

UHL Policy for the Dietary Management of Patients with Neutropenia

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Trust Lead:	Matt Scott, Senior Specialist Dietitian (Adult Bone Marrow Transplant and Haematology)
Board Director Lead:	Chief Nurse
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REVIEW DATES AND DETAILS OF CHANGES MADE DURING THE REVIEW

2004- V1 was written as a Clinical Guideline for the Dietary Management of Neutropenic Patients and subsequently reviewed in 2008.

2008 (B28/2008) - V2 remained as a Clinical Guideline with relevant review of evidence-base and best practice recommendations.

2016 (B28/2008)- V3 has been rewritten as a Trust Policy in line with UHL Policy for Developing and Approving Clinical and Non-Clinical Policies and Other Guidance Documents (B16/2004), with a relevant review and update in line with evidence-base and best recommendations. It was felt that a change to a Trust Policy was required in view of potential significant harm to patients with neutropenia.

2019 (B28/2008)- V4 has been updated as a Trust Policy in line with UHL Policy for Developing and Approving Clinical and Non-Clinical Policies and Other Guidance Documents (B16/2004), with a relevant review and update in line with evidence-base and best recommendations.

2023 (B28/2008) – V5 has been updated in line with the current evidence-base and recommendations. Appendix 2 has been removed and Appendix 1 updated with the new evidence base. As a result, the training presentation has been updated to align with this information.

KEY WORDS

Neutropenic Diet, Neutropenic, Neutropenia, Food Safety, Food, Cancer, Clean Diet, Transplant, Food Hygiene

1 INTRODUCTION AND OVERVIEW

- 1.1 This document sets out the University Hospitals of Leicester (UHL) NHS Trusts Policy and Procedures for the dietary management of adult and paediatric neutropenic patients.
- 1.2 Neutropenic Patients are at an increased risk of infection due to a compromised immune system either as a result of disease, such as Acute Leukaemia, or as a result of treatment such as chemotherapy or after stem cell transplantation. Patients may also become neutropenic as a consequence of immunosuppression i.e. Methotrexate use in Rheumatology patients. Patients with acquired immune deficiency syndrome (AIDS) or chronic bone marrow disease may also require similar consideration. Neutropenic patients can also be at an increased risk of infection due to bacteria translocation when the gut lining has been damaged through chemotherapy or radiotherapy.
- 1.3 The neutropenic diet has been previously used for immunocompromised patients to help minimise the risk of ingesting pathogens, through food and drink. That may induce disease or infection.
- 1.4 The neutropenic diet remains a controversial area across the UK with limited research or evidence into the effect of dietary restrictions during immunosuppressive therapies. With concerns regarding inappropriate or inconsistent advice during neutropenia, a Policy is required to standardise the current practice for patients with neutropenia across the trust with the most up-to-date, evidence base.

2 POLICY SCOPE –WHO THE POLICY APPLIES TO AND ANY SPECIFIC EXCLUSIONS

Who does this policy apply to?

- 2.1 This Policy applies to the following UHL staff groups:
 - Medical Staff
 - Registered Nurses and Nursing Associates, Healthcare Assistants and Housekeepers
 - Registered Dietitians, Dietetic Assistant Practitioners and Dietetic Assistants
 - Catering and Estates and Facilities Staff e.g. ward hostesses.
- 2.2 There are no specific qualifications or competencies that must be held by staff using this Policy however all staff must have access to the training presentation (see section 6).
- 2.3 This Policy will be applicable to UHL adult and paediatric inpatients, outpatients and day-case patients.
- 2.4 There are no exclusions from this policy. Any member of staff supporting a patient with Neutropenia must be familiar with this policy.

3 DEFINITIONS AND ABBREVIATIONS

Neutrophils and Neutropenia

Neutrophils are one type of white blood cell that is circulating in the blood that helps fight infection. Neutropenia is when the number of neutrophils in the blood is too low which can lead to an increased risk of infection. It is defined as a neutrophil count below $1.5 \times 10^9/l$.

