Protective Isolation
Clinical Care Protocol

IC/201/10

Supersedes: Protective Isolation Clinical Care Protocol IC/201/09

<table>
<thead>
<tr>
<th>Owner</th>
<th>Name</th>
<th>Hazel Gray</th>
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<tbody>
<tr>
<td>Job Title</td>
<td>Senior Infection Control Nurse</td>
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<tr>
<td>Final approval committee</td>
<td>Name</td>
<td>Infection Control Committee</td>
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<tr>
<td>Date of meeting</td>
<td>5 March 2010</td>
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<td>Name</td>
<td>Dr Nicki Hutchinson</td>
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<tr>
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<td>5 March 2010</td>
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<td>March 2013</td>
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Summary

To ensure all staff are aware of how to care for patients who require protective isolation, in order that their condition is not compromised.
Implementation Plan

Summary of changes

- Food safety guidelines in appendixes have been updated.
- Patient Hygiene has been added
- Patient equipment has been updated
- Rationale for Protective Isolation has been updated

Action needed and owner of action

Staff need to adhere to updated policy.

In order to ensure staff comply:

- Managers to disseminate Policy to their departments.
- Link Personnel to liaise with ward staff re changes in the Policy.
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1.0 Introduction

This protocol has been designed to aid health care professionals when looking after patients with compromised immunity to try and reduce the risk of infection to these patients whilst in our care. It will cover all patients who require protective isolation in the Trust.

Immunosuppression is a generalised depression of the immune system, which increases the risk of acquiring an infection. This necessitates protecting immunosuppressed patients from micro organisms carried in the environment, on health care workers providing care, on visitors and on other patients.

Immunosuppression can be caused by many factors including:

- Primary disease such as leukaemia, lymphoma, acquired immune deficiency syndrome (AIDS), severe combined immunodeficiency disease (SCID)
- Secondary disease, such as diabetes. It may complicate primary disease
- Drugs, in particular cytotoxic drugs and corticosteroids
- Antimicrobial therapy causing changes in the patient's microbial flora
- Irradiation therapy: the degree of immunosuppression is related directly to the area being treated
- Trauma and burns
- Age

Mallett & Dougherty (2001)

To ascertain if a patient is susceptible to infection a careful clinical history and physical examination must be undertaken.

2.0 Roles and Responsibility

All staff involved in caring for or having contact with a patient in Protective Isolation has a role to play in the adherence of this policy.

Staff have a duty to ensure that correct and essential education is given to patients in Protective Isolation and their visitors.

3.0 Source of Infection

The infections that immunosuppressed patients are susceptible to can be defined as

- Intrinsic
- Extrinsic.

The patients own body flora causes intrinsic infections. These are the cause of most infections in immunosuppressed patients. Extrinsic infections can arise from contaminated equipment, environmental contamination or from contaminated food or drinks.
4.0 Isolation Procedures

Patients who are neutropaenic will require a strict and high standard of nursing care. Nursing staff must pay careful attention to the patient for any signs or symptoms of infection and should pay particular attention to total hygiene, aseptic technique for intravenous therapy and urinary catheters. All of these areas could become a potential source of infection. Staff need to be able to acknowledge how infections are spread and ensure that all care given is undertaken in such a way so that cross infections do not occur. This can be achieved by:

4.1 Single Room

Immunosuppressed patients should be nursed in a single room with an en suite facility. In some of the rooms in the Wessex unit an Ultra Violet Germicidal Irradiation (UVGI) machine will be used to filter the air. Please refer to separate policy re use of this equipment.

For washing/showering purposes an Aquasafe water filter should be used on taps/showerheads in adult patient rooms to protect from Legionella.

4.2 Anterooms

Where possible anterooms should be used when caring for immunosuppressed patients. The areas in the Trust with anterooms are:

- Wessex
- C2

All staff members and visitors must wash their hands and place on the plastic aprons and gloves before entering the patient’s room. The patient’s door must always be kept closed.

4.3 Door Signs

To ensure that everybody is made aware that the patient is at risk of infection a ‘Protective Isolation’ sign must be placed on the outside of the anteroom door. Anybody entering this room should follow the procedure laid out on the sign please see appendix 1.

