

Queen Mary Hospital

Department of Clinical Oncology

Health Guide: Neutropenia and Fever

The function of white blood cells (Neutrophils): Protect our body from infection

Causes of neutropenia:

- Most chemotherapy suppress the bone marrow, which causes a reduction in the number of white blood cells (neutrophils)
- White blood cell counts (neutrophils) usually decreases to lowest between 7 to 14 days after chemotherapy, and will gradually return to normal
- The timing of this reduction varies according to which chemotherapy agents are used for treatment



Effects of neutropenia:

- Prone to infections
- Implement measures to prevent infection, detect symptoms and start treatment as soon as possible

Infection Prevention

Measuring Body Temperature

- Avoid activities which may affect body temperature measurement such as drinking hot water before measurement
- Use the same thermometer and site of measurement (either tympanic or oral). Check your body temperature every day around the same time for a better comparison
- Check your body temperature with electronic thermometer when feeling fever, flushing, chills and rigors or any discomfort
- Check your body temperature before taking Paracetamol or any antipyretic drugs to obtain an accurate measurement



Seek medical advice as soon as possible if any following symptoms occur after chemotherapy :

- Fever with temperature 38.3°C (101°F) or above, chills or shivering
- Symptoms of infection: severe cough, running nose, sore throat and shortness of breath
- Any dysuria, vaginal burning or abnormal discharge
- Swelling, redness, pain or burning sensation over skin or injection site
- Unexplained bruising or bleeding
- Persistent vomiting or diarrhea



Remember to show your "Chemotherapy Alert Card" to healthcare professionals



Body Temperature Record

Body Temperature Record of _____

| Example | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | |
|---------|------|---------|--|---------|--|---------|--|---------------------------------------|--|---------|--|---------|--|
| AM | 36.7 | AM | | AM | | AM | | AM | | AM | | AM | |
| PM | 36.4 | PM | | PM | | PM | | PM | | PM | | PM | |
| Evening | 37.0 | Evening | | Evening | | Evening | | Evening | | Evening | | Evening | |
| 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | |
| AM | | AM | | AM | | AM | | AM | | AM | | AM | |
| PM | | PM | | PM | | PM | | PM | | PM | | PM | |
| Evening | | Evening | | Evening | | Evening | | Evening | | Evening | | Evening | |
| 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | |
| AM | | AM | | AM | | AM | | AM | | AM | | AM | |
| PM | | PM | | PM | | PM | | PM | | PM | | PM | |
| Evening | | Evening | | Evening | | Evening | | Evening | | Evening | | Evening | |
| 21 | | 22 | | 23 | | 24 | | 25 | | 26 | | 27 | |
| AM | | AM | | AM | | AM | | AM | | AM | | AM | |
| PM | | PM | | PM | | PM | | PM | | PM | | PM | |
| Evening | | Evening | | Evening | | Evening | | Evening | | Evening | | Evening | |
| 28 | | 29 | | 30 | | 31 | | Reference temperature range for fever | | | | | |
| AM | | AM | | AM | | AM | | Reference temperature range for fever | | | | | |
| PM | | PM | | PM | | PM | | Reference temperature range for fever | | | | | |
| Evening | | Evening | | Evening | | Evening | | Oral: 37.5 °C (99.5 °F) or higher | | | | | |
| | | | | | | | | Tympanic: 38°C (100 °F) or higher | | | | | |

Personal Hygiene

- Wash hands thoroughly with soap and water before meals and after toileting
- Take a shower and change clothes every day
- Wipe from front to back of vulva after toileting to minimize infections in women
- Clean the perianal area after defecation
- Observe hands hygiene and trim nails regularly
- Monitor body temperature to detect any fever



Oral care

- Check your mouth daily for soreness or ulceration
- Clean the mouth and teeth in the morning and at night, as well as after meals
- Rinse your mouth with normal saline every two to three hours to prevent or manage oral mucositis



Maintain the integrity of the skin and mucous membranes

- Use an electric razor for shaving
- Avoid enemas and refrain from using rectal thermometers
- Be cautious during physical activities to prevent skin injuries; avoid scratches or bites from pets
- Frequent wiping during diarrhea and straining from constipation can damage the anal mucosa. If experiencing constipation or diarrhea, inform healthcare professionals and follow their instructions for medication and anal hygiene



Environmental Hygiene

- Keep environment clean to prevent breeding of mosquitoes and flies
- Open windows to ensure air ventilation. Can use ventilation fan to improve indoor air ventilation
- Wash and change the air conditioner filters regularly
- Avoid contact with people who have infectious disease such as flu, measles, herpes zoster or people who recently got any live vaccine
- Avoid crowded places. Wear a mask when you are in a crowd
- Change your mask if it becomes moist or wet



Hygiene at home



- Wash and change beddings, towels and clothes regularly
- Avoid contact with animals' waste
- Keep your floor clean by daily sweeping or vacuuming and clean your carpets regularly
- Increase the frequency of home cleaning if you have pets in your home
- Keep your home and kitchen utensils clean
- Tie garbage bag properly and put it in a bin with cover. At least empty the bin once a day
- Keep your toilet and bathroom clean and dry
- Close the toilet lid and flush immediately after use
- Don't share towels with others. Clean your own towels daily and dry them up
- Prepare more towels for replacement



General food safety practice

- Ensure adequate rest
- Maintain high protein, high-calorie diet and increase vitamin intake
- Drink 2-3 liters of fluids a day to maintain adequate hydration(if no contraindication)
- Thoroughly cook meats, poultry, seafood and egg. Food need to be consumed as soon as possible after cooking
- Avoid unpasteurized beverage such as unpasteurized milk, juice and honey
- Thoroughly wash fresh fruits before eating
- Use serving tableware
- Purchase food from hygienic and reliable sources. Do not patronize unlicensed hawkers
- Thoroughly clean all cooking utensils, countertops, cutting boards etc. before and after preparing food, especially after handling raw meat
- Store raw and ready-to-eat foods separately to prevent cross-contamination
- Discard any spoiled food and clean refrigerator regularly
- Refrain from eating expired food items

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