4 ROLES – WHO DOES WHAT

Responsibilities within the Organisation

4.1 The **Board Director Lead** for this Policy is the Chief Nurse who has overall responsibility for ensuring patient care and safety, including special nutrition and dietary needs.

4.2 **CMG Clinical Director and Heads of Nursing** are responsible for:

- The distribution of this policy and ensuring compliance and monitoring processes for relevant staff groups are in place within their CMG.
- Ensuring the UHL Policy for the Dietary Management of Patients with Neutropenia (B28/2008) is implemented within their Clinical Management Group (CMG).
- Monitoring and validating compliance with the UHL Policy for the Dietary Management of Patients with Neutropenia (B28/2008) in wards/areas with a high number of neutropenic patients.
- Signing off Serious Incidents (SI) reports and ensures actions are implemented linked to Neutropenic Dietary needs of patient and ensuring and remedial action is identified and implemented.

4.3 **Matrons and Ward Sisters and Deputy Sisters** have a responsibility:

- To ensure that all staff receive information, instruction and training on the key aspects of this policy through the training presentation at induction and need for refresher training as required.
- To investigate reported incidents and complaints linked to neutropenic dietary needs of patients and ensuring any remedial action is identified and implemented.

4.4 **Registered Nurses (Ward or Clinical Specialist)** are responsible for:

- Providing a copy of the Food Hygiene and Safety during Neutropenia diet sheet (Appendix 1).
- Referring to the ward Dietitian electronically via ICE system if an inpatient or via referral letter if an outpatient (please note outpatient referrals must be sent to the Dietetic booking team at Leicester Royal Infirmary Site) if identified as neutropenic and requiring dietetic advice. Refer to the Dietetic and Nutrition Adult Service Referral Policy, Trust Ref: B30/2018.
- Neutropenic inpatients who are visiting the restaurant and other food outlets on the hospital site should also apply these dietary principles. This includes inpatients

issued with a dietetic restaurant pass. Foods which would not be suitable for purchase /issue would include: rice, self-service salad bar and buffet items, raw meat and fish i.e. Sushi, partially cooked eggs. The ward team should ensure that the inpatient is educated on this.

- Communicating with relevant members of the ward team – e.g. housekeepers, health care assistants and mealtime volunteers - of the patients' need for a neutropenic diet.
- Document neutropenic status on Nerve Centre.
- Communicating with the ward hostess regarding patients' neutropenic dietary needs.
- Informing and supporting patients to make appropriate menu and snack choices (neutropenic coded menu options where applicable).
- Support the ward hostess in identifying neutropenic patients and ensuring appropriate menu and snack choices are made. For non-standard menu items, not coded as neutropenic, to liaise with catering.

4.5 **Medical Staff** are responsible for:

- Ensuring the neutropenic status of patients is assessed as part of admission, board rounds, ward rounds and on discharge. For outpatients, neutropenic status should be assessed on an individual patient basis, depending on diagnosis and/or treatment plan and at regular intervals (Diagnostic Testing procedures UHL Policy, Trust Ref: B7/2013, UHL Neutropenia Policy Trust Ref: B6/2018).

4.6 The **Nutrition and Dietetic Service** is responsible for:

- Acting upon referrals to the Nutrition and Dietetic Service and provide individualised care plans for dietary management of neutropenia, with appropriate documentation as per Dietetic documentation in patients' Health Records UHL Nutrition and Dietetics Policy Trust ref: C242/2016.
- Escalating concerns to the medical team if it is identified that patients are not following appropriate neutropenic advice.
- Provision of training on neutropenic dietary advice to specific ward areas and multi-disciplinary teams outlined in Section 6.
- Having an active role in monitoring compliance of this policy as outlined in Section 7.
- Ensuring all inpatients issued with a dietetic restaurant pass are assessed and advised on appropriate neutropenic options.

