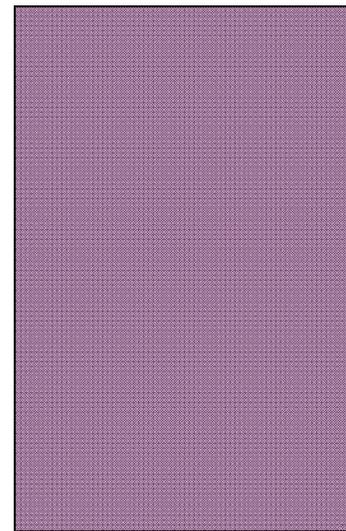
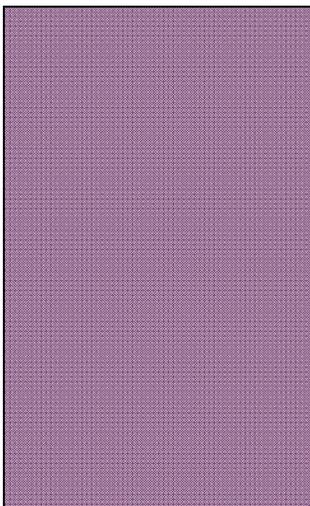


School Health Matters

A guide to communicable diseases and infection control

Updated July 2010



SCHOOL HEALTH MATTERS

INFORMATION SHEET

This sheet should be completed by your school nurse

School:

School Nurse:.....

The School Nurse is regularly in school on:

The School Nurse can be contacted at:

Centre:

Tel:

The School Nurse Team Leader is:

The School Nurse Team Leader can be contacted at:

Centre:

Tel:

During a pupil's school career the following routine services are offered	
1	
2	
3	
4	
5	

SCHOOL HEALTH MATTERS

INTRODUCTION

The South East London Health Protection Unit and the London Boroughs of Lambeth, Southwark, Lewisham, Bexley, Bromley and Greenwich are delighted to present the fourth edition of School Health Protection Matters, for children and young people. This information pack has been expanded and updated from the original Health Matters produced by Optimum Health Services NHS Trust Group setting Health Team in 1993 and 'Health Matters for Early Years for Lambeth, Southwark and Lewisham' produced in 1999. We would like to acknowledge the original team of contributors and advisors to the project; this team comprised a wide range of specialists and health care professionals from South East London.

The pack provides information on a variety of conditions and their management in group settings, and is expanded to include advice for those looking after children in a variety of settings such as nurseries or day centres. The information could usefully serve as a basis for developing policies and training on health issues within the group setting. This pack should not be reproduced in its entirety [please note copyright] but individual sheets may be photocopied for your use.

School Health Matters 4th Edition has been produced by the: **South East London Health Protection Unit (SELHPU)**

Resources, information and leaflets are available on a variety of conditions from:

South East London Health Protection Unit
1 Lower Marsh
London
SE1 7NT
020 3049 4338

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SCHOOL HEALTH MATTERS

SECTION ONE

INTRODUCTION

GLOSSARY OF COMMUNICABLE DISEASE TERMS

Airborne: See 'Spread'

Antibody: A blood protein produced by the immune system to help fight infection.

Asymptomatic: Not showing any symptoms of disease, whether or not the disease is present.

Bacterium: Small, single-celled organism that may cause disease

Case: A person who has a disease.

Carrier: A person who carries the micro-organism without any symptoms and who may transmit the disease to others.

CCDC: Consultant in Communicable Disease Control

Chemoprophylaxis: Medication given to prevent the development or progression of an infection, or to eliminate the carriage of an infectious agent to prevent transmission to others.

Colonisation: The existence of a micro-organism in a particular environment, such as a body surface, without causing disease.

Communicable Disease: An illness due to an infectious agent that can be transmitted from an infected person, animal or inanimate object.

Complications: Disease or condition arising during the course, or as a consequence, of an infection.

Contact: A person or animal that has been in contact with someone who has an infectious disease.

DH: Department of Health

EHO: Environmental Health Officer

Exclusion (exclude for) The time a pupil or a staff member should be away from school if they are infectious.

HPA: Health Protection Agency

HPN: Health Protection Nurse

HPS: Health Protection Specialist

HPU: Health Protection Unit

Immunisation: The use of a vaccine to produce an immune response to a particular disease in an individual.

Immunity: Protection against infection achieved either by vaccination, or by natural infection.

Immunoglobulin: Antibodies which can be used to temporarily increase a person's immunity to an infection.

Immunosuppressed (immunocompromised): A weakened immune system (caused by various means), making the person more susceptible to infections.

Incubation period: The time between the initial contact with an infectious agent and the first appearance of any symptoms.

Index case: The first person to become unwell with a particular disease.

Infected individual: A person who has acquired an infection.

Infection: The multiplication of an infectious agent in the body of an infected person or animal.

Infectious agent: An organism that causes an infection or infectious disease.

Lancet: A needle used to obtain a blood specimen, usually by pricking the finger. Often used by people with diabetes to obtain a small amount blood for glucose testing.

Micro-organism: Small organisms that cause infections e.g. bacteria, viruses.

MMR: The combined vaccine against measles, mumps and rubella.

Notifiable disease: One of the specified infectious diseases that must be reported to the local authority (the HPU/CCDC usually accepts notifications on behalf of the local authority). This is a legal requirement under the Public Health (Control of Disease) Act 1984 and the Public Health (Infectious Diseases) Regulations 1988.

Pathogen: A micro-organism capable of causing disease.

Period of communicability: The time during which an infected person is infectious to others.

Natural immunity/Vaccination: Natural immunity develops when a person is exposed to a specific disease and antibodies are produced, preventing re-infection. Immunity does not develop after all infections, or may develop to different degrees. Vaccines work by stimulating the immune system to develop antibodies that confer immunity against a specific disease.

Protozoa: Microscopic animal

Report of a disease: An official report notifying an appropriate authority of the occurrence of a specified infectious disease.

Septicaemia: Bacteria present in the bloodstream accompanied by the symptoms and signs of infection.

Spread: The method by which the disease is transmitted to others. There are several ways in which diseases can be transmitted:

- **Direct:** The transfer of an infectious agent from one person to another by direct body to body contact (e.g. by touching, biting, kissing, sexual intercourse) or with blood or body fluids.
- **Indirect:** The transfer of an infectious agent through touching contaminated objects, such as toys or handkerchiefs, or by eating contaminated food. An individual can transfer microorganisms to another person without becoming infected themselves.
- **Airborne:** The spread of very small infectious particles from an infectious person that remain suspended in the air and can be widely dispersed.
- **Droplet:** (theoretically a form of direct transmission): Transmission of infection via larger particles (droplets) that are expelled from an infectious person (e.g. when coughing, sneezing), and land directly on the eyes, nose or mouth of another person. These larger particles do not become suspended in the air, but settle within a few seconds, potentially contaminating surfaces.

- **Faecal-oral:** (a form of direct or indirect transmission) The transfer of infectious agents from the faeces. Usually, an infected person contaminates their hands and then transfers the organisms directly by touching another person, or indirectly by contaminating food or objects which are then eaten or touched and transferred to the mouth.

Vector: An animal or insect that can transfer an infection on its body, in excreta or via a bite.

Susceptible: A person or animal that does not have sufficient resistance against an infectious agent.

Symptoms: Indications of disease, e.g. coughing, fever, vomiting.

Transmission: The way in which an infectious agent is spread. See spread.

Treatment: Administration or application of remedies (medicinal, surgical or therapy) to a person for a disease or injury.

Toxin: Any poisonous substance produced by a living cell or organism.

Vaccine: A preparation administered as a precaution against contracting a disease. Usually the vaccine stimulates the body to produce antibodies to the disease, making the person immune.

Virus: A micro-organism that may cause infection.

SCHOOL HEALTH MATTERS

NATIONAL IMMUNISATION SCHEDULE 2008

When to immunise	Diseases protected against (vaccine given)
2 months old	Diphtheria, tetanus, pertussis, polio and <i>Haemophilus influenzae</i> type b (Hib) (DTaP/IPV/Hib) Pneumococcal infection (PCV)
3 months old	Diphtheria, tetanus, pertussis, polio and Hib Meningitis C (Men C)
4 months old	Diphtheria, tetanus, pertussis, polio and Hib Pneumococcal infection Meningitis C
Around 12 months old	Hib/Meningitis C
Around 13 months	Pneumococcal infection Measles, mumps and rubella (MMR)*
3 years four months old	Diphtheria, tetanus, pertussis, polio Measles, mumps and rubella
12 to 18 years old	Diphtheria, tetanus and polio (Td/IPV) Human Papilloma Virus (HPV)
Girls aged 12-13 years	Cervical cancer caused by human papillomavirus types 16 and 18 (Cervarix)

- *** NB In SE London, MMR vaccines are given at age 12 months, with the second dose 3 months later. The local schedule was adapted as a result of the measles epidemic in 2008**
- Children from abroad may have missed some or all of their immunisations and parents should be advised to see their GP or practice nurse.
- Some childhood immunisation programmes, such as hepatitis B, influenza and TB, only target children at particular risk of these diseases
- The GP or practice nurse should be contacted regarding appropriate immunisations when considering travelling abroad.

REPORTING INFECTIOUS DISEASES

Introduction

The Consultant in Communicable Disease Control (CCDC) is a consultant in the Health Protection Agency who has responsibility on behalf of local Primary Care Trusts for control of infectious disease in the community. The CCDC is usually known as 'Proper Officer' by local authorities, a term that is defined as "an officer appointed for that purpose by that body" under the Public Health (Control of Disease) Act 1984. In some cases the most senior professional Environmental Health Officer may also be appointed as the Proper Officer for certain sections of the Act.

Any doctor making a diagnosis of any one of a number of specific notifiable diseases, should notify the CCDC by contacting the local Health protection Unit (HPU). The full list of notifiable diseases was updated in 2010 and is available in appendix B, page 144 or on this link

http://www.hpa.org.uk/infections/topics_az/noids/noidlist.htm

Obtaining information from schools

"Section 22 of the Act enables the proper officer to obtain lists of the names and addresses of pupils at a school, or other childcare settings, in which a pupil is suffering from a notifiable disease or one of a number of additional diseases."

Reporting Forms

To complement this reporting system, Head Teachers/Managers are asked to ensure that the HPU is informed of any case of absence from the school, reported or suspected to be due to any one of the illnesses listed as notifiable. This is so that appropriate action can be taken to reduce the spread of disease and to avoid unnecessary concern.

It is important that this information is sent as soon as possible. The occurrence of certain of these diseases should be reported by telephone and the form faxed to the HPU.

Having received information from the doctor or from the school or nursery, the CCDC or HPU staff can then initiate the action necessary to control further spread of the disease. Under these circumstances it is normal practice for Health Protection Unit staff to contact the notifying school or nursery to obtain more information and offer further advice.

A master copy of the form is in Appendix A on pages 142 to 143. Forms should be photocopied and faxed to the HPU on 020 7633 9734. Please retain a copy for your own records.

Outbreaks

An outbreak may be defined as more linked cases with similar symptoms (or a notifiable disease) than would normally be expected. This usually involves two or more people. In some instances, for example diphtheria, only one case may prompt outbreak control and public health measures.

The HPU should be informed of any outbreak of disease. The reporting system should enable the HPU to identify outbreaks quickly, and as it may be important to take prompt action, Head Teachers/Managers are advised that they should inform the HPU by telephone as soon as they suspect an outbreak is occurring in their setting.