4.4 Hand washing

The hands of nurses, doctors, physiotherapist and other allied health professionals that have direct patient contact, are probably the most important vehicle of cross-infection, and it is essential that effective methods should be used to minimise these hazards. Hand washing is the easiest most effective way of minimising cross contamination. Every member of staff entering the patient’s room should ensure that they have washed their hands with soap and water in the anteroom before entering the patients’ room. If no anteroom is available, hands should be thoroughly decontaminated with alcohol gel. Alcohol gel containing 70 per cent isopropyl alcohol rapidly destroys microorganisms on the skin surface and may be used as an alternative to hand washing on visibly clean hands. If hands are visibly soiled they must be washed with soap and water first. For alcohol to be effective it must be applied to the entire skin surface and allowed to evaporate completely on the skin.
(Ayliffe et al 1992). There must always be an adequate supply of liquid soap, alcohol gel and hand towels available in the anteroom and the patients room.

4.5 Patient Hygiene

- Nightwear should be changed daily and when soiled. This is to prevent the transfer of organisms.
- The patient’s personal hygiene needs to be scrupulous to minimize the risk of infection. The patient may require encouragement and assistance to maintain this, as they may feel fatigued. Bottles of shower gel or soap should be used, avoid bars of soap.
- Dental hygiene must be performed at least twice a day.
- When shaving an electric razor should be used to minimize the risk of cuts. This should be the patient's own shaver and not a communal one.
- Disposable cloths rather than flannels must be used and towels must be changed daily

4.6 Personal Protective Equipment

Gloves

Staff members when dealing with blood or body fluid products should wear gloves. If the patient has an infection gloves should be worn for patient/environmental contact. These items should be disposed of as clinical waste in the anteroom or outside of the room if anteroom is not available.

Plastic aprons

Plastic aprons should be worn to protect the patient from the many micro organisms from being transferred from outdoor clothing. If doctors wear white coats these should be removed before entering. Everybody entering the room, including visitors, should wear plastic aprons. These items should be disposed of as clinical waste in the anteroom or outside of the room if anteroom is not available.

Masks

Staff do not need to wear masks when entering the protective isolation room. Masks may be required if the patient has a respiratory infection the Infection Control Team should be contacted and the need for this discussed.

4.7 Environmental Cleaning

Scrupulous cleaning of the patient’s room is essential, as dust must not be allowed to build up. The room should have its own dedicated cleaning equipment, including a mop and bucket. This equipment should be stored safely in the anteroom or in the patients' bathroom if no anteroom available. The mop head should be sent for laundering after each use and the bucket cleaned with a solution of Actichlor and left dry. The room should be damp dusted and dried and the floor moped at least daily using a detergent and water solution followed by an Actichlor solution. If any spillages occur they must be dealt with immediately. A fresh cleaning solution must be made up for each occasion. The housekeeping staff must always comply with hand washing and the wearing of plastic aprons and gloves whilst in the room. The
protective isolation room **MUST** always be cleaned **before** any other area on the ward.

### 4.8 Laundry

All linen should be changed daily and disposed of into white plastic bags. If the linen is foul or infected then it should be placed into a red alginate bag and then into a red plastic bag. Linen should only be taken into the room when the bed is to be changed. Linen should **never** be stored in the room.

### 4.9 Waste Disposal

Waste that leaves the protective isolation room should be placed in yellow clinical waste bags. These bags should be tied with a plastic tie and be labelled prior to disposal. Clinical waste should not be allowed to accumulate in the room and the bins, which should be enclosed and foot operated, should be emptied twice daily and when ever necessary. Contaminated dressings and used incontinence pads should **not** be placed in the bins in the rooms and should be disposed of in the sluice.

### 4.10 Patient Equipment

- All equipment used for the immunosuppressed patient should be dedicated solely for their use. Each room should have its own dedicated thermometer, sphygmomanometer and stethoscope. If the patient does not have an en-suite facility then a dedicated toilet or commode will be needed. If a commode is used it will need to be scrupulously cleaned after every use.

