are bleeding from anywhere, we may give you platelets to help clot your blood at that point.

- Bleeding precautions: When your platelets are less than 50,000:
 - Do not floss
 - Do not blow your nose harshly
 - Do not rub your eyes
 - Do not scratch your skin hard
 - Do not strain with bowel movements
 - Do not have sexual intercourse (vaginal or anal)
 - Electric razors only
 - Avoid popcorn and hard to chew items
 - Avoid vomiting- call nurse for anti-nausea medications
 - Nothing per rectum or vagina (no enemas, tampons, vaginal dilators)
 - Notify staff of any signs of bleeding (nosebleeds, blood in urine/stool/vomit/sputum)

Engraftment:

Engraftment is when your stem cells that you got on transplant day are growing and now functioning as normal cells. Engraftment typically takes a few weeks after your transplant date. We will alert you as to when you are engrafting and when we anticipate you being discharged from the hospital.

When can I go home?

- Once engraftment has occurred
- When your symptoms have resolved (no fevers, nausea/diarrhea controlled with oral meds, etc.)
- Eating and drinking well
- Able to take all medications by mouth

Frequently Asked Questions about Bone Marrow Transplant- Allogeneic

Bone marrow transplant is a very complex process that includes many steps. This handout provides answers to common questions patients and caregivers have. We hope it will help you better understand the process and learn the medical terms we often use. Please do not hesitate to ask us more questions as they come up.

How are stem cells collected?

There are several ways to collect stem cells for future re-infusion.

Cord Blood is collected from the umbilical blood vessels in the placenta at time of the delivery and then frozen.

Bone Marrow is collected by multiple needle aspirations from the bone marrow space in the hips or chest.

Peripheral Blood - it is possible to collect stem cells directly from the patient's bloodstream. In order to have enough stem cells in the bloodstream, the patient receives growth-factor drugs (Granix)[®] and/or Mozobil[®]) with or without chemotherapy. The drugs stimulate the movement of stem cells out of the bone marrow space into the bloodstream. This process is called **mobilization of stem cells**. After the stem cells mobilized into the bloodstream the blood is collected through an IV connected to a special machine called an apheresis machine. The machine separates the stem cells and returns the remaining blood back to the donor.

Aspiration- procedure that removes something from an area of the body
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How are stem cells stored?

Some cells are fresh, which means they will be infused shortly after collection. Some stem cells are collected, mixed with a preservative called DMSO, and frozen in liquid nitrogen at a temperature below 50° celcius. Cells can be stored indefinitely. Extra cells are sometimes stored in case the patient needs more cells.

How many cells are needed for transplant?

The number of cells necessary for transplant has not been established and varies from center to center. At Michigan Medicine we want 2-5 million cells.

What are conditioning regimens?

Conditioning regimens are treatment plans that include a combination of chemotherapy and/or radiation before transplant. The purpose is to:

- Kill off any existing cancer cells
- Make room in the bone marrow for new cells
- Suppress your immune system to allow the transplanted stem cells to start growing and maturing.

How will the new stem cells grow in my body?

You will receive the stem cells through your central line. Stem cells have a “homing” (from the word “home”) ability that allows them to migrate to the bone marrow where they will grow and mature. You will receive Granix® several days after transplant to help increase your white blood cell counts.

How do I know transplant is successful?

Transplant is successful when the new cells begin to grow and mature in the bone marrow. This is called **engraftment**. White blood cells are the first to engraft; platelets will engraft second and red blood cells third. When the

new stem cells have engrafted you will see a gradual but steady increase in blood counts. We define engraftment in one of two ways:

- ANC is over 0.5 or 500 for two days in a row,
or
- Platelet count is over 20,000 **and** ANC is higher than 1,000 for 1 day

<p>ANC = Absolute Neutrophil Count. Neutrophils are a type of white blood cell that fights infection.</p>
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When will I engraft?

Time of engraftment varies per type of transplant and where stem cells are collected.

Autologous: Peripheral stem cells: average 10-14 days
Bone Marrow: average 15-20 days

Allogeneic: Peripheral stem cells: average 12-14 days
Bone Marrow: average 15-20 days

Cord Blood: Average 25-45 days

When can I go home?