Good practice guidelines on the management of a diarrhoea outbreak are found in appendix C, pages 145 to 151.

Confidentiality

The Health Protection Agency exists to reduce the impact of infectious disease and other health hazards while safeguarding the confidentiality of information about patients. Working closely with doctors, nurses, group settings and other health care professionals, the Health Protection Agency monitors infections and other causes of illness in order to gain a better picture of the public's health. This work has been going on for many years and is a vital part of the health service. Recent data protection legislation and concerns about patient consent make it even more important that everyone knows how information about them is being used.

Health protection staff are required to treat personal details in strict confidence. They have the same duty to maintain confidentiality as all health care professionals and deliberate or negligent breaches are disciplinary offences. Individual case reports are shared **only** with health care professionals caring for the patient, or those investigating the source of an outbreak, such as local environmental health officers.

For further information on patient confidentiality and how information is used can be obtained by visiting the confidentiality page on the Health protection Agency's web site: www.hpa.org.uk/confidentiality or by writing to:

The Caldicott Guardian
Corporate services
Health Protection Agency
61 Colindale Avenue
London NW9 5EQ

Tel: 020 8200 4400
Fax: 020 8200 7868.

SCHOOL HEALTH MATTERS

EXCLUSION TABLE FOR INFECTIOUS DISEASES

The following table is to be used in conjunction with the 2010 Health Protection Agency (HPA) orange poster “Guidance on Infection Control in Schools and other Child Care Settings”. It is intended as an “exclusion at a glance” guide only.

Disease	Exclusion from school
Chicken pox	For 5 days from onset of rash.
Diarrhoea and/or vomiting	For 48 hours from last episode of diarrhoea or vomiting.
E.coli O157	48 hours from the last episode of diarrhoea. Longer exclusion may be required for some children. Consult HPU.
Food poisoning	Until free of symptoms (diarrhoea and/or vomiting) for 48 hours.
Flu	Until recovered.
Hepatitis A	For 7 days from onset of jaundice (or seven days after symptom onset if no jaundice)
Impetigo	Until lesions are crusted or healed or 48 hours after commencing antibiotic treatment
Measles	For 4 days from onset of rash.
Mumps	For 5 days from onset of swelling.
Ringworm	Exclusion not usually required.
Rubella	For 6 days from onset of rash.

Scabies	Child can return after first treatment has commenced.
Scarlet Fever	For 24 hours after commencing antibiotics.
Shigella (dysentery)	For 48 hours from last episode of diarrhoea or vomiting. Longer exclusion may be required for some children. Consult HPU
Tuberculosis	For two weeks after treatment has started. HPU will advise on action.
Typhoid (and paratyphoid)	For 48 hours from last episode of diarrhoea or vomiting. Longer exclusion may be required for some children. Consult HPU
Whooping Cough	For 5 days from commencing antibiotic treatment

For a copy of the poster see:

http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1194947358374

SCHOOL HEALTH MATTERS

SECTION TWO

Communicable Diseases

CHICKENPOX

Facts

The Varicella zoster virus causes chicken pox. It is highly infectious.

- **Spread** Droplet or airborne spread from respiratory or vesicle (blisters) secretions; direct person-to-person contact: and indirectly by contact with items soiled with respiratory or vesicle fluid (e.g. tissues)
- **Incubation period** 14-21 days
- **Period of communicability** Up to five (but usually one to two) days before the onset of rash until five days after the first crop of blisters appear
- **Exclusion** Five days from the onset of the rash. There is no need to wait until lesions are healed

Symptoms

- Cold and flu-like symptoms
- Fever
- Muscle pains
- Headache
- Watery eyes
- Then an itchy rash develops, characterised by crops of blister-type spots (vesicles) which appear over three to five days particularly on covered rather than exposed areas

Treatment

Generally, there is no specific treatment for chickenpox as viral infections do not respond to antibiotics. Treatment is usually based on reducing symptoms such as fever and itchiness.

In some cases, an immunoglobulin (see Glossary of terms) is effective at reducing the severity of the illness and is available for people at high risk and susceptible pregnant women. This should be administered as soon as possible, but can be given within 10 days of exposure. Oral acyclovir (an anti-viral drug) is the treatment of choice for those at high risk of complications, and may prevent the infection or reduce the symptoms if given within a week of exposure.

Complications

Complications are rare, but may include pneumonia and encephalitis (inflammation of the brain). Severe disease may occur in people with a weak immune system, pregnant women, newborn babies and occasionally healthy adults. Infection in pregnancy may result in complications for the unborn baby – see below.

Reactivation of the chicken pox virus in children or adults may result in shingles many years after the initial infection. Shingles appears as a painful rash and is much less infectious. Please see separate section on shingles.

Advice and implications for contacts

Over 90% of adults have already had chickenpox and are immune. People with a weak immune system, newborn babies and pregnant women may be at risk of severe chickenpox if they are not immune and come into contact with someone with chickenpox or shingles. These groups should seek medical advice as soon as possible if exposed.

Infection in the first five months of pregnancy in women who are not immune may affect the unborn child, but the risks are much lower after 20 weeks. However, infection with varicella in the later stages of pregnancy can cause premature delivery or chickenpox infection in the new born baby. This is particularly serious if the mother becomes infected seven days before, to seven days after birth.

Natural immunity/Vaccination

- Natural infection with chicken pox usually gives life-long immunity. Second attacks can occur, but are rare. The infection remains latent, and may recur years later as shingles.
- Varicella vaccination offers protection but it is not part of the childhood immunisation programme. There are circumstances when the vaccine may be offered to susceptible children or adults, or their close contacts.

Please see the Health Protection Agency website for further information:

http://www.hpa.org.uk/infections/topics_az/chickenpox/gen_info.htm

Do

- ✓ Send the child home from school
- ✓ Advise parents of affected pupils to consult their GP if they are concerned that the child may be developing complications
- ✓ Advise parents of children with a weak immune system or newborn babies to contact their GP if they are exposed to chickenpox or shingles
- ✓ Advise staff with a weak immune system, or those who are pregnant, to seek medical advice if they have been exposed to chickenpox or shingles

Do Not

- X Allow child back to school unless exclusion period is completed

CONJUNCTIVITIS

Facts

Conjunctivitis is a bacterial or viral infection of one or both eyes.

- **Spread** By direct, or indirect, contact with discharge from the eyes or respiratory secretions of an infected person. Children under 5 are most affected
- **Incubation period** Usually 24-72 hours for bacterial conjunctivitis. Viral infections may have longer incubation periods – from 12 hours to 12 days, or longer
- **Period of communicability** During the time symptoms are present for bacterial infection. Viral infections may be communicable for up to 14 days after onset
- **Exclusion** None

Symptoms

- Itchy, red, swollen eyes
- A gritty feeling in the eyes
- Watery or sticky yellow discharge

Symptoms may last two days to two to three weeks.

Treatment

Careful cleansing is required so the infection is not spread from one eye to the other. Eye drops or ointment to be applied as prescribed by the GP.

Complications

In rare cases there may be scarring of the cornea.

Advice and implications for contacts

Avoid direct contact with the discharge from infected eyes and ensure good personal hygiene.

Natural immunity/vaccination

- With bacterial infection, immunity after the infection is low or does not occur and varies with the infecting agent. After viral infection immunity to the specific type of virus that caused the infection sometimes occurs, but does not give immunity to other types, so repeated attacks are possible.
- There is no vaccine.

Do

- ✓ Encourage parents to consult their GP
- ✓ Discourage close facial contact between infected and non-infected children
- ✓ Discourage children from rubbing their eyes
- ✓ Ensure particular attention is paid to hand washing and personal hygiene, especially after contact with infectious secretions/discharge

Do Not

- X Share clothing or towels
- X Share eye make up or applicators

***E. coli* O157**

Facts

Escherichia coli (*E. coli*) are bacteria that live in the gut of humans and animals. A few strains of *E. coli*, such as VTEC (Vero cytotoxin-producing) O157, can produce toxins (poisons) that lead to more serious illness and can be potentially fatal.

- **Spread** Contaminated food is one means of transmission: beef and beef products (for example, undercooked beef burgers), poultry and poultry products (for example, undercooked chicken burgers), dairy products and vegetables have all been associated with cases or outbreaks. Person to person spread can also occur by direct contact (faecal-oral). Outbreaks and sporadic cases have been linked with handling of animals and therefore there are risks associated with visitors, especially children, to farm centres. Faecal-oral transmission can also occur within families and child care settings
- **Incubation period** From one to ten days (usually three to four)
- **Period of communicability** For as long as the bacteria are present in the faeces. This is typically for a week or less in adults, but may be several weeks in children
- **Exclusion** Exclude until fully recovered and without symptoms for 48 hours. Some groups of people may pose an additional risk to others and may need to be excluded for longer. For example, pre-school and infants should not attend nursery or be in contact with young children in other settings until they have had negative stool samples. The Health Protection Unit will give further advice in these instances

Symptoms

These vary according to the strain and the severity of the infection:

- Mild diarrhoea
- Abdominal cramps
- Bloody diarrhoea
- Headache
- Nausea and vomiting

Treatment

People with *E. coli* O157 infection should see their GP for advice. Dehydration due to diarrhoea should be treated with plenty of fluids. Anti-diarrhoeal medicines should be avoided. In particular where there is blood in the faeces, antibiotics should not be prescribed until the cause has been identified; there is some evidence that antibiotics may increase the risk of serious complications, such as haemolytic uraemic syndrome (see below).

Complications

Some people develop a serious complication called haemolytic uraemic syndrome (HUS), which causes red blood cells to be destroyed and can lead to kidney failure. HUS develops in up to 8% of those infected with VTEC O157, particularly the elderly and children.

Advice and implications for contacts

The infection may spread to others either directly or indirectly. Contacts may need to be excluded until they have negative stool sample(s) if they are in the following groups:

- Food handlers
- Those who have difficulty maintaining personal or hand hygiene
- Health and social care staff working with vulnerable people
- Children attending pre-school groups or nurseries

The HPU and Environmental Health Officers can give further advice.

Natural Immunity/Vaccination

- It is not known if infection provides immunity.
- There is no vaccine available against *E.coli* O157.

Do

- ✓ Encourage staff and children to practice good personal hygiene and supervise children when food handling
- ✓ Wash hands with liquid soap and warm water and dry thoroughly. This is the most important factor in preventing spread, not only for *E. coli* O157, but for all infectious gastro-intestinal illnesses
- ✓ Wash hands after using the toilet and before handling and/or eating food
- ✓ Supervise children when hand washing, or wash their hands for them
- ✓ Ensure crockery and cutlery are washed in hot water and detergent
- ✓ Keep food preparation surfaces clean at all times
- ✓ Maintain high standards of environmental cleaning, paying particular attention to toilet seats, flush handles, sink taps and toilet door handles at least daily. Refer to Section 3 for instructions for cleaning and disinfecting areas contaminated with faeces. A simple diluted solution of bleach (one part bleach to ten parts of water) is all that is required - typically household bleach should be diluted 1 in 50 to obtain 0.1% hypochlorite (bleach)
- ✓ Provide liquid soap and paper towels in toilet areas for hand washing
- ✓ **Check HSE (1998) guidance before farm/zoo visits.** *Avoiding Ill Health at Open Farms – Advice to Teachers (A1S23 Supplement)*. HSE, UK
- ✓ Advise that children who report/are noted to have blood in their stools contact their GP as soon as possible
- ✓ Ensure exclusion period is observed, i.e. whilst symptomatic and for 48 hours after symptoms have resolved (or longer if advised by the HPU)
- ✓ Take advice from Environmental Health or your local HPU

Do Not

- X Take anti-diarrhoeal medications without consulting a doctor

FIFTH DISEASE / 'SLAPPED CHEEK' SYNDROME / ERYTHEMA INFECTIONOSUM / PARVOVIRUS B19

Facts

A highly infectious viral infection (known by several names) caused by Parvovirus B19, which usually results in a mild illness.