- All equipment in the room should be kept to a minimum so that there is not a potential of dust accumulating. All equipment entering the room should be scrupulously cleaned before entering the room.

- All surfaces must be cleanable; especially items that come into direct contact with the patient e.g. chairs. Excess equipment should be removed to make the cleaning process easier and more effective.

- Plants or flowers should not be allowed in the room as they maybe a source of *Aspergillus spp* and other fungal spores. Cut flowers also provide a reservoir for gram negative organisms.

- Baskets of fresh fruit should also be avoided.

- Portable fans should not be used in these rooms due to dust particles being blown into the environment.

- Doors and windows should be kept closed to avoid contamination from the outside environment.

- Blinds and curtains must be able to be removed for cleaning. If disposable bed curtains are used these must be changed on a 3 monthly cycle or when soiled.

- Any toys taken into the room must be able to be cleaned prior to entering. Soft toys will need to be laundered at 60 degrees centigrade before entering the room. Books should be able to be cleaned (wipe able) prior to entering the room.

- Patient charts to be left outside the room to minimize the number of staff who has to enter the room.
4.11 Patient Visitors

The patient should be asked to nominate close relatives and friends, who may then, after instruction from nursing staff, visit freely. The patient or his or her representative should inform casual acquaintances or non-essential visitors that they should avoid visiting during the period of neutropenia. The incidence of infection increases in proportion to the number of people visiting. Large numbers of visitors are difficult to screen and educate. Unlimited visiting by close relatives and friends diminishes the sense of isolation that the patient may experience. Children, (unless very close relatives), should be discouraged. Children are more likely to have been in contact with infectious diseases, which can have serious consequences if transmitted to a neutropaenic patient. Any visitor with an infection or who has been in contact with an infection should not visit until well.

4.12 Pets

Pets must not be allowed to enter the rooms of Immunosuppressed patients.

4.13 Staffing

Any staff member with a sore throat, cold, skin infection or who has been in contact with infection, should not be allocated the care of an immunosuppressed patient and should attend occupational health to ascertain if they are fit to work in other areas of the hospital.

All staff should ensure that they keep an up to date record of their immunisation/immunity to:

- Hepatitis B
- MMR
- Chickenpox
- Flu vaccine

Occupational health will be able to assist to ensure that these are up to date.

Staff who are nursing patients with infections should avoid nursing patients in protective isolation during the same span of duty.

Orientation, education and training for new and existing staff about how to stop the spread of infection and regular hand washing education is necessary to ensure that staff do not become complacent. Nurses must keep up with research and evidence based practice to ensure optimum patient care.

The infection control team or infection control link nurse, to ensure heightened awareness and compliance, will carry out random audits of hand hygiene.

4.14 Patient Education

The patient should be made aware of the importance of hand washing by everybody having contact with him or her and they should be empowered to check this. The patient should also be informed about the signs and symptoms of an infection that should be reported promptly to the nurse in charge or doctor looking after their care.
Signs include

- Fever
- Chills
- Cough
- Mild erythema
- Tenderness at line or wound sites.

Patients should be given an immunocompromised diet sheet (Appendix 3)

4.15 Psychological Effects of Protective Isolation

Protective isolation may cause increased stress to the patient and the nursing staff should ensure that patient and family are educated in the purpose of protective isolation and any questions they might have about it answered before it begins. Staff need to ensure that the patients are kept informed about their care to help reduce the stress.

4.16 Leaving the Isolation Room

The patient should not leave the room whilst they are immunosuppressed or be transported to other areas of the hospital unless absolutely necessary. The Consultant caring for the patient must undertake a risk assessment and ascertain whether movement out of the room is advantageous.

Other departments should be notified in advance that the patient is susceptible to infection. This is to ensure the time out of the single room is kept to a minimum and contact with other patients is avoided.

Special precautions e.g. protective clothing and hand hygiene must be adhered to at all times in other units to which the patient might be referred e.g. ITU

4.17 Building and Maintenance Work

Extra precautions are needed when any building or maintenance work is carried out in areas adjacent or in the unit. Under no circumstances should any work be carried out in rooms with immunosuppressed patients in them. Please contact Infection Control for advice.