We will discharge you when the following have occurred:

- Your cells have begun to engraft and your ANC is more than 1.0 or 1,000
- You have been without fever for 24 hours
- You are eating and drinking adequately
- Side effects such as pain, nausea, vomiting or diarrhea are all under control with oral medications
- You are not requiring daily blood transfusions

Will my blood type change?

If you received stem cells from a donor, your donor may have a different blood

type than yours. A blood bank technician will provide you with a blood ID card with your current blood type and donor's blood type. To assess changing of blood type, we will do frequent blood-type tests during your stay. This will help you to prepare for future transfusions. It will take approximately one year for your blood type to convert.

How long do I have diet restrictions?

Transplant recipients receive specific food safety guidelines to help protect against bacteria and other harmful organisms found in some food and drinks. A FDA *Food Safety* booklet for bone marrow transplant recipients is included in this binder. You will be required to follow these guidelines for the first 100 days or until you are off all medications that suppress your immune system (if you received donated stem cells.) The unit dietician will review guidelines in this booklet with you.

What to Expect on “Day Zero” of an Allogenic BMT?

What is Day Zero?

Day Zero is the day you receive your new stem cells. This handout will describe in detail what you can expect to occur on this day.

Where will the procedure take place?

- Your transplant will take place in your room with you lying in bed. You may have visitors if you like, as long as they are not sick.

How will I prepare for the procedure?

- You may want to eat light lunch or postpone lunch until after transplant.
- You will receive Tylenol® and Benadryl® prior to the procedure. You may also receive anti-nausea medications if needed. Patients with blood types that are different, or incompatible, to donor’s blood type will get additional medications before the procedure. These may include steroids and diuretics (water pills).

What will happen during the infusion of stem cells?

- The blood bank will bring the stem cells to your room. We double check each bag to ensure you are receiving the correct stem cells.
- Your cells will be in a bag that looks similar to blood. They will be connected to your central line and infused through your line.
- The bag will be rinsed when empty to help capture all cells.
- The transplant takes about 30 minutes to an hour, but may take longer depending on volume and number of stem cells to be infused.
- We will monitor you closely during the infusion, and will take vital signs frequently.

What are the common side- effects?

The common side effects for this procedure include:

- Change in vital signs: fever, increase in blood pressure and/or heart rate.

There may also be a decrease in oxygenation and we may temporarily place you on oxygen.

- Heaviness in your chest or a feeling of pressure in your chest.
- Back pain or flank pain
- Chills, Shivers or shakes, also called rigors.
- Itchiness and/or redness to skin.
- Red or pink tinged urine may occur due to break down of remaining red blood cells during infusion. You will be getting IV fluids to help flush out your kidneys so we expect this side effect to subside with 24-48 hours.

Side effects can be treated by slowing the infusion. We will monitor you closely during infusion of your stem cells with frequent vital signs and adjust the pace as needed.

The medications you received prior to the procedure, will help to prevent serious transfusion reactions, such as:

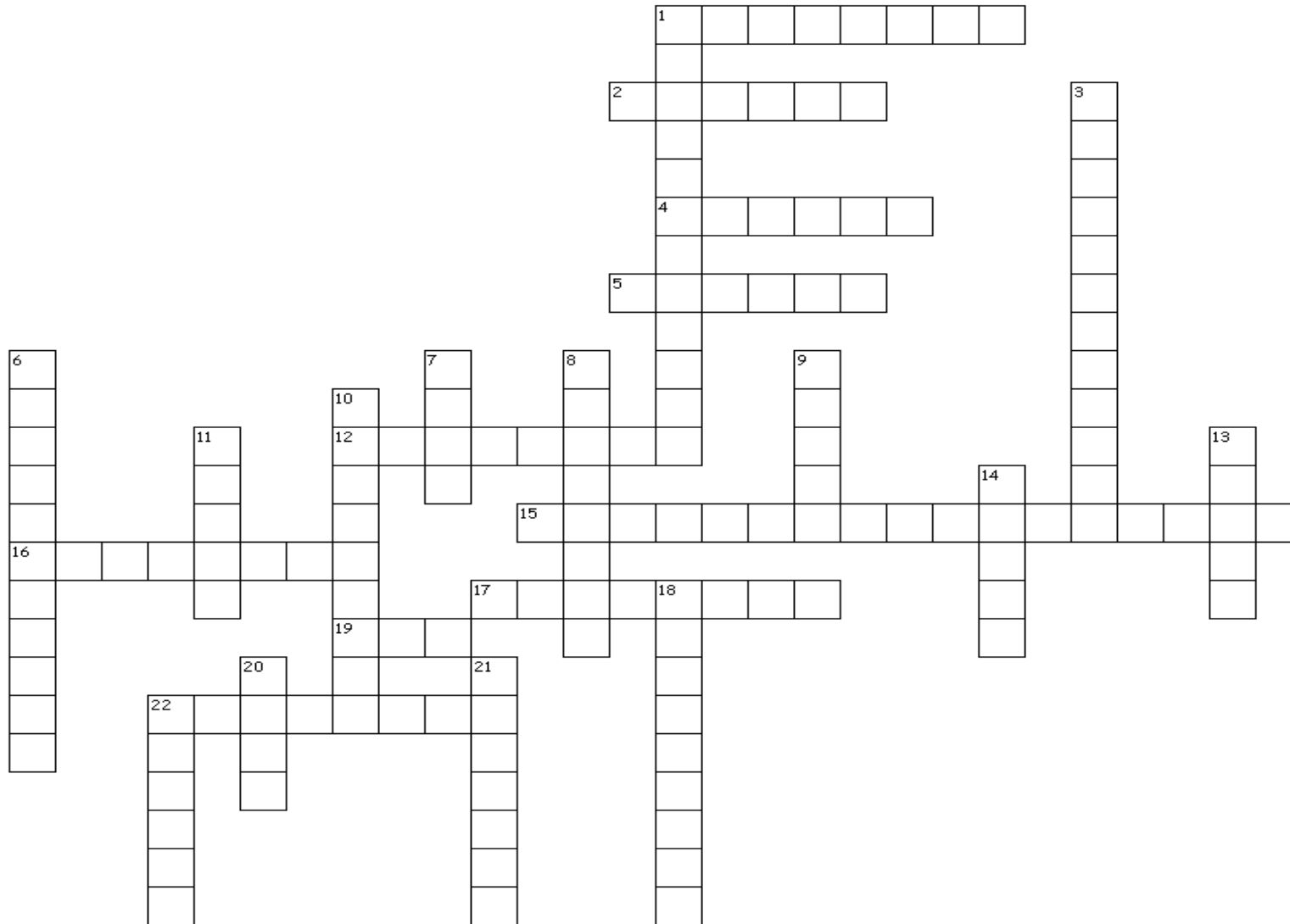
- fever
- shortness of breath
- swelling of the throat
- itching/hives

If this happens we would stop your infusion and manage your symptoms. Once the procedure is completed, it is very unlikely you will have any further reactions.

What happens after the infusion?

After transplant, patients are often tired from pre-medications and lack of sleep in anticipation of the procedure. We find a quick nap sometimes helps to feel better.