- **Spread** Contact with infected respiratory secretions and by droplet spread
- **Incubation period** Between 4-20 days, with an average of 13-18 days
- **Period of communicability** Usually for 7 days before onset of rash
- **Exclusion** Not necessary because the infectious period occurs before the onset of the rash

Symptoms

- Mild flu-like symptoms
- Characteristic redness of the cheeks ('slapped cheek')
- A lace-like rash on the body and limbs that recurs for 1-3 weeks after exposure to stimuli such as light and heat

As many as a quarter or more of infections show no symptoms.

Treatment

There is no specific treatment.

Complications

The illness may be more severe and have more serious consequences in people who have a weak immune system and/or have an underlying condition, especially those with certain blood disorders such as anaemia, sickle cell disease, thalassaemia or leukaemia.

Advice and implications for contacts

Rarely, infection in the first half of pregnancy results in miscarriage. Pregnant women who have had contact with a child with parvovirus should therefore seek advice from their GP.

Natural immunity/Vaccination

- There is some evidence of immunity after infection.
- There is no vaccine.

Do

- ✓ Ensure that particular attention is paid to hand washing
- ✓ Ensure that articles and tissues soiled by nose and throat discharges are disposed of straight away
- ✓ Advise that at risk people (as described above) and pregnant staff seek medical advice

Do Not

- X Exclude from school

FOOD POISONING

Facts

Each year thousands of people suffer with food poisoning caused by eating/drinking contaminated food or water. The illness can be caused by a variety of different organisms that include bacteria, viruses and parasites. Many of these organisms can also be passed directly from person to person.

The most commonly reported types of food poisoning in this country are caused by *Campylobacter* and *Salmonella* bacteria and the foods most often associated with infection are inadequately cooked meat and poultry, untreated milk, dairy products, raw eggs, shellfish and rice. Unfortunately contaminated food looks, tastes and smells normal so it is impossible to tell if a food will make you ill.

- **Spread** By eating contaminated food that is undercooked or raw such as meat, poultry or eggs. By eating cooked or ready to eat foods that have been in contact with contaminated food, surfaces (including soft play areas), equipment or utensils. By an infected person through inadequate hand washing after using the toilet or after touching animals or pets
- **Incubation period** Under an hour to several weeks. Food poisoning is not always caused by the last meal eaten as organisms can incubate in the body for long periods before causing illness
- **Period of communicability** Normally for the duration of symptoms, especially with diarrhoea or vomiting.
- **Exclusion** Children should not attend school, nursery, playgroups or childminders until 48 hours after the last episode of diarrhoea and/or vomiting. Exclusion periods differ for specific infections, and may be longer than 48 hours – the Environmental Health Officers or the Health Protection Unit can advise. Children should be excluded from swimming or other water activities, such as therapy pools, for two weeks after the last episode of diarrhoea

Symptoms

- Diarrhoea
- Nausea and vomiting
- Stomach cramps
- Fever
- Headache
- Tiredness/aching muscles

The illness normally lasts between one and seven days but can linger for several weeks. The organism can remain in the gut for some time after symptoms have stopped.

Treatment

Any person thought to have food poisoning should consult their doctor who may request a stool specimen to provide a definite diagnosis. Medication may be prescribed, although often the symptoms resolve without treatment.

Advice and implications for contacts

The infection can be spread to others either directly or indirectly. Contacts may need to be screened and excluded until they have negative stool specimens if they are:

- Food handlers
- Children attending pre-school/nursery
- Those who have difficulty maintaining personal or hand hygiene (e.g. those with learning difficulties)
- Health care or social care staff working with vulnerable people/children attending pre-school groups or nurseries

Natural immunity/Vaccination

- Infection with the bacteria that cause food poisoning does not give natural immunity.
- There are no vaccines available for diseases such as *Campylobacter*, *E coli O157* and *Salmonella*. There is a vaccine available for those travelling to countries where hepatitis A is prevalent.

Do

- ✓ Encourage good personal hygiene. Thorough hand washing and drying is the most important factor in preventing the spread of infections. Wash your hands with hot water and soap and thoroughly dry them after going to the toilet, touching animals or changing nappies. Always wash your hands before you eat or start to prepare food, and after handling raw meat, fish or vegetables
- ✓ Ensure a supply of soap and disposable hand towels is maintained at sinks or basins used for hand washing within kitchen and toilet areas
- ✓ Always ensure high standards of environmental cleaning especially frequently touched areas such as toilet seats, flush handles, wash hand basin taps and toilet door handles. These areas should be cleaned at least daily using a suitable disinfectant
- ✓ Contact your local HPU if you suspect an outbreak

Do Not

- X Allow children/staff back to school until 48 hours after the last episode of diarrhoea or vomiting

GLANDULAR FEVER

Facts

Glandular fever, also known as infectious mononucleosis, is caused by the Epstein - Barr virus.

- **Spread** Direct contact with saliva (for example through kissing), and by indirect contact with hands or objects contaminated with saliva from an infected person
- **Incubation period** Between four and six weeks
- **Period of communicability** The virus may stay in the glands and saliva for a year or more after infection. A few people will continue to be healthy life-long carriers
- **Exclusion** None. Children may return to school once they feel well

Symptoms

- Severe tiredness
- Aching muscles
- Sore throat
- Fever
- Swollen tonsils and neck glands
- Occasionally jaundice

The disease is more severe in adults; in young children the infection is usually mild and may go unrecognised.

Treatment

There is no specific treatment. Plenty of fluids and rest will help relieve the symptoms.

Complications

Although recovery usually occurs in a few weeks, a small proportion of people take longer to get better and suffer from tiredness and lethargy for several months.

Advice and implications for contacts

The disease is more severe in older adults and those with a weak immune system.

Natural immunity/Vaccination

- Natural infection gives a high degree of protection.
- There is no vaccine.

Do

- ✓ Recognise that some people may take weeks to recover.
- ✓ Take measures to avoid cross contamination.
- ✓ Maintain high standards of personal and environmental hygiene.

Do Not

- X Share cups, utensils, and crockery.

HAND, FOOT AND MOUTH DISEASE

Facts

An infection caused by Coxsackie viruses, which normally live in the gut. The illness is unrelated to the animal foot and mouth disease.

- **Spread** Faecal-oral route, direct contact with saliva or nasal secretions (nose and throat discharges of infected people), and contact with the fluid from the blisters or by respiratory droplets. It is unlikely to be spread by food or water
- **Incubation period** three to five days
- **Period of communicability** The virus is present in the blisters for 7-10 days and in the faeces for several weeks
- **Exclusion** None

Symptoms

- Sudden onset of fever
- Sore throat
- Small greyish blisters in the mouth that may also occur on the palms, fingers and soles of the feet
- Some children may have the infection but do not have any symptoms

Treatment

There is no specific treatment.

Complications

There are usually no complications but rarely, cases in infants have been fatal.

Advice and implications for contacts

None. However, pregnant women may wish to avoid exposure, as a possible risk of miscarriage has been suggested.

Natural immunity/Vaccination

- Previous infection does not guarantee natural immunity. Immunity is probably acquired after infection, but only to the specific type of virus that caused it - different types of the virus can cause second attacks. The duration of immunity is unknown.
- There is no vaccine available.

Do

- ✓ Pay particular attention to hand washing at all times, especially for young children who need supervision
- ✓ Ensure articles soiled by nose, throat or blister secretions, or faeces are disposed of, or washed straight away

HEAD LICE

Facts

Head lice are tiny insects between 1 mm and 3 mm long. They only live on human heads and they do not spread to or from animals. They stay close to the scalp, feeding on blood. Eggs are grey/brown and approximately the size of a pinhead; they are glued to the hair, close to the scalp and hatch in 7-10 days. Empty egg shells (nits) are white and shiny and are found further along the hair shaft as they grow out with the hair.

- **Spread** Head lice cannot jump, hop or fly. They clamber readily in dry hair from person to person by direct, head-to-head contact. They may also be spread when combs and brushes are shared
- **Incubation period** None
- **Period of communicability** Any period of time when heads are touching, the contact need only be a few seconds
- **Exclusion** None

Symptoms

When newly infected there are no symptoms. Itching and scratching on the scalp may occur two to three weeks after infection.

Treatment

There are two ways of treating head lice:

- **Physical removal** Lice can be removed by combing through hair that has been lubricated with a conditioner using a fine-toothed detector comb.
- **Insecticidal treatments** Lotions should be used rather than shampoos. Refer to the manufacturer's instructions for timings of treatments.

Complications

Repeated infestation may result in the scalp becoming hypersensitive.

Advice and implications for contacts

Contacts may become infested. Household/family contacts should be examined for lice by detection combing and treated if necessary.

Natural immunity/Vaccination

- There is no evidence of immunity following infestation.
- There is no vaccination.

Do

- ✓ Encourage families to check their heads weekly using a fine toothed detector comb
- ✓ Only apply chemical treatments if live lice are found
- ✓ Ensure instructions are followed when using chemical treatments
- ✓ Ask your pharmacist for advice on the appropriate treatment
- ✓ Ensure that all close contacts are checked for lice and that those found to be infested are treated at the same time
- ✓ Ensure your school has access to head lice education leaflets

Do Not

- X Use alternative treatments, as there is no current evidence these are effective
- X Send letters home when there is a case of head lice. Instead use a system of continual education, information and advice so families know what to do all the time and are regularly checking heads at home

HEPATITIS A

Facts

An infection of the liver caused by the hepatitis A virus (HAV), which is spread via faeces. Hepatitis A is one of several known types of viral hepatitis. Not all of these viruses will cause the same symptoms, and some are more serious than others.

- **Spread** Faecal-oral route, or through consuming food and water contaminated by sewage e.g. certain shellfish, or salads washed in contaminated water
- **Incubation period** 15-50 days, with an average of 28-30 days
- **Period of communicability** From 14 days before the onset of jaundice until 5 days afterwards.
- **Exclusion** Until 7 days after the onset of jaundice (or onset of symptoms if no jaundice)

Symptoms

- Nausea and vomiting
- Fever
- Loss of appetite
- Malaise
- Diarrhoea
- Fever
- Dark urine
- Older children and adults may develop jaundice (a yellowing of the eyes and skin). Jaundice is not common in children under 6 years

Young children (under 5 years) are less likely to have symptoms and the illness may go unrecognised.

The disease severity varies from a mild illness lasting one to two weeks to a severely disabling disease lasting several months.

Treatment

Treatment is usually at home and is limited to controlling the symptoms.

Complications

Complete recovery is usual, but return of appetite and energy may take several weeks. The severity of the illness increases with age, but children with pre-existing liver disease may have more severe symptoms.

Advice and implications for contacts

For household contacts who have never had the infection, immunisation with hepatitis A vaccine should be given as soon as possible, but no later than two weeks after exposure. Immunoglobulin may be used in some circumstances to give immediate protection against hepatitis A.

Natural immunity/Vaccination

- Natural immunity after infection will probably last for life.
- A vaccine is available for those travelling to countries where hepatitis A is prevalent.