5.0 Catering and Dietary needs for Immunocompromised Patients.

- A special diet is required when the patient is immunocompromised. The patient should be referred to a Dietitian and given a copy of the leaflet "neutropaenic diet" (Appendix 4). If the patient is having chemotherapy he/she should be given a copy of "Food Safety Guidelines for Patients Receiving Chemotherapy" (Appendix 3). In all cases of neutropenia the nurse must discuss all aspects of diet with the patient.
- Food should not be brought in from outside the hospital, however, if a patients’ nutritional needs are compromised, the nurse in charge of the ward should discuss this with the patient and his/her family. The nurse should explain the risks involved with bringing in food, in order that the patient can make an informed choice. It will be necessary for the patient to
sign a disclaimer stating that he/she accepts the responsibility and potential consequences of bringing food in.

- Any food brought in to the hospital must be stored as per the hospital guidelines (see below).
- It is important that the patient eats a healthy, balanced diet, but to avoid any possibility of food poisoning.
- All food should be stored and handled correctly to avoid food borne infections.
- The kitchen area should always be kept clean and free from clutter and inappropriate items.
- Staff handling patient food should always decontaminate their hands before and after handling patient food. They should wear vinyl gloves and a pink apron for any food handling.
- Patients can use normal cutlery and crockery. Return to the kitchen dishwasher in the usual way. The risk of cross infection from crockery and cutlery is minimal if they have been through a dishwasher. They must not be washed by hand.

5.1 Hot food

Hot food must be served hot; therefore immunocompromised patients should have their meals served first.

Ensure food is thoroughly cooked, it should not be reheated.

Food should be fresh and within its sell by date.

5.2 Food Storage

All Patient foods should be stored according to Infection Control Policy:

- Chilled food should be stored within a clean fridge at a temperature of 5 degrees Centigrade or lower. **Temperatures should be recorded daily.**
- If the original food wrapping is removed or opened the food should be stored in an airtight container, labelled with the patients name and the date it was opened.
- Once opened, any unused food should be discarded after 2 days.
- The Fridge contents should be **checked daily** and any out of date/unlabelled food discarded.
- If chilled food is not stored within a fridge, it should be eaten within four hours of preparing.

The patient must have cooled boiled water to drink or if an Aquasafe disposable water filter is fitted to a dedicated tap in the kitchen this is where all drinking water must be taken from. The filters, which are sterilising grade filters, must be changed weekly and must not be cleaned with any cleaning agents. Bottled water is not permissible.

6.0 Education and Training

- All new staff will attend Infection Control Training at Trust Induction.
- Staff will attend yearly Mandatory Infection Control Training.
7.0 How Might We Evaluate Practice

Practice will be evaluated/audited by regular audits performed by the Infection Control Team and ward Infection Control Link Personnel. Results will be evaluated and fed back to the relevant wards/departments accordingly.

8.0 Infection Control Contacts

Dr N Hutchinson Consultant Microbiologist/Infection Control Doctor Ext 3310

Dr F El Bakri Consultant Microbiologist Ext 3305

Hazel Gray Senior Infection Control Sister bleep 2364

Linda Swanson Infection Control Sister Bleep 2364

References


STOP AND THINK!

Protective Isolation

**All Visitors:**
- Please ask the nurse before entering so that she/he can explain any precautions you need to take.
- Please use the alcohol gel provided before entering and on exiting the room and put on aprons and gloves.
- Please do not visit if you have a cough/cold or sore throat or have been unwell within the last 7 days.
- Please close the door behind you.
- Please ask the nurse/matron or a member of the Infection Control Team to explain anything you are unsure about.