Allogeneic Bone Marrow Transplant Crossword Puzzle on Discharge Education



Across

1. If you have _____, it is important to inform their school that you must be notified of communicable diseases like measles, chicken pox, etc. Notify your doctor if you have been exposed to one of these illnesses.
2. Your _____ to work or school will depend on the type of transplant you received and how your recovery proceeds. Your doctor should approve your return. In general, autologous transplant recipients can return on a part-time basis in around 100 days. For Allogeneic transplant recipients, it may be anywhere from 6 months to a year.
4. Notify your doctor before you plan to do this. It may not be wise to plan an extended vacation until you see how your recovery progresses.
5. Continue your mouth care regimen that you practiced in the hospital. Continue your mouth care after meals and at bedtime. Notify your doctor of any mouth changes and plans for _____ work. You should have a _____ follow-up visit at six months after your transplant.
12. Balance work and _____. Avoid contact sports. Fatigue is common but it's important to stay active to keep your body and lungs strong. Space out activities and schedule rest periods into your day.
15. Bring your medications with you to clinic. Wait to take your _____ medication until after your blood-draw in clinic. Then you are okay to take it. This will allow us to get an accurate drug level.
16. Loss of taste and _____ happens frequently following transplant. If you are having problems eating a diet with enough calories and protein, talk with our dietitian.
17. Avoid prolonged exposure to _____. Wear hats, long sleeves, and SPF 30 or higher. Lifelong medications may increase your risk for sunburn.
19. Avoid _____ people and kids under 12 as much as possible. Avoid large crowds and people who have been recently vaccinated with a live vaccine (like chickenpox).
22. It is advisable to use only one _____ at home. They will have your complete records, can advise you on your prescriptions and will communicate with your doctor.

Down

1. Women- Use a dilator as directed by gynecology. Also use a water based lube to combat vaginal dryness which can be a result of _____ and radiation.
3. After transplant, your body may no longer recognize previous childhood _____. Therefore, you will be re-immunized with several vaccines beginning at approximately one year after transplant.
6. Consult your doctor before taking any over-the-counter _____. In general, avoid aspirin containing products and products containing acetaminophen or ibuprofen unless discussed first with your doctor or nurse. Avoid herbal supplements.
7. Household _____ can remain in the home, with the exception of birds and reptiles. Avoid contact with animal wastes. Do not let them sleep with you.
8. Avoid doing this in lakes, public pools, and sitting in hot tubs due to the possibility of exposure to excessive bacteria.
9. Wash your _____ after using the restroom, before preparing or eating food, before caring for your central line and after coughing or sneezing. Always wash your _____ when they look visibly soiled.
10. You may go home on IV electrolytes such as _____. In some instances, you may come into the infusion clinic to receive supplements.
11. Avoid sexual activity until your platelet count is at least _____-thousand. Use a condom for at least the first 100 days post-transplant for sexual activity. Avoid anal intercourse. Avoid kissing or oral sex if your partner has mouth sores.
13. Inform the lab technician who is drawing your immunosuppression level (tacrolimus or cyclosporine) not to draw _____ from the lumen with peach tape. Tacrolimus and cyclosporine levels can be affected if drawn from this line if they have had these drugs infused through it.
14. You will not be able to _____ for at least three months following your transplant. This period may be shorter for patients receiving their own stem cells. It is essential to have someone available to drive you to your clinic appointments or to the hospital. You cannot resume driving without your doctor's approval.

18. Observe your central line (venous access device) for signs and symptoms of this. You should notify your doctor of any changes to the insertion area including areas of redness, tenderness, drainage, or a general change of appearance.

20. You need to wear this when coming to the hospital or clinic appointments. It will not necessarily protect you from those who are sick, but is a reminder to those around you to be cautious. It is not necessary when you are at home or out for a walk in areas free of construction and free of large crowds.

21. Daily _____ is important. Shower every day and keep your private area clean after using the restroom. Use non-alcohol containing lotions for moisturizing.

22. These can remain in the home. Avoid gardening, mowing the lawn, and other activities that stir up soil or the ground. Avoid handling fresh-cut flowers in vases.



Common Allogeneic Transplant Medications Matching

Match the medication use on the left to the medication on the right
Some Medications may be matched to multiple numbers on the left