4.7 The Patient Catering Manager, Catering Services, Estates and Facilities are responsible for:

- Provision of neutropenic diets on each UHL site.
- Monitoring of incidents as reported on DATIX
- Provision of training on neutropenic diets to relevant catering staff and seeking support with training from Nutrition and Dietetic Service as required.
- Catering hostess to receive appropriate training on neutropenic diets and support with the use of catering tablets within their meal ordering role to ensure patients can comply with neutropenic dietary advice.

4.8 The UHL Food Forum and the Trusts Nutrition and Hydration Assurance Committee are responsible for:

- Discussion and identification of training needs of key staff involved in the provision of neutropenic diets within UHL.
- Peer review of this Policy undertaken with other relevant Trust staff at UHL Food Forum meetings.

5. POLICY IMPLEMENTATION AND ASSOCIATED DOCUMENTS –WHAT TO DO AND HOW TO DO IT

Determining when a neutropenic diet should be instigated and discontinued needs to be considered by the MDT responsible for caring for neutropenic patients by considering the following;

- The specific neutrophil count
- Dose of immunosuppressive drugs
- Number of days following a stem cell transplant

The Medical team must define if the patient is neutropenic. With ongoing disparity across NHS Trusts, this Policy incorporates work from the British Dietetic Association and also takes into account new literature and agreed best practice to ensure there is consistency in advice across UHL. A diet sheet highlighting the current evidence has been created to support this advice.

Dietitians, Dietetic Assistant Practitioners, Dietetic Assistants, Registered Nurses and Clinical Nurse Specialists will be responsible for providing advice as outlined in Appendix 1 on a service-specific basis, when the need for neutropenic dietary advice has been identified (i.e. $<1.5 \times 10^9/l$).

6 EDUCATION AND TRAINING REQUIREMENTS

Training is available to support the use of this Policy.

Nursing staff in specific clinical areas must receive training on this Policy with support from relevant members of staff involved in education and training (as appropriate):

- Bone Marrow Transplant Unit, Leicester Royal Infirmary
- Renal Transplant Ward, Ward 37, Glenfield Hospital
- Infectious Diseases Unit, Leicester Royal Infirmary
- Oncology and Haematology, Wards 39, 40, 41 and OAU, Leicester Royal Infirmary
- Chemotherapy Suite, Leicester Royal Infirmary
- Osbourne Treatment Centre, Leicester Royal Infirmary

This training will include direct knowledge of the policy and the appendices available to patients with neutropenia to support safe food choices.

A training presentation will be disseminated to all Clinical Directors and Heads of Nursing to cascade to their relevant staff. Other stakeholders e.g. catering services will also be sent the training presentation to consolidate this information.

7 PROCESS FOR MONITORING COMPLIANCE

Element to be monitored	Lead	Tool	Frequency	Reporting arrangements
Correct provision of food and drink against neutropenic diet criteria	Estates and Facilities	Incidents as reported on DATIX	Continuous (Daily)	Estates and Facilities to feedback via Catering Services at UHL Food Forum

8 EQUALITY IMPACT ASSESSMENT

- 8.1 The Trust recognises the diversity of the local community it serves. Our aim therefore is to provide a safe environment free from discrimination and treat all individuals fairly with dignity and appropriately according to their needs.
- 8.2 As part of its development, this policy and its impact on equality have been reviewed and no detriment was identified.

9 SUPPORTING REFERENCES, EVIDENCE BASE AND RELATED POLICIES

Related Policies:

- Dietetic documentation in patients' Health Records UHL Nutrition and Dietetics Policy, Trust ref: C242/2016.
- Diagnostic Testing procedures UHL Policy, Trust Ref: B7/2013
- UHL Neutropenia Policy, Trust Ref: B6/2018
- Dietetic and Nutrition Adult Service Referral Policy, Trust Ref: B30/2018

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10 PROCESS FOR VERSION CONTROL, DOCUMENT ARCHIVING AND REVIEW

The updated version of the Policy will be uploaded and available through Insite Clinical Guidelines and Policies and the Trust's externally accessible freedom of information publication scheme. It will be archived through the Trust's PAGL system.