**All Staff:**
- ALL staff members entering this room MUST wear aprons and gloves.
- Please do not enter if you have a cough/cold or sore throat or have been unwell within the last 7 days.
- Please adhere to standard infection control precautions at all times.
- Please check care plan/ward guidance if you are unsure about any infection control procedure.
Appendix 2

Preparation of the room for neutropaenic patient care and maintenance of general cleanliness

<table>
<thead>
<tr>
<th>Action</th>
<th>Rationale</th>
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<tbody>
<tr>
<td>1A single room should be used if possible.</td>
<td>To reduce airborne transfer of micro-organisms</td>
</tr>
<tr>
<td>2A toilet to be kept for the sole use of the patient.</td>
<td>To reduce the risk of cross-infection</td>
</tr>
<tr>
<td>3Area to be cleaned meticulously before the patient is admitted.</td>
<td>To reduce the risk of infection</td>
</tr>
<tr>
<td>4Equipment and supplies to be kept for the sole use of the patient.</td>
<td>To reduce the risk of cross-infection. Equipment can easily become colonized with micro-organisms, which may cause cross-infection</td>
</tr>
<tr>
<td>5Surfaces and furniture to be damp dusted at least daily using disposable cleaning cloths and detergent solution.</td>
<td>Damp dusting and mopping remove micro-organisms without distributing them into the air</td>
</tr>
<tr>
<td>6Floor to be mopped at least daily using soap and water</td>
<td>To reduce the risk of cross-infection</td>
</tr>
<tr>
<td>7Mop head to be laundered daily.</td>
<td>To reduce the risk of cross-infection</td>
</tr>
<tr>
<td>8Bucket and mop handle to be cleaned and dried</td>
<td>To reduce the risk of cross-infection</td>
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Nursing procedure

Entering room of neutropaenic patient

<table>
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<th>Action</th>
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<tbody>
<tr>
<td>1A disposable plastic apron to be worn when entering room.</td>
<td>To protect staff clothing from becoming contaminated, which could transfer organisms to the other patients in their care</td>
</tr>
<tr>
<td>2Wash hands with soap and water or use alcohol hand rub if hands visibly clean</td>
<td>Hands are regarded as the principal source of transfer of micro-organisms</td>
</tr>
<tr>
<td>3Door of room to be kept closed. Ideally the air in the room should be under slightly positive pressure. The air flow should be from the room into the corridor.</td>
<td>To reduce the risk of airborne transmission of infection from other areas of the ward</td>
</tr>
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Visitors to neutropaenic patient

<table>
<thead>
<tr>
<th>Action</th>
<th>Rationale</th>
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<tr>
<td>1The patient should be asked to nominate close relatives and friends, who may then, after instruction, visit freely. The patient or his or her representative should inform casual acquaintances or non-essential visitors that they should avoid visiting during the period of neutropenia.</td>
<td>The incidence of infection increases in proportion to the number of people visiting. Large numbers of visitors are difficult to screen and educate. Unlimited visiting by close relatives and friends diminishes the sense of isolation that the patient may experience</td>
</tr>
<tr>
<td>2Any visitor with an infection or who has been in contact with infection should be excluded.</td>
<td>Neutropaenic patients are susceptible to infection</td>
</tr>
<tr>
<td>3Children, unless very close relatives,</td>
<td>Children are more likely to have been in contact with infection</td>
</tr>
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Protective Isolation

should be discouraged. contact with infectious diseases which can have serious consequences if transmitted to a neutropaenic patient

**Diet for neutropenic patient**

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<tr>
<th>Action</th>
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<tbody>
<tr>
<td>1 Educate the patient to choose only cooked food from the hospital menu and eliminate raw fruit, salads and uncooked vegetables from the diet.</td>
<td>Uncooked foods are often heavily colonized by micro-organisms, particularly Gram-negative bacteria</td>
</tr>
<tr>
<td>2 Food brought into the hospital by visitors must be restricted and: (a) obtained from well-known, reliable firms; (b) in undamaged, sealed tins and packets; (c) within the expiry date.</td>
<td>Correctly processed and packaged foods are more likely to be of an acceptable food hygiene standard</td>
</tr>
<tr>
<td>3 Filtered water from Aquasafe water filter or cooled boiled water to be used</td>
<td>Tap water is safe to drink but can become colonized by organisms, particularly Gram-negative organisms found in the plughole of sinks or overflow outlet when the water is being filled</td>
</tr>
<tr>
<td>4 Sealed packets of fruit juice (long shelf-life varieties, particularly those rich in vitamins) are suitable. Juice should be poured directly into a clean jug and drunk the same day</td>
<td>These juices have been pasteurized and remain pathogen free until they are opened</td>
</tr>
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**Discharging the neutropaenic patient**