Do

- ✓ Insist the child stays at home during the period of communicability
- ✓ Encourage all staff and pupils to practice good personal hygiene at all times i.e. wash hands after going to the toilet, and before eating, handling or preparing food. Wash hands thoroughly with soap and warm water, rinse and dry on disposable paper towels
- ✓ Supervise children who are unable to wash their hands thoroughly
- ✓ Prevent young children putting shared toys in their mouths
- ✓ Maintain high standards of environmental hygiene. Follow cleaning advice in **Section 3**
- ✓ Inform the Health Protection Unit who will offer advice and support

HEPATITIS B

Facts

An infection of the liver caused by the hepatitis B virus (HBV), which is spread in blood and body fluids. Hepatitis B is one of several known types of viral hepatitis. Not all of these viruses will cause the same symptoms, and some are more serious than others.

- **Spread** Entry of the virus into the blood from contaminated blood or body fluids including vaginal secretions, semen, cerebrospinal fluid, and amniotic fluid. Urine, faeces, sputum, tears, sweat and vomit are considered to present a lower risk unless they contain visible blood. Routes of transmission are:
 - Unprotected sexual intercourse
 - Skin puncture by contaminated needle or sharp object
 - Skin puncture by contaminated instrument used for tattooing, electrolysis and piercing
 - Sharing needles and syringes
 - From mother to baby during birth
 - Transfusion of infected blood products (this is a remote risk in the UK as all blood donations are screened for hepatitis B, C, and HIV)
 - Contamination of open wounds and skin lesions with infected blood or body fluid
 - A human bite from someone with hepatitis B, which punctures the skin
 - Contamination of the mucous membranes of the eye, nose or mouth with infected blood/body fluid
 - Sharing razors and toothbrushes, contaminated with microscopic traces of infected blood, or saliva
- **Incubation period** 4-160 days, with an average of 60-90 days
- **Period of communicability** Depends on the length of time the virus is present in the blood, which is from several weeks before symptoms start. Some people, known as 'chronic carriers', remain infectious for their lifetime
- **Exclusion** Not necessary

Symptoms

- General tiredness
- Nausea and vomiting
- Diarrhoea
- Loss of appetite
- Fever
- Occasionally joint pain and a rash
- Dark urine
- Older children and adults may develop jaundice (a yellowing of the eyes and skin). Jaundice is not common in children under six years

Young children (under five years) are more likely to show no symptoms and the illness may go unrecognised.

Treatment

Usually, the only treatment is to relieve the symptoms. Antiviral drugs are available but may not be suitable for everyone.

Complications

Acute liver failure can occur, but most people clear the virus from their blood. However, approximately 10% carry the virus for the rest of their lives, becoming chronic carriers, and to varying degrees are infectious to others. These people may develop long-term complications such as cirrhosis and cancer of the liver.

Advice and implications for contacts

Close household and sexual contacts who have not previously been vaccinated or who are not immune should be offered a course of immunisation, and if appropriate given HBIG (an immunoglobulin). No additional action is necessary in relation to pregnant contacts of cases; they should also seek medical attention immediately if they have been exposed.

If exposure to blood or body fluid occurs (i.e. an exposure of mucous membrane or broken skin to any blood or body fluid, unprotected sexual intercourse), hepatitis B vaccine and immunoglobulin may be offered to reduce the chance of acquiring infection. Hepatitis B vaccine is highly effective at preventing infection if given shortly after exposure (ideally within 48 hours, but can be considered up to a week after exposure). Immunoglobulin may also be offered (given preferably within 12 hours and not later than one week after exposure). Immediate medical advice should be sought (after initial first aid) in order for a risk assessment to be made.

Natural immunity/Vaccination

- Past infection usually leads to life long immunity in those who do not become chronic carriers.
- Hepatitis B infection can be prevented with an effective vaccine. Vaccination is recommended for people at high risk of infection including individuals with chronic liver or kidney disease, babies born to mothers who are infected with hepatitis B, staff and residents in residential accommodation, those with learning difficulties living in residential institutions and health care workers. Similar considerations may apply to children and adults in day care, schools and centres for those with severe learning disability. A local risk assessment should be carried out to decide whether to immunise. In settings where an individual's behaviour is likely to lead to regular significant exposure (e.g. biting or being bitten), immunisation should be offered.

Do

- ✓ Treat **all** blood and body fluids as potentially infectious (as many blood borne infections will be undiagnosed), and follow standard infection control procedures at all times (see infection control section, p.90)
- ✓ Encourage staff and children to practice good hygiene AT ALL TIMES, especially careful hand washing
- ✓ Ensure that protective clothing (gloves and aprons) are worn where there is potential for exposure to blood or body fluids. Protective clothing should be used for a single episode and then disposed of as clinical waste
- ✓ Ensure that any items that have been contaminated with blood or body fluids are disposed of as clinical waste
- ✓ Ensure spillages of blood/body fluids are cleared up immediately and appropriately (see section on spillages, p.94)
- ✓ Ensure sharp items that are contaminated with blood or body fluids are handled safely and appropriately (see section on spillages, p.94)
- ✓ Cover cuts and wounds with a waterproof dressing
- ✓ Maintain high standards of environmental cleaning, including general cleaning, toilets, changing mats, furniture, toys

✓ Notify the Health Protection Unit

Do Not

X Exclude any child with a blood borne virus

HEPATITIS C

Facts

An infection of the liver caused by the hepatitis C virus (HCV), which is spread in blood and body fluids. Hepatitis C is one of several known types of viral hepatitis. Not all of these viruses will cause the same symptoms, and some are more serious than others.

- **Spread** Entry of the virus into the blood from contaminated blood or body fluids including vaginal secretions, semen, cerebrospinal fluid, and amniotic fluid. Urine, faeces, sputum, tears, sweat and vomit are considered to present a lower risk unless they contain visible blood. Routes of transmission are:
 - Unprotected sexual intercourse
 - Skin puncture by contaminated needle or sharp object
 - Skin puncture by contaminated instrument used for tattooing, electrolysis and piercing.
 - Sharing needles and syringes
 - From mother to baby during birth
 - Transfusion of infected blood products (this is a remote risk in the UK as all blood donations are screened for Hepatitis B, C, and HIV)
 - Contamination of open wounds and skin lesions with infected blood or body fluid
 - A human bite from someone with Hepatitis C, which punctures the skin
 - Contamination of the mucous membranes of the eye, nose or mouth with infected blood/body fluid
 - Sharing razors and toothbrushes, contaminated with microscopic traces of infected blood, or saliva
- **Incubation period** Two weeks to six months; commonly six to nine weeks
- **Period of communicability** From one or more weeks before onset of the first symptoms; without treatment the virus may remain in the blood indefinitely
- **Exclusion** None

Treatment

Currently, the treatment of choice for individuals with chronic hepatitis C is a combination of antiviral drugs.

Symptoms

Hepatitis C may not cause any symptoms. If symptoms do occur they include:

- Loss of or decreased appetite
- Nausea
- Vomiting
- Rarely, jaundice

Complications

It is estimated that around 15 – 20 per cent of infected people clear the infection naturally within the first six months. For the remainder, without treatment, hepatitis C is a chronic infection that can span several decades and may eventually lead to liver disease.

Advice and implication for contacts

There are no implications for social contacts. For household contacts and sexual contacts prevention is centred on preventing the blood from infected individuals from coming into contact with others. Specialist advice is available on www.hepctrust.org.uk or www.britishlivertrust.org.

Natural immunity/Vaccination

- Approximately 15-20% of those infected will clear the virus within six months, but the degree of immunity following infection is not known. The remaining 80–85% of those infected become chronic carriers of the virus.
- There is no available vaccine for hepatitis C.

Do

- ✓ Treat **all** blood and body fluids as potentially infectious (as many blood borne infections will be undiagnosed), and follow standard infection control procedures at all times (see infection control, p.90)
- ✓ Encourage staff and children to practice good hygiene
- ✓ Ensure that protective clothing (gloves and aprons) are worn where there is potential for exposure to blood or body fluid. Protective clothing should be used for a single episode and then disposed of as clinical waste
- ✓ Ensure that any items that have been contaminated with blood or body fluids are disposed of as clinical waste
- ✓ Ensure spillages of blood/body fluids are cleared up immediately and appropriately (see spillages, p.94)
- ✓ Ensure sharp items that are contaminated with blood or body fluids are handled safely and appropriately (see spillages, p.94)
- ✓ Cover cuts and wounds with a waterproof dressing
- ✓ Maintain high standards of environmental cleaning, including general cleaning, toilets, changing mats, furniture, toys
- ✓ Notify the Health Protection Unit

Do Not

- X Exclude any child with a blood borne virus

HIV (Human Immunodeficiency Virus) AND AIDS (Acquired Immune Deficiency Syndrome)

Facts

Human immunodeficiency virus (HIV) is a blood-borne virus that gradually damages and weakens the immune system. It can lead to acquired immunodeficiency syndrome (AIDS), now more commonly known as advanced HIV infection, in which a person develops specific infections and cancers.

- **Spread** Entry of the virus into the body via infected blood, semen, vaginal secretions or breast milk. Other body fluids, such as saliva and urine do not contain enough of the virus to pass on infection. The routes of transmission are:
 - Unprotected sexual intercourse
 - Sharing needles and syringes
 - From mother to baby during birth
 - In countries where blood donations are not screened, HIV may be transmitted through blood/blood product transfusions
- **Incubation period** The time from infection to the presence of detectable antibodies is around one to three months
- **Period of communicability** Unknown; presumed to begin early after onset of HIV infection and extend throughout life
- **Exclusion** None

Symptoms

People living with HIV experience the infection in different ways and there is no common pattern to its development. At first most people do not show signs of infection and the time it takes for symptoms to appear can range from a few months to several years. Symptoms may include:

- Night sweats
- Unintentional weight loss
- Swollen glands in the neck, armpits and groin lasting more than two months
- Tiredness
- Frequent diarrhoea
- Rashes, cold sores and thrush infections

Once treatment starts, it is usual for people with HIV infection to have long periods of feeling well.

Once AIDS develops, the symptoms will be those of the specific illnesses, such as chest infections or cancers.

Treatment

There is no cure for HIV infection, but medication can slow the progression of the disease. Currently the treatment of choice for individuals with HIV/AIDS is a combination of antiviral drugs. Specific cancers and infections are treated as they arise.

Advice and implications for contacts

As the infection cannot be transmitted by social contact, there are no implications for students or staff. Protective clothing is only necessary for contact with blood or body fluids (as with all children), and no other precautions are necessary in the school setting.

Household contacts will need to take some precautions. Specialist advice is available on www.tht.org.uk

A course of anti-retroviral drugs may be recommended if a person has significant exposure to blood or body fluids (for example, an exposure of broken skin or mucous membrane to any blood or body fluid, or unprotected sexual intercourse) to reduce the chance of transmission. This is only effective if given within 72 hours. Immediate medical advice should be sought (after initial first aid) in order for a risk assessment to be made. See section on exposure, p.99.

Natural Immunity/Vaccination

- There is no vaccine available.