The Policy will be reviewed regularly in a 3 year review cycle by the Nutrition and Dietetic service.

Food Hygiene and Safety during Neutropenia



During illness or following a transplant, your immune system may be low or you may be taking medications that suppress your immunity.

As this will reduce your body's ability to fight infections, it is important to avoid foods that have a high risk of carrying infection and to practice good food hygiene.

The advice in this booklet will help with lowering this risk while still having a varied diet and help maintain your weight.

Shopping for Food

- Check 'use by' and 'best before' dates on food.
- Avoid buying products in damaged packaging or dented tins.
- Ensure all food is covered to avoid contamination i.e. avoiding buffets and self-serving.
- Keep raw meat and ready to eat products apart.
- Try to buy chilled and frozen foods last with a cool bag if possible to help minimize these warming up or defrosting. Do not allow food to defrost unless using it straight away.

Storing Food

- Refrigerator temperature should be between 0C and 5C. Keep your freezer temperature below –18C or below. Always ensure food is frozen solid when it is removed from the freezer.
- Avoid contact between ready to eat/ cooked and raw foods or unwashed vegetables. Uncovered raw meat or defrosting foods can contaminate other foods with bacteria; therefore ensure raw and defrosting meat and fish are stored at the bottom of the fridge in a covered container to prevent any drips leaking into the fridge. Never re-freeze thawed food.
- Do not over-load the fridge or freezer as it will increase the temperature and food will start defrosting.

Preparing food and avoiding cross-contamination

- Wash hands thoroughly with warm water and soap and cover cuts with a waterproof plaster before and after handling food. This is important for anyone preparing your meals.
- Remove jewellery when preparing food, especially rings and watches.
- Use disposable kitchen cloths change daily; alternatively wash cloths on a hot wash cycle in the washing machine daily. Avoid using sponges as these are difficult to clean.
- Disinfect worktops frequently especially after preparing raw meat, poultry or unwashed vegetables.

- Use separate utensils for raw and ready to eat/ cooked foods, for example you should use a separate board, knife and utensils for raw meats. Plastic chopping boards are the most hygienic. Ensure they are washed and disinfected after each use and replaced regularly.
- Do not wash raw meat or poultry before cooking as any harmful bacteria will be destroyed during cooking. Washing could splash potentially harmful germs onto work surfaces.
- Wash fruit and vegetables before eating.
- Wipe the tops of all cans and bottles before opening.
- Keep pets and litter trays out of the kitchen. Wash hands after contact with pets, animal treats made from dried meat or litter trays.

Cooking Food

- Thaw meat and poultry in a fridge and not at room temperature as bacteria grow quickly at room temperature.
- Ensure food is thoroughly cooked. The temperature in the middle of the food should be above 75°C. You could use a cooking thermometer if you want to check this or ensure it is piping hot.
- Ensure meat, fish, shellfish are cooked all the way through and follow cooking instructions.
- Cool cooked food as quickly as possible (within 1-2 hours) at room temperature and then chill or freeze. Store leftovers in multiple shallow containers as this helps to speed up the cooling process.
- Do not put hot food in the fridge as it will increase the temperature of all food in the fridge.
- Eat reheated food within 24 hours of preparing or defrosting it, and ensure that it is served piping hot. Do not reheat it more than once.
- Rice must be served hot and eaten immediately after it is first cooked, and must not be reheated. The same applies for take-away establishments or restaurants. It is advisable to prepare rice at home when ordering a take away e.g. Indian or Chinese.

Eating Out

- Ensure all meat at a barbeque or Picnic is well cooked and separated from raw

foods. Ensure all food is covered and eaten quickly to avoid cross contamination.