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<thead>
<tr>
<th>Action</th>
<th>Rationale</th>
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<tr>
<td>1 Crowded areas, for example shops, cinemas, pubs and discos, should be avoided.</td>
<td>Although the patient's white cell count is usually high enough for discharge, the patient remains Immunocompromised for some time</td>
</tr>
<tr>
<td>2 Pets should not be allowed to lick the patient, and new pets should not be obtained.</td>
<td>Pets are known carriers of infection</td>
</tr>
<tr>
<td>3 Certain foods, for example take-away meals, soft cheese and pâté, should continue to be avoided.</td>
<td>Take-away meals are subject to handling by a large number of individuals and are stored for longer periods, both of which increase the likelihood of contamination</td>
</tr>
<tr>
<td>4 Salads and fruit should be washed carefully, dried and, if possible, peeled</td>
<td>To remove as many pathogens as possible</td>
</tr>
<tr>
<td>5 Any sign or symptoms of infection should be reported immediately to the patient's general practitioner or to the discharging hospital.</td>
<td>Any infection may continue to have serious consequences if left unlocated</td>
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Appendix 3

Food Safety Guidelines
for
Patients Receiving Chemotherapy

Please note this is for information only. Actual copies of the leaflet are available from the Dietetic Department.
When receiving chemotherapy your body has an increased risk of developing food-borne infections.

The most common causes of food-borne infection are:

- Storing food at incorrect temperatures.
- Cross-contamination of foods (e.g. raw and cooked foods).
- Undercooking of meat, eggs and poultry.
- Not thawing food fully prior to cooking.
- Incorrect reheating of foods.
- Inadequate hand washing.

By following these guidelines and avoiding the listed foods, you will help reduce your risk of developing these infections.

Avoid:

- ****Tap and bottled water. All water must be boiled and cooled as Cryptosporidium has been found in local water. Cryptosporidium most often causes watery diarrhoea, nausea, vomiting and stomach pains. If you have a weakened immune system as a result of chemotherapy it can be more serious, even fatal.
- Raw and undercooked meats, fish, seafood and poultry (includes pate).
- Cheeses that are made from unpasteurised milk or have high mould contents such as Brie, Camembert, Stilton, Danish Blue, etc.
- Raw or undercooked eggs or foods containing raw eggs such as home-made mayonnaise.
- Probiotic yoghurts and drinks such as Actimel, Yacult, etc.
- Speak with your doctor about grapefruit as it can interact with several medications.

When Shopping for Food:

- Once opened canned food will keep up to 48 hours ONLY if removed from tin and placed into a covered clean container, after which it should be thrown away.
- Reject damaged, swollen, rusted and dented cans. Wash the tops of cans before opening.
- Check ‘Use by’ dates on perishable foods. If it isn’t eaten by the ‘Use by’ date, throw it away.
- Try to buy chilled or frozen foods last and put them into the fridge or freezer as soon as possible.

Around the Kitchen:

- Wash hands often, especially after using the toilet, after touching pets, gardening, touching raw foods and before touching ready-to-eat foods.
- Wipe hands on a separate kitchen towel that can be thrown away, not the tea towel.
- Bleach, disinfect or change kitchen cloths or sponges often. Disinfect worktops, especially when raw meat or poultry has been prepared.
- If possible, avoid using the same knife or chopping board for raw meat, cooked food and fresh vegetables. If you have to use the same knife or board always wash them before use.

Cooking and Preparing Food:

- Cook food thoroughly to help kill harmful bacteria. Do not eat rare or undercooked meats, fish, seafood, eggs or poultry.
- Microwave cooking can leave cold spots in food where bacteria can
Protective Isolation

survive. Be sure to rotate the dish when cooking and ensure food is piping hot.

- Ensure frozen meat and poultry are thawed before cooking by defrosting in the fridge or using the microwave.
- Wash all fruits and vegetables thoroughly before consuming. If able, peel the skin off fruits and vegetables.
- If eating takeaways, be sure you reheat them so they are piping hot before consuming.