Do

- ✓ Ensure that confidentiality is maintained at all times. Remember that school staff do not need to know if a pupil has been diagnosed with HIV. The decision to inform the school rests with the parent and the pupil
- ✓ Treat **all** blood and body fluids as potentially infectious (as many blood-borne infections will be undiagnosed), and follow standard infection control procedures for at all times for everybody

- ✓ Encourage staff and children to practice good hygiene AT ALL TIMES
- ✓ Ensure that protective clothing (gloves and aprons) are worn where there is potential for exposure to blood or body fluid. Protective clothing should be used once only and then disposed of as clinical waste
- ✓ Ensure that any items that have been contaminated with blood or body fluids are disposed of as clinical waste
- ✓ Ensure that spillages of blood/body fluids are cleared up immediately and appropriately (see spillages, p.94)
- ✓ Ensure that contaminated sharp items are handled and disposed of safely and appropriately
- ✓ Cover all cuts and wounds with a waterproof dressing
- ✓ Maintain high standards of environmental cleaning, including general cleaning of toilets, changing mats, furniture, toys
- ✓ Include a pupil who has been diagnosed with HIV in all school activities

Do Not

- X Exclude any child with a blood borne virus

INFLUENZA

Facts

Influenza (commonly known as flu) is caused by a virus, usually influenza A or B (influenza C is an uncommon type). The illness is very infectious and easily spreads in crowded populations and in enclosed spaces. Flu viruses are always changing so this winter's flu strains will be slightly different from last winter's.

- **Spread** By breathing in droplets coughed out into the air by infected people or by the droplets landing on mucous membranes. Transmission may also occur by direct or indirect contact with respiratory secretions (e.g. via soiled tissues, surfaces)
- **Incubation period** 1 – 3 days
- **Period of communicability** One day before to 3 – 5 days after symptoms appear. In children, the infectious period is slightly longer - 3 days before until 9 days after symptoms appear
- **Exclusion** There is no precise exclusion period. Adults and children with symptoms of influenza are advised to remain at home until recovered

Symptoms

Influenza is a respiratory illness characterised by an abrupt onset. Symptoms include:

- Headache
- Fever
- Cough
- Sore throat
- Aching muscles and joints

Treatment

Rest, fluids, and painkillers for headaches and muscle aches will help to relieve symptoms. Antibiotics may be given for secondary bacterial infection. Anti-viral drugs - Zanamavir (Relenza), or Oseltamivir (Tamiflu) may help to shorten the length of the illness by a day or two but there is no evidence that they prevent serious complications.

Complications

The complications of influenza include sinus problems, ear infections, viral and bacterial pneumonias, dehydration and worsening of long-term medical conditions, such as heart failure, asthma or diabetes.

Advice and implications for contacts

Transmission can occur rapidly in crowded environments. The elderly, young and those with weak immune systems are more susceptible to complications of influenza and may be eligible for the vaccine (see below).

Natural immunity/Vaccination

- As the influenza virus constantly changes and natural infection produces immunity only to that specific strain, past infection does not guarantee future immunity.
- An annual vaccine is available for some people thought to be at risk. Details of age and risk groups advised to have the vaccine every year can be found at www.immunisation.nhs.uk

Do

- ✓ Have the influenza vaccine every year if you are in one of the risk groups.
- ✓ Encourage children and staff with flu-like symptoms to stay at home and drink plenty of fluids.
- ✓ Ask children to cover their noses and mouths with a tissue when coughing or sneezing and to discard tissues after use.
- ✓ Ensure regular hand washing with soap and water, especially after coughing or sneezing.

Do Not

- x Do not allow children under 16 years old to have aspirin as it is associated with Reye's syndrome (a neurological disorder).

H1N1 Influenza (Swine flu)

In spring 2009, a new influenza virus emerged and, as few people were immune, rapidly spread around the world affecting millions of people.

There is now an effective vaccine against this virus and people who are in high risk groups are being offered this vaccine. For more information on swine flu see:

www.hpa.org.uk

http://www.direct.gov.uk/en/Swineflu/DG_177831

<http://www.nhs.uk/news/2009/04April/Pages/Swineflulatest.aspx>

MALARIA

Facts

Malaria is a disease caused by a parasite called *Plasmodium* that is transmitted by mosquitoes. There are four types of human malaria, three of which are generally not life threatening. Falciparum malaria, however, is the most serious and is potentially fatal.

- **Spread** Via the bite of an infected female mosquito. The condition is almost without exception acquired abroad in countries where the disease is common
- **Incubation period** Varies according to the type of malaria. Usually 5-16 days but can be up to 15 months after the bite
- **Period of communicability** None. Malaria cannot be passed from person to person
- **Exclusion** None

The ABCD of prevention is an easy guide for everyone travelling to a country that has malaria.

- **Awareness of risk** (check the risk before you travel)
- **Bite prevention** - Travellers to malarious areas are advised to wear clothes that cover as much of the skin as possible. Exposed parts of the body should be treated with insect repellent. When sleeping, insecticide-impregnated bed nets should be used.
- **Chemoprophylaxis** (drugs taken to prevent malaria during travel)
- **rapid Diagnosis and treatment** (if you suspect malaria, seek medical help as soon as possible)

Symptoms

- Fever
- Headache
- Muscle pain
- Chills
- Sweats
- Diarrhoea
- Cough

Treatment

Treatment is with drugs and depends on the type of malaria.

Complications

The symptoms may progress to jaundice (yellowing of the eyes and skin), problems with blood clotting, shock, and liver or kidney failure. Malaria may also cause acute brain and lung problems.

Advice and implications for contacts

None.

Natural Immunity/Vaccination

- Infection with malaria does not provide immunity.
- There is no vaccine. Malaria is preventable by avoiding mosquito bites when travelling in endemic areas and taking appropriate anti-malarial medication.

More information is available on the Health Protection Agency's website:

http://www.hpa.org.uk/infections/topics_az/malaria/menu.htm

Do

- ✓ Allay any fears; the disease cannot be spread directly from person to person
- ✓ As far as possible, be aware which children have travelled overseas as this may be important if they become unwell
- ✓ Take opportunities to recommend to parents that the whole family seeks advice about travel vaccines and malaria prophylaxis

MEASLES

Facts

Measles is a highly infectious, potentially serious, illness caused by the measles virus.

- **Spread** By the droplet and airborne route, and by direct contact with the nose and throat secretions of infected people. It is less commonly spread by indirect contact with nose and throat secretions via soiled items (e.g. tissues, handkerchiefs)
- **Incubation period** 7-18 days from exposure to onset of fever
- **Period of communicability** Four days before onset of rash to four days after
- **Exclusion** From the onset of the rash until four days afterwards

Symptoms

- Cold-like symptoms with a runny nose (coryza)
- Cough
- Conjunctivitis
- High fever
- Small white spots (Koplik spots) inside the cheeks
- From about day three of the illness, a rash of flat red/brown blotches that flow into each other beginning on the face and spreading over the body (lasts four to seven days)
- Sometimes, diarrhoea, vomiting and abdominal pain

The symptoms may last up to 14 days from the first signs to the end of the rash.

Treatment

There is no specific treatment for measles. Plenty of fluids and painkillers can be used to reduce any discomfort and fever, and to replace fluid loss. Aspirin should NOT be used in children under the age of 16 as it is associated with Reye's syndrome (a neurological disorder). Some people with measles are admitted to hospital.

Complications

Complications include:

- Pneumonitis (inflammation of the lung)
- Secondary bacterial infection (especially ear infection and pneumonia)
- Croup
- Encephalitis (inflammation of the brain)
- Convulsions.

There are estimated to be about one death per 2500-5000 measles cases.

Advice and implications for contacts

All children over the age of one should have their MMR immunisations as per the national schedule. In the case of an outbreak of measles, an accelerated schedule is recommended: unimmunised children can be given two doses of MMR vaccine one month apart. If the second dose is given when the child is under 18 months, then a third dose will be needed with the pre-school booster.

Pregnant women in contact with a case of measles need to contact their GP for advice. Measles illness during pregnancy can lead to increased rates of premature labour, miscarriages, and low birth weight babies.

Children and adults with a weak immune system, pregnant women and children under 12 months who come into contact with measles may require immunoglobulin (a protein containing antibodies). These people should contact their GP immediately for advice.

Natural immunity/Vaccination

- Past infection gives lifelong immunity. Measles can be prevented by the highly effective measles-mumps-rubella (MMR) vaccine. This is given in two doses, the first dose at around 13 months and the second dose at three years of age.
- MMR vaccine can be given irrespective of a history of measles, as it will offer protection against future exposure to the other two infections. There are no ill effects from vaccinating those who are already immune.

Do

- ✓ Do send the child home from school as soon as possible and exclude for four days from onset of rash.
- ✓ Do advise the child's parents to see the GP.
- ✓ Do notify the Health Protection Unit immediately.
- ✓ Do encourage children who have not had MMR vaccine to complete a course of two doses.
- ✓ Do advise pregnant women, children under 12 months and children and adults with a weak immune system to contact their GP if they have been in contact with a case of measles.

Do Not

- X Allow the child back to school until the exclusion period of four days is over.

MENINGITIS (overview)

Meningitis requires **IMMEDIATE MEDICAL ATTENTION**.

Facts

Meningitis is inflammation of the membranes covering the brain and spinal cord. It is caused by a variety of different bacteria (usually *Neisseria meningitidis*, *Streptococcus pneumoniae* or *Haemophilus influenzae type b (Hib)*), pneumococcus, viruses (such as the measles or mumps virus) or, more rarely, fungi and protozoa. Viral meningitis is usually mild or unapparent, whereas bacterial meningitis is the more severe form.

For more information about bacterial meningitis see the following section headed Meningococcal meningitis & septicaemia.

- **Spread** For viral meningitis, this will depend on the specific infectious agent. Bacterial infection is spread through respiratory droplets and direct contact with nose and throat secretions. Infectivity is relatively low and transmission usually requires prolonged close contact (e.g. within households or via intimate kissing)
- **Incubation period** This varies because it depends on the organism causing the infection. Bacterial meningitis is between 2-10 days
- **Period of communicability** For bacterial meningitis this will be for as long as the bacteria is carried in the nose and throat. For other forms of meningitis this will vary according to the organism
- **Exclusion** Once the child has been treated (if necessary) and has recovered, they can return to school. There is no need to exclude siblings or other family members

Symptoms

The common signs and symptoms of meningitis are listed here. It is important to note that if a child/adult has bacterial meningitis, the symptoms of septicaemia (blood infection) may also be present and are included in the following list of symptoms. **If you suspect meningitis, you should get medical help urgently.**

Babies and toddlers:

- High temperature with cold hands and feet
- Vomiting, or refusing feeds
- High pitched moaning, whimpering cry
- Difficult to wake or lethargic, floppy and unresponsive
- Pale, blotchy complexion
- Baby may dislike being handled, be fretful
- The fontanelle (soft spot on baby's heads) may be tense or bulging.
- Rash (see glass test below)

Children and adults:

- High temperature, possibly with cold hands and feet
- Vomiting, sometimes diarrhoea and stomach cramps
- Severe headache
- Dislike of bright lights
- Neck stiffness (unable to touch the chin to the chest)
- Joint or muscle pains
- Drowsiness
- Fits
- Confusion/disorientation
- Rash (see glass test below)

GLASS TEST: If a glass tumbler is pressed firmly against a septicaemia rash, the rash will not fade. You will be able to see the rash through the glass. **If this happens get medical help immediately.** Please note that the rash is a late symptom - if any of the other symptoms have already occurred seek medical advice **immediately.**

Treatment

People with bacterial meningitis are usually very unwell and should be looked after in hospital where treatment includes intravenous antibiotics. There is no effective medication for viral meningitis and symptoms are usually much milder so care will involve treating the symptoms.

Complications

This will depend on the organism causing the infection. Most people will recover fully from viral meningitis. Occasionally bacterial meningitis results in permanent hearing loss, convulsions, mental impairment and loss of limbs. Rarely, the illness results in coma and can be fatal.