1	Injection to treat or prevent blood clots		Actigall / Ursodiol
2	To treat/prevent nausea		Ativan / Lorazepam
3	First line immunosuppression		Cellcept / mycophenolate mofetil
4	Antibiotic used to prevent/treat infections		Compazine / prochlorperazine
5	Used to treat active viral infection		Diflucan / fluconazole
6	Immunosuppression used with or instead of Tacrolimus		Levaquin / levofloxacin
7	Antiviral medication to prevent virus		Lovenox / Enoxaparin sodium
8	Antifungal		Medrol / methylprednisolone
9	Used to prevent/treat gastric reflux		Neupogen / Filgrastim, Granix /tbo-filgrastim
10	Protects liver and gall bladder		Oxy IR /oxycodone
11	Anti-anxiety medication that also helps with nausea		Prilosec / Omeprazole
12	Vitamin supplement		Prograf / Tacrolimus
13	Drops to prevent graft-vs-host disease of eyes		Restasis eye drops / cyclosporine
14	Antibiotic used to prevent/treat infections		Valcyte / valganciclovir
15	Injection used to boost neutrophil count		Vantin / Cefpodoxime
16	Antifungal		Vfend / Voriconazole
17	To treat/prevent nausea		Vitamin D3 / cholecalciferol
18	Short acting pain control		Zofran / Ondansetron
19	Steroid to treat graft-vs-host disease		Zovirax / Acyclovir

Signs of Infection

G C M M C V P C W C U S S P S
 X N P O Q O G O O Y L V O J S
 P Z I J U U U N E E V K R J E
 Q Y Q L Z T F G W H B J E S N
 J Y P U E U H O H K R J T Y R
 P B M Z S E B S S L Y I H R E
 B N D I P E F R O C P D R X D
 Z D O L S K K G N R I V O V N
 N N Z O X M G E N B E L A B E
 I S O B R F G G E I G S T Y T
 B L B A N R R G N J N M D K N
 Y C N E U Q E R F D B R A B I
 G C H I L L S Q E N B Y U E K
 E N L U O C K R V N N U D B S
 U T I M U S C L E A C H E S G
 G N N L H E L N R V V U D Y S
 I R B R L K I H S F F D Z C Q
 T Q F L Z E W A U S M G I U O
 A J B J S K W Q L R O A Q L U
 F M K Z R E F S V P M G I V Y

Burningfeeling

Chills

Confusion

Cough

Fatigue

Fever (over 38* celsius; or 100.5*fahrenheit)

Frequency (with urination)

Loosebowels

Mouthsores

Muscleaches

Skintenderness

Sorethroat

Swelling

Urgency (with urination)

If any of the above symptoms appear, notify your nurse or doctor immediately.

When to Contact your BMT Doctor

E T E T C P I N I G K G N B V
 G H S A R Q X K H F R N Q L E
 Z N E X E O V D O T S I O U C
 G N I T I M O V V K H L Z R O
 C Z Z D M A C Y I U Y L D R U
 T V R W E C K N F A Q E Z E G
 K P N H V E C H E Q P W S D H
 O K V U V H L H P A O S C V N
 V B B H A U R B I T Q A E I S
 L V N N U R A N T A R M H S V
 F F G I A U N B N F Q S S I F
 W E E I M C I E Z W O B R O P
 S C D V Q X R E D N E S S N K
 H E Y Q E C Q H P J X P Q S Q
 G O P C Q R E M M Q B K G C S