**Home Storage**

- Aim to keep the coldest part of the fridge at 5°C or lower and the freezer below –18 to restrict bacteria from growing. Monitor by using a fridge thermometer.
- Raw meat or defrosting food should be covered and stored UNDERNEATH any cooked food.
- Store eggs in the fridge and throw away if cracked or broken.
- If your appetite is poor, your dietitian can provide a list of foods that are high in calories and protein and advise you on fortifying foods. Additionally, nutritional products are available to supplement your nutritional intake if necessary. Please ask your dietitian for further information.

Dietitian’s Name ……………………………………………………………
Contact Telephone Number ……………………………………………

**This has been adapted from the Central South Coast Cancer Network guidelines and may differ slightly as our patients have different medical concerns.**

June 2008 (Revise 2010)
Food Safety Guidelines
For
Immunocompromised Patients

Please note this is for information only. Actual copies of the leaflet are available from the Dietetic Department.
If your immune system becomes weakened (i.e. you become immuno-compromised) you are at increased risk of developing certain types of infection. This includes infection from food and drinking water.

The most common causes of food-borne infection are:

- Storing food at incorrect temperatures.
- Cross-contamination of foods (e.g. raw and cooked foods).
- Undercooking of meat, eggs and poultry.
- Not thawing food fully prior to cooking.
- Incorrect reheating of foods.
- Inadequate hand washing.

By following these guidelines and avoiding the listed foods, you will help reduce your risk of developing these infections.

**Avoid:**

- ****Tap and bottled water. All water must be boiled and cooled as Cryptosporidium has been found in local water. Cryptosporidium most often causes watery diarrhoea, nausea, vomiting and stomach pains. If you have a weakened immune system as a result of chemotherapy it can be more serious, even fatal.

- Raw and undercooked meats, fish, seafood and poultry (includes pate).
- Cheeses that are made from unpasteurised milk or have high mould contents such as Brie, Camembert, Stilton, Danish Blue, etc.
- Raw or undercooked eggs or foods containing raw eggs such homemade mayonnaise.
- Probiotic yoghurts and drinks such as Actimel, Yacult, etc.
- Raw unpeeled fruit or vegetables i.e. salad, raw dried fruit, damaged or over-ripe fruit or vegetables.
- Unpasteurised or freshly squeezed juice or smoothies.
- Large packets of food - choose small individual packets instead.
- Items from ‘Pick & Mix counters, universal jars and delicatessen counters.
- Uncooked herbs, spice and pepper.
- Unpasteurised, “farm fresh” honey and honeycomb.
- Speak with your doctor about grapefruit as it can interact with several mediations.

**When Shopping for Food:**

- Once opened canned food will keep up to 48 hours ONLY if removed from tin and placed into a covered clean container, after which it should be thrown away.
- Reject damaged, swollen, rusted and dented cans. Wash the tops of cans before opening.
- Check ‘Use by’ dates on perishable foods. If it isn’t eaten by the ‘Use by’ date, throw it away.
- Try to buy chilled or frozen foods last and put them into the fridge or
Around the Kitchen:
- Wash hands often, especially after using the toilet, after touching pets, gardening, touching raw foods and before touching ready-to-eat foods.
- Wipe hands on a separate kitchen towel that can be thrown away, not the tea towel.
- Bleach, disinfect or change kitchen cloths or sponges often. Disinfect worktops, especially when raw meat or poultry has been prepared.
- If possible, avoid using the same knife or chopping board for raw meat, cooked food and fresh vegetables. If you have to use the same knife or board always wash them before use.

Cooking and Preparing Food:
- Cook food thoroughly to help kill harmful bacteria. Do not eat rare or undercooked meats, fish, seafood, eggs or poultry.
- Microwave cooking can leave cold spots in food where bacteria can survive. Be sure to rotate the dish when cooking and ensure food is piping hot.
- Ensure frozen meat and poultry are thawed before cooking by defrosting in the fridge or using the microwave.
- Wash all fruits and vegetables thoroughly before consuming. If able, peel the skin off fruits and vegetables.