Advice and implications for contacts

Where meningococcal bacteria are the cause of meningitis, close contacts will require antibiotics and possibly vaccination. See section headed “meningococcal meningitis and septicaemia” for further information.

Natural immunity/Vaccination

- Vaccines offer the only protection. The routine childhood immunisation schedule provides protection against meningitis caused by mumps, polio, *Haemophilus influenzae* type b (Hib), pneumococcus and *Neisseria meningitidis* group C. There is no vaccination for some types of meningitis (e.g. *Neisseria meningitidis* group B).

Do

- ✓ Know the symptoms of meningitis
- ✓ Seek medical attention immediately if you suspect a child has meningitis
- ✓ Notify your local Health Protection Unit as soon as possible. The Unit will advise you on what action to take regarding contacts, and may send a letter of advice for you to distribute to all parents
- ✓ Ensure all children have received all meningitis C and Hib vaccines
- ✓ Contact the Meningitis Trust www.meningitis-trust.org telephone 0845 6000 800, or the Meningitis Research Foundation www.meningitis.org telephone 0800 8800 3344 for further information

Do Not

- X Delay in seeking advice

MENINGOCOCCAL MENINGITIS & SEPTICAEMIA

Meningitis and septicaemia require **IMMEDIATE MEDICAL ATTENTION.**

Facts

The bacteria *Neisseria meningitidis* are responsible for meningococcal meningitis and meningococcal septicaemia (known collectively as “meningococcal infection”). There are 13 known groups of the bacteria, the most common worldwide are A, B, C, W135 and Y. In the UK, groups B and C are the most common. Meningococcal infection is very serious and is fatal in around one in ten people with the illness. Approximately 15% of those that recover have long-term complications – including deafness and loss of limbs.

- **Spread** From person to person through respiratory droplets and direct contact with nose and throat secretions. Approximately 10% of us carry the bacteria harmlessly in our nose and throat. Infectivity is relatively low and only a very small proportion of people develop meningitis or septicaemia if they come into contact with the bacteria. Close and prolonged contact is required to pass on the bacteria (such as occurs in a household setting or by intimate kissing).
- **Incubation period** Up to 10 days, but usually 2-5 days. For this reason, only those that have had significant close contact in the previous 7 days will be offered antibiotics. See “advice and implications for contacts” section for definition of close contact.
- **Period of communicability** Until 24 hours after taking the appropriate antibiotic to clear the bacteria from the nose and throat.
- **Exclusion** Once the child has been treated and has recovered, they can return to school. Household members and close contacts of a case will all have received antibiotics. Antibiotic treatment ensures that they cannot pass on the bacteria to others, and exclusion is unnecessary

Symptoms

Symptoms	Meningitis	Septicaemia
Drowsiness or impaired consciousness	✓	✓
Fever/Vomiting	✓	✓
Headache	✓	
Stiff neck	✓	
Dislike of bright lights	✓	
Cold hands and feet/shivering		✓
Rapid breathing /breathless		✓
Joint, muscle or stomach pain		✓
Rash (on any part of body) which does not fade if a glass tumbler is pressed against it	✓	✓
Pale or mottled skin		✓
Confused/delirious	✓	✓
Seizures (fits)	✓	

Meningococcal meningitis and septicaemia are not common diseases but may develop very quickly and cause serious illness. It is vital that everyone knows the symptoms to watch out for. Not all the symptoms will be present, and it is possible to have symptoms of both meningitis and septicaemia.

GLASS TEST: If a glass tumbler is pressed firmly against a septicaemia rash, the rash will not fade. You will be able to see the rash through the glass. **If this happens get medical help immediately.** Please note that the rash is a late symptom - if any of the other symptoms have already occurred seek medical advice **immediately.**

Treatment

Treatment will include intravenous antibiotics and management in hospital. If meningococcal disease is detected and treated quickly most children will make a full recovery.

Complications

Occasionally bacterial meningitis results in permanent hearing loss, convulsions, mental impairment and loss of limbs. Rarely, the illness results in coma and is fatal in between five and 15 per cent of cases.

Advice and implications for contacts

- Close contacts, such as household members and any person who has stayed overnight within seven days of the person becoming ill, will need antibiotics. This is to clear any bacteria which may have caused the infection from their nose or throat and to stop further spread. Classroom, nursery and other social contacts are not considered close contacts so they do not need antibiotics.
- If a susceptible person has already been exposed to the bacteria, antibiotics will not prevent them developing the infection, so it is important to be alert for further symptoms. However, infectivity is relatively low and transmission in schools is rare.
- There is no additional risk for women who are pregnant; they will be given appropriate advice and may also receive antibiotics.
- If it is confirmed that the meningococci are group A, C, W135, or Y then those previously identified as needing antibiotics are subsequently given an appropriate vaccine.

Natural immunity/Vaccination

The meningitis C vaccine offers protection against the C group meningococcal meningitis, and is a routine childhood immunisation. There are vaccines available for groups A, W135 and Y, but as these types of meningococcal infection are rare in the UK they are only offered to those travelling to countries where they are common. There is no vaccine against the B group currently available in the UK. Some vaccines against group B have been developed in other countries, but have not been fully effective.

Do

- ✓ Know the symptoms of both meningitis and septicaemia.
- ✓ Seek medical attention immediately if you suspect a child has meningitis and/or septicaemia.
- ✓ Contact your school nurse or Health Protection Unit for further advice.
- ✓ Notify your local Health Protection Unit as soon as possible by telephone, who will advise you on what action to take regarding contacts, and may send you a letter of advice, to distribute to all parents.
- ✓ Ensure all children have received meningitis C and Hib vaccines

- ✓ Contact the Meningitis Trust www.meningitis-trust.org telephone 0845 6000 800, or the Meningitis Research Foundation www.meningitis.org telephone 0800 8800 3344, for further information.

Do Not

- X Delay in seeking advice

MRSA (Meticillin resistant *Staphylococcus aureus*)

Facts

Staphylococcus aureus (*S. aureus*) bacteria live naturally on the skin of around a third of the population without causing any harm; this is known as colonisation. Sometimes the bacteria cause infections, but these are usually effectively treated with antibiotics. MRSA is a type of *S. aureus* that is resistant to a number of antibiotics, including meticillin, and is therefore harder to treat. In general, healthy people are at low risk of infection with MRSA, and infections usually occur in hospital, particularly in vulnerable people.

- **Spread** Person to person by direct contact with skin or by indirect contact (e.g. via contaminated equipment or environment). Bacteria are commonly carried on hands.
- **Incubation period** 4-10 days
- **Period of communicability** MRSA can be transmitted as long as the infection, or colonisation, persists
- **Exclusion** None. However, children should be excluded if infected wounds cannot be covered.

Symptoms

Symptoms of infection with MRSA or *S. aureus* vary depending on what part of the body is infected. For example:

- Wound infection: painful, red, hot, inflamed, pus may be present.
- Skin infections, such as boils (infection of a hair follicle) or impetigo.
- Conjunctivitis: eyes become red or pink; they may be sticky or watery and may feel 'gritty'.
- Septicaemia (blood infection): fever, shivering, joint/muscle pain, rash, rapid breathing, drowsiness, vomiting.

NB: These infections can also be caused by other bacteria or viruses, and will have the same symptoms.

Treatment

MRSA infection can be treated with antibiotics, although the range of effective drugs is limited, can be difficult to use and can cause side effects. Topical treatments (those applied directly to the affected part of the body) may be sufficient for minor, superficial infections.

It is not generally necessary to treat MRSA colonisation. Most people who are colonised with MRSA do not go on to develop an infection.

Complications

Staphylococcus aureus (and MRSA) commonly causes mild skin infections, but can also cause urinary tract infections, pneumonia and septicaemia. MRSA infection may occur particularly if the bacteria have an opportunity to enter the body via a wound (e.g. accidental cut or surgical wound) or medical device (e.g. drip, catheter).

Advice and implications for contacts

Some people are more susceptible to MRSA infection, (e.g. those with weakened immunity, the elderly and sick people in hospital) but generally healthy people are at a low risk of infection with MRSA. People colonised with hospital strains of MRSA can safely socialise with others, including babies, children and pregnant women. There is a community type of MRSA that can affect otherwise healthy people, but this variety is rare in the UK.

Natural immunity/Vaccination

- There is no natural immunity to *S. aureus*
- There is no vaccination for MRSA, and re-infection is possible. The best method to prevent MRSA is thorough hand washing. High standards of personal hygiene and effective cleaning of equipment and the environment should also help to prevent transmission.

Do

- ✓ Do encourage hand washing.
- ✓ Do clean the environment and equipment/toys regularly.

Do Not

- X Exclude children with colonisation of the skin or nose.
- X Exclude children unless wounds cannot be covered.

Panton Valentine Leukocidin (PVL) *Staphylococcus aureus*

Panton-Valentine Leukocidin is a toxic substance produced by some strains of *Staphylococcus aureus* (including MRSA) which is associated with an increased ability to cause disease.

Currently PVL *Staphylococcus aureus* infection is uncommon in the UK.

Infections caused by PVL strains of *S. aureus* normally cause cellulitis (inflammation of layers under the skin) and skin infections, such as:

- Abscesses
- Boils
- Carbuncles.

They can, however, on very rare occasions, lead to more severe infections, such as septic arthritis, blood poisoning or a severe, life-threatening form of pneumonia.

NB: Not all people with PVL *S. aureus* will develop an infection. When these occur they are usually associated with other risk factors such as overcrowding, poor hand hygiene, skin abrasions resulting from close contact sports such as wrestling or rugby, or sharing contaminated articles such as towels and razors.

Occasionally clusters of cases may occur. If you suspect this, please call the Health Protection Unit

MUMPS

Facts

Mumps is an acute, infectious illness caused by a virus.

- **Spread** Droplet or airborne spread from respiratory secretions, and by direct contact with the saliva of an infected person
- **Incubation period** 14-25 days
- **Period of communicability** From six to seven days before swelling of the glands and up to nine days after onset of illness. The most infectious period occurs between two days before symptoms and four days after the onset of illness
- **Exclusion** 5 days from onset of swelling

Symptoms

- Tenderness and swelling of the parotid salivary glands (glands above or below the jaw). The swelling may be on one or both sides of the face
- Headache
- Fever
- Generally feeling unwell
- Tenderness of the testicles in males (orchitis)

About one third of those infected will have no symptoms at all.

Treatment

There is no specific treatment for mumps. Treatment should be based on relieving symptoms. Painkillers and plenty of fluids can be used to reduce the pain and fever, and to replace fluid loss. Aspirin should NOT be used in children under the age of 16 as it is associated with Reye's syndrome (a neurological disorder).

Complications

Mumps is rarely fatal, but can cause meningo-encephalitis (inflammation of the brain and membranes covering the brain and spinal cord), and pancreatitis (inflammation of the pancreas) and hospitalisation may be necessary. Mumps can lead to viral meningitis in 10% of cases (usually without further complications). Rarely, orchitis can reduce fertility.

Advice and implications for contacts

None. Although MMR cannot protect against mumps once exposure has occurred, all children should be immunised against MMR as part of the childhood immunisation programme to protect them against measles and rubella.

Natural immunity/Vaccination

- Natural immunity develops after infection and is generally for life.
- Mumps can be prevented by the highly effective MMR (measles, mumps and rubella) immunisation. This is given in two doses, the first dose at 13 months and the second dose at age three.