Bleeding

Blurred vision

Cough

Diarrhea

Fever

Pain

Rash

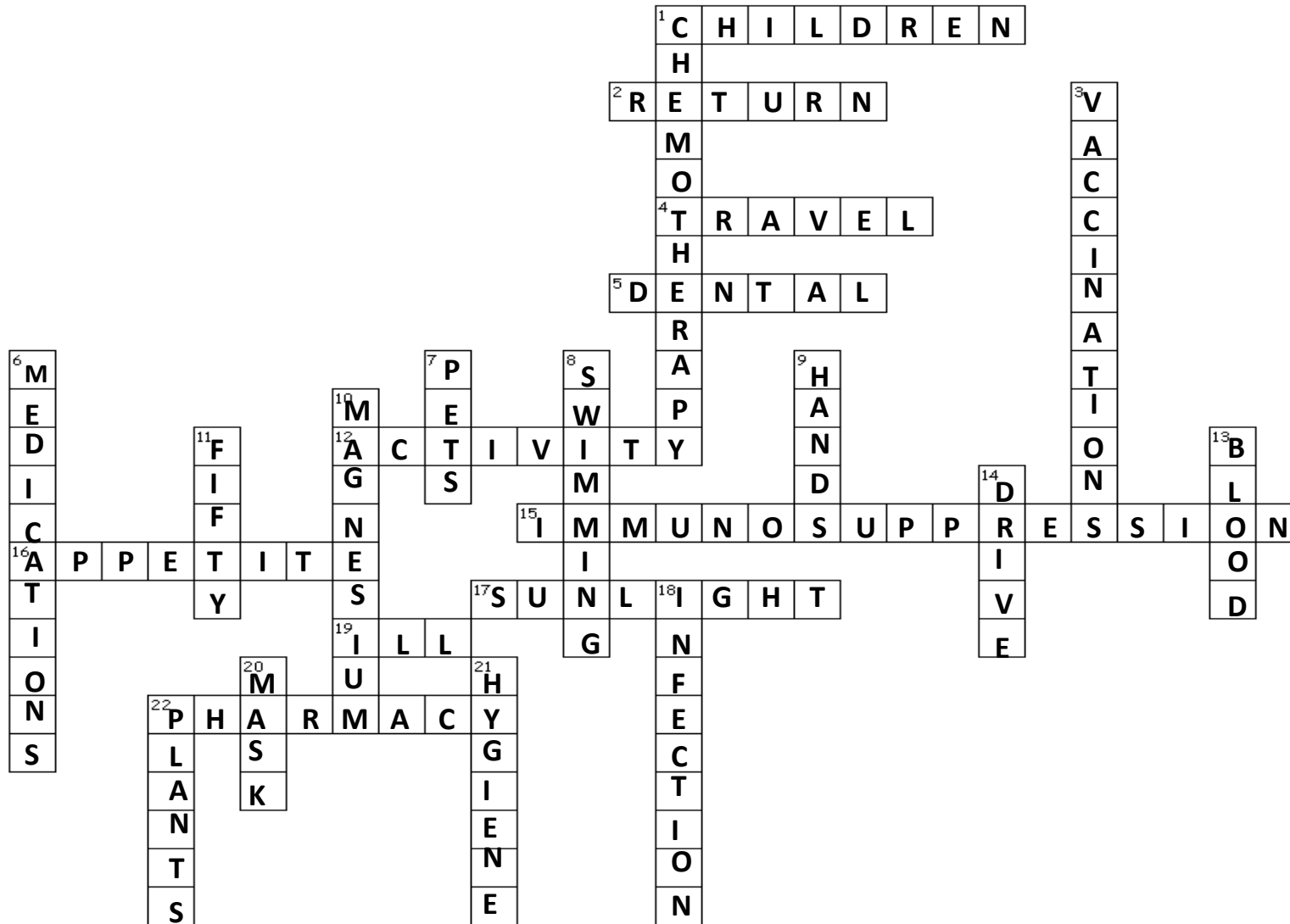
Redness

Skin changes

Swelling

Vomiting

Allogeneic Bone Marrow Transplant Crossword Puzzle on Discharge Education



Across

1. If you have **children**, it is important to inform their school that you must be notified of communicable diseases like measles, chicken pox, etc. Notify your doctor if you have been exposed to one of these illnesses.
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4. Notify your doctor before you plan to do this. It may not be wise to plan an extended vacation until you see how your recovery progresses. **travel**
5. Continue your mouth care regimen that you practiced in the hospital. Continue your mouth care after meals and at bedtime. Notify your doctor of any mouth changes and plans for **dental** work. You should have a **dental** follow-up visit at six months after your transplant.
12. Balance work and **activity**. Avoid contact sports. Fatigue is common but it's important to stay active to keep your body and lungs strong. Space out activities and schedule rest periods into your day.
15. Bring your medications with you to clinic. Wait to take your **immunosuppression** medication until after your blood-draw in clinic. Then you are okay to take it. This will allow us to get an accurate drug level.
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7. Household **pets** can remain in the home, with the exception of birds and reptiles. Avoid contact with animal wastes. Do not let them sleep with you.
8. Avoid doing this in lakes, public pools, and sitting in hot tubs due to the possibility of exposure to excessive bacteria. **swimming**
9. Wash your **hands** after using the restroom, before preparing or eating food, before caring for your central line and after coughing or sneezing. Always wash your **hands** when they look visibly soiled.
10. You may go home on IV electrolytes such as **magnesium**. In some instances, you may come into the infusion clinic to receive supplements.
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21. Daily **hygiene** is important. Shower every day and keep your private area clean after using the restroom. Use non-alcohol containing lotions for moisturizing.