- If eating out, ensure the area you are sitting is clean and tidy and avoiding food at buffets or self service restaurants.
- To check the hygiene rating of a restaurant, take away or food shop a useful website is <https://ratings.food.gov.uk/>

During your hospital stay

- Neutropenic inpatients who are visiting the restaurant and other food outlets on the hospital site should also apply these diet principles. This includes inpatients issued with a dietetic restaurant pass.
- If you have bought snacks or food in from Home please discuss with your nurse who can advise you on what is safe to bring on to the ward as well as the foods to avoid below.

Water

- If you use a filter system at home it is essential to follow the manufacturer's advice on regular cleaning and also filter change.
- When travelling abroad it may be safer to drink bottled water. Ice in drinks should be avoided.

Grapefruit

- Grapefruit is best avoided as it may interact with your medications. If you would like further advice, please discuss with your pharmacist.

Other useful Links:

[Preparing and cooking food safely - Food and nutrition | NHS inform](#)

[Food safety | Food Standards Agency](#)

Travelling abroad - [NaTHNaC - Home \(travelhealthpro.org.uk\)](#)

FOOD YOU CAN EAT	FOODS TO AVOID
<p><u>CHEESE MILK, DAIRY PRODUCTS</u></p> <ul style="list-style-type: none"> - All Hard pasteurised cheeses (e.g. cheddar) - Soft pasteurised cheeses without rind (e.g. mozzarella, feta, paneer, cream cheese, ricotta, halloumi, goats cheese) - All cheese that is cooked until steaming hot. - All pasteurised milk, yoghurt, cream and ice cream - All plant based milks 	<p><u>CHEESE MILK, DAIRY PRODUCTS</u></p> <ul style="list-style-type: none"> - Mould ripened soft cheeses (e.g. brie) - Soft blue cheeses (e.g. gorgonzola, Roquefort) - Cheese/ dairy uncovered at a buffet or deli - Unpasteurised milks and food made from Unpasteurised milk (e.g. unpasteurised goats cheese) - Probiotic products (e.g. Kefir, Yakult, Actimel) - Soft serve ice cream
<p><u>MEAT, POULTRY, FISH, EGGS</u></p> <ul style="list-style-type: none"> - Meat, poultry that is cooked all the way through with no trace of blood or pink colour. - Pasteurised egg products (e.g. shop bought mayonnaise that use British Lion eggs) - Eggs that have been cooked all the way though i.e Hard boiled eggs or scrambled eggs. - Well cooked fish shellfish and crustaceans that are cooked all the way through - Prepacked cooked meats (e.g. ham) - Pasteurised pate in a jar 	<p><u>MEAT, POULTRY, FISH, EGGS</u></p> <ul style="list-style-type: none"> - Raw or undercooked meat, poultry, fish shellfish. - Raw or undercooked eggs from any egg source. - Any product using raw eggs that is not fully cooked - Cured or smoked foods (e.g. smoked salmon, Salami)- unless cooked - Sushi - Unpasteurised pate
<p><u>FRUIT AND VEGETABLES</u></p> <ul style="list-style-type: none"> - Ensure all fruit and vegetables and salad are washed properly (including pre-packaged ready washed salad). 	<p><u>FRUIT AND VEGETABLES</u></p> <ul style="list-style-type: none"> - Damaged or Bruised fruit and vegetables. - Raw, sprouted seeds.
<p><u>OTHER</u></p> <ul style="list-style-type: none"> - Black pepper, herbs and spices in sealed jars. - All sealed packets (e.g. cereals, dried nuts, fruits, biscuits). - Pasteurised or Heat treated Honey 	<p><u>OTHER</u></p> <ul style="list-style-type: none"> - Black pepper, herbs and spices bought loose from the deli/ farm shops - Buffet style foods, refill or excessively large packets. - Raw Honey and honeycomb (unless cooked)