NB: MMR vaccine can be given irrespective of a history of mumps, as it will offer protection against future exposure to the other two infections. There are no ill effects from vaccinating those who are already immune.

Do

- ✓ Do send the child home for the exclusion period
- ✓ Do advise parents to take child to see their GP
- ✓ Do encourage children who have not had MMR vaccine to complete a course of two doses

Do Not

- X Do not allow children under 16 years to have aspirin as it is associated with Reye's syndrome (a neurological disorder)

NOROVIRUS

Facts

Norovirus (also known as winter vomiting disease and Norwalk-like virus) is one of a group of viruses called Small Round Structured Viruses. Small round structured viruses spread easily and are the most common cause of outbreaks of gastro-enteritis in hospitals, schools, hotels, nursing homes and cruise ships.

- **Spread** Via the faecal oral route and by vomiting. Airborne virus particles from vomit can contaminate food, water, objects and surfaces, land directly on a person, or be inhaled or swallowed
- Food and water can become contaminated if handled by an infected person
- Food may already be contaminated (e.g. shellfish). If this food is eaten raw or insufficiently cooked, it can cause disease
- Water may already be contaminated if it is inadequately treated or contaminated post treatment. Swimming in contaminated water may also cause disease
- **Incubation period** Ranges from 4-77 hours, but commonly 15 - 50 hours
- **Period of communicability** Usually whilst symptomatic and for 48 hours **after** symptoms have resolved
- **Exclusion** Affected children and staff members should be excluded for as long as they are unwell and for 48 hours after symptoms of diarrhoea and/or vomiting have resolved

Symptoms

- Nausea and vomiting (often projectile)
- Diarrhoea
- Abdominal pain
- Headache
- Muscle pain
- Lethargy
- Fever

Norovirus usually causes a mild or moderate illness for about 12-60 hours, but can be severe in the very young, elderly or debilitated people.

Treatment

There is no specific treatment and with rest and plenty of fluids most people make a full recovery within one to two days.

Complications

Some people (usually the very young or elderly) may become dehydrated and unwell and require hospital treatment.

Advice and implications for contacts

Good hygiene is important in preventing others from becoming infected. This includes hand hygiene and environmental cleaning (see section on infection control, p.91). Contacts that do not have symptoms should not be excluded.

It is not advisable to have visitors to the school during an outbreak. If it is unavoidable, visitors should wash their hands thoroughly with soap and water both before and after visiting.

Natural immunity/Vaccination

- If immunity occurs after illness, it lasts only for a few months. There are many different types of norovirus (immunity to one type will not give immunity to another), so re-infection is possible.
- There is no vaccine available for norovirus.

Do

- ✓ Ensure children and staff are excluded from school for 48 hours after symptoms of diarrhoea and/or vomiting have resolved.
- ✓ Increase the frequency of cleaning in an outbreak situation
- ✓ Clear up faeces and vomit promptly and disinfect area appropriately.
- ✓ Notify the HPU as soon as possible.
- ✓ Encourage thorough hand washing at all times, especially after using the toilet and before handling food.

Do Not

- X Allow exposed food to be consumed.

RINGWORM

Facts

Ringworm, also known as tinea, is a fungal infection of the scalp, skin or nails.

- **Spread** By direct contact with the lesions of an infected person or animal. Also by indirect contact with environment or objects contaminated with hair or skin scales from infected people or animals. The fungi are sometimes present in soil
- **Incubation period**
- Ringworm of the scalp: 10-14 days
- Ringworm of the body: 4-10 days
- Ringworm of the foot and nails: unknown
- **Period of communicability** As long as the infection is present (can be months to years if left untreated). Spores and fungus may persist in the environment for long periods
- **Exclusion** Not usually required

Symptoms

The symptoms vary depending on the type of fungus and the site of infection:

Ringworm of the scalp

Starts as a small red area, which spreads, leaving a temporary, bald, scaly patch. Surrounding hairs become brittle and break easily. Lymph nodes in the back of the neck are often swollen and tender.

Ringworm of the body

Appears as flat, spreading, ring shaped lesions. The outside of the lesion is usually red. As the lesion develops, the central area often clears, leaving normal looking skin.

Ringworm of the foot (athlete's foot)

Affects the toes, toe webs and soles. Causes itching, scaling, cracking or blistering.

Ringworm of the nails

Causes nail thickening and discolouration. Nails can become brittle or chalky and easily broken. The adjacent skin is often infected.

Treatment

Topical agents or oral medication. Oral medication is required for scalp and sometimes for nail ringworm or for skin infections that persist.

Complications

Ringworm lesions may become infected by bacteria. Scarring and permanent hair loss may occur with severe scalp ringworm infection.

Advice and implications for contacts

Look for symptoms in household contacts, and obtain treatment if infected.

Natural immunity/Vaccination

- Re-infection with scalp ringworm is rare. Re-infection with ringworm of the foot and nail is common.
- There is no vaccine.

Do

- ✓ Ask affected individuals to go to their GP for diagnosis and treatment
- ✓ Launder clothing and towels on a hot wash
- ✓ Minimise close contact with others until treated
- ✓ Maintain good personal and environmental hygiene
- ✓ Continue treatment for as long as instructed, even if symptoms disappear

Do Not

- X Share clothing, towels, combs or personal items with infected people

RUBELLA (GERMAN MEASLES)

Facts

An infectious disease caused by the rubella virus. Rubella is very rarely a serious disease for a child but has serious consequences for women in the first 20 weeks of pregnancy.

- **Spread** By the droplet and airborne route, and by direct contact with the nose and throat secretions of infected people
- **Incubation period** 14-21 days
- **Period of communicability** From seven days before the rash appears, until at least four days after
- **Exclusion** Six days from onset of rash

Symptoms

- Mild fever
- Headache
- Conjunctivitis
- Sore throat and runny nose
- Swollen glands around the ears and back of head
- The rash appears a few days later and is usually transient, red, and mostly seen behind the ears and on the face and neck

Treatment

There is no specific treatment for rubella. Mild painkillers can be used to reduce any discomfort and fever. Aspirin should NOT be used in children under the age of 16 as it is associated with Reye's syndrome (a neurological disorder).

Complications

Rare, but include thrombocytopenia (a blood disorder), encephalitis (inflammation of the brain) and joint pains. Complications can occur if a pregnant woman develops rubella, as the baby may be affected.

Advice and implications for contacts

Pregnant women in contact with rubella should contact their GP and seek medical advice. Rubella is serious for pregnant women, because if they become infected, their unborn child may develop abnormalities. The risk is greatest in the first three months of pregnancy, but decreases as the pregnancy continues.

Natural immunity/Vaccination

- Natural infection usually gives life long protection.
- Rubella can be prevented by the highly effective MMR (measles, mumps and rubella) immunisation. This is given in two doses, the first dose at 13 months and the second dose at age three.

MMR vaccine can be given irrespective of a history of rubella, as it will offer protection against future exposure to the other two infections. There are no ill effects from vaccinating those who are already immune.

Do

- ✓ Advise parents to consult their GP
- ✓ Advise pregnant staff members to seek medical advice
- ✓ Notify the HPU
- ✓ Encourage children who have not had MMR vaccine to complete a course of two doses

Do Not

- X Allow the child back to school until exclusion period is completed

SCABIES

Facts

Scabies is an inflammatory disease caused by a mite *Sarcoptes scabiei*, which burrows under human skin. There are two types: the more common 'classical' scabies; and 'atypical' scabies, also known as 'Norwegian' or 'crusted' scabies.

- **Spread** By direct continuous skin to skin contact. Scabies is typically passed to those living in the same household, sexual partners or those that have prolonged skin to skin contact (5-10 minutes or more). Classical scabies is unlikely to be transmitted via clothing or linen. However, with atypical scabies, the large number of mites are more likely to be shed into the environment
- **Incubation period** None, but the rash and itching symptoms can take two to eight weeks to develop in people who have not had scabies. If a person has had scabies before, this reaction can appear in one to four days
- **Period of communicability** Scabies can be passed on until the mites and eggs are destroyed by treatment
- **Exclusion** Affected children/staff should be excluded until the first of the two treatments has been given

Symptoms

The rash and itch do not correspond to the location of the mites. They are caused by an allergic reaction to the mite, so only those with sensitivity to the mite will develop symptoms.

Classical scabies:

- Bilateral symmetrical rash anywhere on the body.
- Generalised, intense itching occurs, worsening at night and when the body is warm
- Visible discoloured, irregular lines (the mites' burrows) in finger webs, on wrists, elbows, feet, genitalia, buttocks, and under armpits

Atypical scabies: may have the same symptoms as classical scabies, but there are many more mites on the body. This causes scaling or crusting of the skin, with loose, flaky, scaly, thickened areas, containing burrows. Crusting may appear anywhere, but is commonly found on the chest, back, head and behind the ears. Atypical scabies is more likely to affect the elderly or those with a weakened immune system

Treatment

Scabies is treated with a lotion that should be thoroughly applied as per the instructions. The rash and itching can take up to three weeks to resolve after treatment. In classical scabies, the affected person requires two treatments, one week apart. Contacts (usually household members and sexual partners) who do not have symptoms require a single treatment. This is given at the same time as the affected person's second treatment. In atypical scabies, a dermatologist should advise on treatment.

Complications

Secondary infection can be caused by scratching.

Advice and Implications for Contacts

Simultaneous treatment is required for:

- Household contacts
- Sexual partners or people that share a bed
- Close contacts (those that have had more than five minutes direct, continuous skin to skin contact with the affected person)
- Breastfeeding and pregnant women can be treated for scabies - the GP will advise on appropriate treatments

Natural immunity/Vaccination

- Treatment or previous infestations will not prevent re-infestation, but fewer mites establish themselves on people who have previously had scabies.

Do

- ✓ Advise families/staff to consult their GP
- ✓ Ensure the child/staff member is excluded until treatment has started
- ✓ Wash clothing. Classical scabies is not usually spread by clothing or bedding. However, it is advisable to put clothing, bed linen and towels used by the person with scabies into a machine (60°C or above) after application of the scabies treatment and the correct treatment time has elapsed. If this high temperature is not possible, then items can be bagged, set aside for three days (in this time the mites will die) and then washed. For atypical scabies, launder/bag items as above and vacuum environment well

SCARLET FEVER

Facts

An illness caused by a reaction to a toxin (poison) produced by a bacterium called group A streptococcus. This bacterium is commonly found on the skin or in the throat.

- **Spread** Direct contact with infected people or carriers, or via respiratory droplets. Indirect transmission via objects or contaminated food can occur, but is rare. (Transmission via contaminated food, particularly milk and egg products, is possible)
- **Incubation period** One to four days
- **Period of communicability** From 24 -48 hours after the first dose of antibiotics
- **Exclusion** 24 hours after commencing antibiotics

Symptoms

A fine rash most often appearing on the neck, chest, folds of armpit, elbow, groin and inner thighs. The rash feels like sandpaper to touch, blanches (fades temporarily) with pressure and may be accompanied by any of the following:

- Flushing of the cheeks with paleness around the mouth
- Fever
- Sore throat
- Wound/skin infection
- Nausea and vomiting
- A whitish coating on the tongue, which may resemble a strawberry, with the normal bumps looking bigger
- During recovery, skin peeling may occur, especially on the finger and toes

Treatment

Treatment is with appropriate antibiotics.

Complications

- Acute glomerulonephritis (inflammation of the kidney)
- Acute rheumatic fever (affecting the joints, skin and heart)

These conditions are caused by an immune reaction to the bacteria and are rare in the developed world.