Home Storage
- Aim to keep the coldest part of the fridge at 5 C or lower and the freezer below –18 to restrict bacteria from growing.
- Monitor by using a fridge thermometer.
- Raw meat or defrosting food should be covered and stored UNDERNEATH any cooked food
- Store eggs in the fridge and throw away if cracked or broken
- If your appetite is poor, your dietitian can provide a list of foods that are high in calories and protein and advise you on fortifying foods. Additionally, nutritional products are available to supplement your nutritional intake if necessary. Please ask your dietitian for further information.

Dietitian's Name …………………………………………………………………
Contact Telephone Number …………………………………………………
March 2009 (revise 2011)
Appendix 5
Parent Held Oncology Record

Guidelines on food and drink for children / teenagers having chemotherapy

These common sense guidelines should be followed all the time whether at home or in hospital, throughout the whole treatment plan.

Why do I need food safety advice?
Your medical condition or your treatment means that there may be times when the white blood cells in your body are reduced. The white cells in your body help you fight the bugs that cause infection. This includes germs or bugs found in food. These guidelines should help reduce the risk of developing food related infections.

Basic food hygiene
- Wash hands thoroughly with hot soapy water before preparing or eating food, after going to the toilet or after handling pets
- It is best to avoid using T-towels. If you do use them they must be clean, regularly washed at high temperatures and properly dried before use
- Keep pets away from food, dishes and work surfaces
- Keep your kitchen clean! Wipe kitchen work surfaces with hot soapy water before preparing food. Remember to keep your cooker, microwave and fridge clean, inside and out

Storing food and drink
- Keep your fridge and food storage areas clean
- Check that your fridge is at the correct temperature, the coldest point should be between 0°C and 5°C. Get a refrigerator thermometer to check the temperature
- Take chilled and frozen food home quickly. Once home, put chilled food straight into the fridge and frozen food in the freezer. Frozen food that has defrosted must not be refrozen
- Prepare and store raw and cooked foods separately, keep raw meat and fish at the bottom of your refrigerator away from cooked food
Preparing food and drink

- Always wash your hands, work surfaces and utensils, between handling raw and cooked food
- Check the “best before” and “use by” dates on all products. Use food and drink well within the recommended date
- All food must be thoroughly cooked. Follow package cooking instructions carefully
- Serve cooked food immediately and avoid reheating
- Keep hot food hot and cold food cold. Don’t leave it standing around
- Food heated or cooked in a saucepan or microwave should be thoroughly heated until piping hot. Stir food during cooking to make sure that it is properly heated through
- It is best to avoid reheating home cooked rice and poultry. However, ready meals containing these foods are acceptable if correctly stored and reheated

Are there any foods I shouldn’t eat?

- Only have well cooked, pasteurised eggs. Use eggs with the “lion mark” on
- Only have pasteurised or sterilised milk and cheese and dairy products
- Make sure yogurts are pasteurised and do not contain “live bacteria” e.g. “bio” yogurts. Avoid drinks with “live” bacteria e.g. Actimel, Yakult
- Hard cheese, processed cheese or cheese spread made from pasteurised milk are all okay to have. Avoid cheese made from unpasteurised milk or “blue” cheese e.g. Camembert, Brie, Danish blue and Stilton
- Individually wrapped ice creams or ice cream from a tub is fine to eat. Avoid ice cream from ice-cream machines at fast food outlets or ice cream vans, or homemade ice cream made with raw eggs
- Fruit and salad vegetables must be well washed. Avoid pre-washed and prepared salads
- Make sure meat or fish is well cooked – no rare steaks or sushi!
- Do not eat pate
- Take-away food should be eaten whilst hot! Do not re-heat it
Drinking Water

- Rarely there can be outbreaks of a bug called cryptosporidium in water supplies. This causes severe diarrhoea in people receiving chemotherapy. Current guidance from the government suggests that all people who are Immunocompromised should only drink water that has been boiled and allowed to cool.
- This applies to tap and bottled water

If you have any queries please contact your dietitian

Produced by Department Nutrition and Dietetics and Haematology Department SUHT
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