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5	Used to treat active viral infection
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7	Antiviral medication to prevent virus
8	Antifungal
9	Used to prevent/treat gastric reflux
10	Protects liver and gall bladder
11	Anti-anxiety medication that also helps with nausea
12	Vitamin supplement
13	Drops to prevent graft-vs-host disease of eyes
14	Antibiotic used to prevent/treat infections
15	Injection used to boost neutrophil count
16	Antifungal
17	To treat/prevent nausea
18	Short acting pain control
19	Steroid to treat graft-vs-host disease

10	Actigall / Ursodiol
11	Ativan / Lorazepam
6	Cellcept / mycophenolate mofetil
2, 17	Compazine / prochlorperazine
8, 16	Diflucan / fluconazole
4, 14	Levaquin / levofloxacin
1	Lovenox / Enoxaparin sodium
19	Medrol / methylprednisolone
15	Neupogen / Filgrastim Granix/tbo-filgrastim
18	Oxy IR /oxycodone
9	Prilosec / Omeprazole
3	Prograf / Tacrolimus
13	Restasis eye drops / cyclosporine
5	Valcyte / valganciclovir
4, 14	Vantin / Cefpodoxime
8, 16	Vfend / Voriconazole
12	Vitamin D3 / cholecalciferol
2, 17	Zofran / Ondansetron
7	Zovirax / Acyclovir



Signs of Infection

G C M M C V P C W C U S \$ P \$
 X N P O Q O G O O Y L V O J \$
 P Z I J U U N E E V K R J E
 Q Y Q L Z T F G W H B J E S N
 J Y P U E U H O H K R J T Y R
 P B M Z S E B S S L Y I H R E
 B N D I P E F R O C P D R X D
 Z D O L S K K G N R I V O V N
 N N Z O X M G E N B E L A B E
 I S O B R F G G E I G S T Y T
 B L B A N R R G N J N M D K N
 Y C N E U Q E R F D B R A B I
 G C H I L L S Q E N B Y U E K
 E N L U O C K R V N N U D B \$
 U T I M U S C L E A C H E S G
 G N N L H E L N R V V U D Y S
 I R B R L K I H S F F D Z C Q
 T Q F L Z E W A U S M G I U O
 A J B J S K W Q L R O A Q L U
 F M K Z R E F S V P M G I V Y

Burningfeeling	Chills
Confusion	Cough
Fatigue	Fever (over 38* celsius; or 100.5*fahrenheit)
Frequency (with urination)	Loosebowels
Mouthsores	Muscleaches
Skintenderness	Sorethroat
Swelling	Urgency (with urination)
If any of the above symptoms appear, notify your nurse or doctor immediately	

When to Contact your BMT Doctor

E T E T C P I N I G K G N B V
 G H S A R Q X K H F R N Q L E
 Z N E X E O V D O T S I O U C
 G N I T I M O V V K H L Z R O
 C Z Z D M A C Y I U Y L D R U
 T V R W E C K N F A Q E Z E G
 K P N H V E C H E Q P W S D H
 O K V U V H L H P A O S C V N
 V B B H A U R B I T Q A E I S
 L V N N U R A N T A R M H S V
 F F G I A U N B N F Q S S I F
 W E E I M C I E Z W O B R O P
 S C D V Q X R E D N E S S N K
 H E Y Q E C Q H P J X P Q S Q
 G O P C Q R E M M Q B K G C S

Bleeding

Diarrhea

Rash

Swelling

Blurred vision

Fever

Redness

Vomiting

Cough

Pain

Skin changes

Adult Blood and Marrow Transplant Program
Allogeneic Bone Marrow Transplant Puzzle Answers