Advice and implications for contacts

Most people who come into contact with group A streptococcus remain well or develop mild throat or skin infections. Healthy people can get invasive group A streptococcal disease but it is very rare. The early symptoms of invasive disease are:

- High fever
- Severe muscle aches
- Muscle tenderness
- Redness at the site of a wound

If any of these symptoms develop, **seek medical advice immediately**. Tell the doctor that you have been in contact with someone recently diagnosed with group A streptococcal disease and describe your symptoms.

Natural immunity/Vaccination

- There are three types of the toxin; immunity against the type that caused the rash develops after infection and is usually permanent. Previous infection with scarlet fever does not provide immunity to other types of streptococcal infection, but second attacks are rare.
- There is no vaccine.

Do

- ✓ Advise that affected people are seen by a GP
- ✓ Encourage good personal hygiene for case and contacts
- ✓ Ensure that articles soiled by throat and nose discharges are disposed of immediately and hands are thoroughly washed after contact
- ✓ Ensure that cases are excluded for 24 hours after commencing antibiotics

SHINGLES

Facts

Shingles is caused by *Herpes zoster*, a form of the virus that causes chicken pox. The condition can affect children, but is more common in older people.

- **Spread** Although a person cannot catch shingles directly, contact with fluid from the vesicles could cause chicken pox in a person who is not immune
- **Incubation period** Following infection, the chickenpox virus remains in the nervous system for life and can be reactivated, usually years later, causing shingles
- **Period of communicability** Shingles is much less infectious than chicken pox. People with shingles may be a source of infection for a week after the appearance of the rash but usually only if the vesicles are exposed
- **Exclusion** Only if the rash is weeping and cannot be covered

Symptoms

- A tingling or burning sensation or itchiness of the skin, which can be present for up to one week before the rash starts
- Localised pain either before or after the rash develops
- A band of raised, fluid-filled blisters (called vesicles) on the skin over a nerve pathway. The blisters develop on one side of the body only, usually on the chest, face, or abdomen

Treatment

Antiviral medications and pain relief

Complications

The most common complication of shingles is post-herpetic neuralgia. In this condition the pain persists long after the rash has healed, often for months or years.

Advice and implications for contacts

Those with a weakened immune system (for example, people on cancer treatment, on immunosuppressant drugs for transplants, or with HIV infection), newborn babies and pregnant women may be at risk of developing severe

chicken pox if they do not have immunity and are exposed to certain types of shingles. These groups should seek medical attention as soon as possible.

Natural immunity/Vaccination

- There is no natural immunity to shingles and the condition can recur.
- There is no specific vaccination for shingles.

Do

- ✓ Make sure that the rash (vesicles) is covered.
- ✓ Exclude the child from activities which may result in the rash being uncovered, such as swimming
- ✓ Ensure that neither the child, nor anybody else touches the rash. If this does occur, wash hands thoroughly
- ✓ Ensure that pregnant women, babies under 4 weeks old, and adults or children with a weak immune system who have been in contact with a case of shingles and who have no history of chickenpox contact their GP promptly

Do Not

- X Exclude the child unless the rash is weeping and cannot be covered

THREADWORM

Facts

Threadworms (*Enterobius vermicularis*), also known as pinworms, are the most common helminth (worm) affecting humans in the UK. The female worms lay eggs on the skin around the anus and these are transferred to the mouth on fingers after scratching and are ingested. Larvae hatch from the eggs and develop into worms in the small intestine. They are about 1cm in length and resemble white cotton thread.

- **Spread** Infectious eggs are spread to others directly via fingers, or indirectly on bedding, clothing, food, or other contaminated items. The eggs can live outside the body for around 2 weeks
- **Incubation Period** The life cycles takes 2-6 weeks to be completed
- **Period of Communicability** Possibly indefinite if untreated
- **Exclusion** None

Symptoms

- Itching of the skin around the anus caused by the female worms laying eggs there.

Treatment

Oral medicines usually provide effective treatment but their use must be combined with good personal and environmental hygiene (particularly hand washing) to break the cycle of re-infection. Hygiene only is preferred for pregnant and breast feeding women, or for children less than 3 months old.

Complications

The worms are usually harmless but can cause itching, sleep disturbance, irritability and, rarely, bed-wetting. Scratching of the skin around the anus can cause inflammation and there is a risk of secondary infection. Occasionally, there is invasion of the vaginal area. Other rare complications, such as appendicitis, can occur due to the worms migrating up through the bowel.

Advice and implications for contacts

All household contacts of a person with threadworm should be examined.

Natural immunity/Vaccination

- There is no natural immunity and re-infection is common.
- There is no vaccine.

Do

- ✓ Encourage staff and children to practice good personal hygiene (especially careful hand washing) AT ALL TIMES
- ✓ Encourage frequent changes of underclothes, night clothes and bed sheets and daily morning baths (or preferably showers).
- ✓ Advise parents to take their child to the GP for immediate treatment.
- ✓ Discourage scratching of the anal area.
- ✓ Maintain high standards of environmental hygiene

Do Not

- X Exclude the child from school.

TUBERCULOSIS

Facts

Tuberculosis (TB) is a bacterial infection caused by *Mycobacterium tuberculosis*, which can affect any part of the body. This section will focus on pulmonary TB (TB of the lungs), as this is where the disease most commonly occurs. It is also the only type of TB that is infectious to others.

- **Spread** By droplet spread when an infected person coughs or sneezes, although not everyone with pulmonary TB is infectious to others. The infection is difficult to catch and close, prolonged contact is needed for transmission to occur - TB is very rarely passed, from child to child in the school environment. Most people who breathe in the TB bacteria do not develop the disease because their immune system fights the bacteria
- **Incubation period** Varies from weeks to years, and depends on a number of factors, such as the strength of a person's immune system. Some people develop symptoms and become infectious shortly after being exposed to the bacteria. Others may harbour TB for many years before they develop symptoms and are infectious to others
- **Period of communicability** Only pulmonary TB can be passed from person to person. After 2 weeks of treatment, most people are no longer infectious. If TB is not treated, a person may be infectious intermittently for years
- **Exclusion** Most people are not infectious from 14 days after starting treatment. Seek advice from the local HPU

Symptoms

Symptoms of pulmonary TB may include some or all of the following:

- Persistent cough
- Production of sputum (phlegm), sometimes containing blood
- High fever
- Sweating (especially at night)
- Swollen glands
- Weight loss
- Tiredness

Treatment

Treatment consists of a combination of three or four different medicines and usually continues for six months for pulmonary TB. Treatment should always be given through a hospital clinic.

Complications

If TB is not diagnosed or treated early, the infection may spread to involve the lining of the brain, the blood, and other organs. If the anti-TB drugs are not taken every day for the correct period, the bacteria may develop resistance to the medication and become more difficult to treat.

Advice and implications for contacts

As TB is spread through airborne droplets, it is usually 'close contacts', typically household members, who are most likely to be at risk of infection. Sometimes it is necessary to test other pupils and staff in the school. If a child has TB an adult family member is usually the source of infection. The HPU will advise the school if screening within the school is needed and a meeting at the school with the school nurse, local TB nurse and HPU may be needed.

Infection in pregnancy should not affect the unborn child, and anti-TB medicine is safe to take.

Natural immunity/Vaccination

- Infection with TB does not provide immunity.
- BCG (Bacillus Calmette-Guérin) vaccine is now only recommended for infants living in areas with a high incidence of TB or with parents/grandparents from a high incidence country. Older children with a parent or grandparent born in a high incidence country will be offered BCG, often through a school programme. This programme has replaced the schools TB immunisations programme and targets those at most risk. For more information see www.immunisation.nhs.uk.

Do

- ✓ Be aware of the symptoms of TB
- ✓ Encourage anyone with symptoms suggestive of TB to visit their GP
- ✓ Consult the school nurse if you think the child is not taking their anti-TB medicine

Do Not

- X** Exclude the child once they have completed 14 days of treatment (or the exclusion period advised by the HPU).

TYPHOID AND PARATYPHOID

Facts

Typhoid and paratyphoid infections are caused by the bacteria *Salmonella* Typhi and *Salmonella* Paratyphi respectively. Typhoid is usually a severe illness, while paratyphoid, although similar, is much milder.

- **Spread** The disease is almost exclusively acquired abroad through the ingestion of food and water contaminated by the faeces or urine of infected people and carriers. This includes eating food washed in water contaminated by sewage and shellfish taken from sewage contaminated beds. Person to person spread via the faecal oral route can also occur, but this is less likely.
- **Incubation period** Usually one to three weeks but can be as long as two months.
- **Period of communicability** As long as the bacteria are present in the faeces/urine – usually from the first week and throughout recovery. The bacteria clear in most people. However, up to 10% of people excrete the bacteria for up to three months after being infected and up to 5% may become chronic carriers.
- **Exclusion** All children should be excluded for as long as they are unwell and for 48 hours after symptoms of diarrhoea and vomiting have resolved. In addition, children who attend pre-school groups or nurseries, or children who have difficulty maintaining personal or hand hygiene, may need excluding until they have a negative stool sample(s). Food handlers and staff working with vulnerable people may also require negative stool samples before returning to work. The HPU or Environmental Health can also advise in all these situations.

Symptoms

- Fever and sweating
- Headache
- Constipation
- Loss of appetite
- Cough
- Vomiting, diarrhoea and blood in the faeces
- Abdominal tenderness
- Delirium and confusion
- Pale red spots (rose spots) scattered over trunk are seen in around one in five cases.

Treatment

Antibiotics may be prescribed for some people.

Complications

- Gastrointestinal bleeding and perforation
- Kidney complications; kidney failure may occur in severe cases
- Osteomyelitis (inflammation of the bone)
- Rare complications include meningitis and pneumonia.

Advice and implications for contacts

Contacts of people diagnosed with typhoid and paratyphoid who are food handlers, healthcare or social care workers, children attending pre-school/nursery or those who have difficulty maintaining personal/hand hygiene may need to be screened and excluded until they have negative stool samples. Please seek advice from the HPU or Environmental Health.

Natural Immunity / Vaccination

- Infection with *Salmonella* Typhi or Paratyphi does not provide immunity
- Vaccination is recommended for people travelling to endemic countries

Do

- ✓ Encourage staff and children to always practice good personal hygiene
- ✓ Encourage staff and children to wash their hands especially after using the toilet and before eating or preparing food. Young children may need supervision to ensure that adequate hand washing takes place
- ✓ Always ensure high standards of environmental cleaning (especially frequently touched areas, e.g. flush handles, toilet seats, taps, toilet door handles). Please refer to the infection control section on cleaning
- ✓ Use liquid soap and disposable paper towels for hand washing
- ✓ Report immediately to the HPU
- ✓ Observe exclusion period – whilst symptomatic and for 48 hours after symptoms have resolved, or longer if advised by the HPU/EHO

WARTS/VERRUCA

Facts

Warts are small, rough growths that develop on the skin and are caused by the human papilloma virus (HPV). They are common in childhood; about 5% of children and adolescents in the UK have warts.

- **Spread** Usually by direct skin-to-skin contact, or indirectly via contact with contaminated floors or surfaces, for example in swimming pools or communal washing areas. Infection is more likely to occur if the skin is damaged, or wet. If a wart is scratched or knocked, it can bleed, making it easier for the virus to spread to another part of the body
- **Incubation** 1 month to 2 years
- **Period of communicability** As long as the warts are present
- **Exclusion** None

Symptoms

Warts are rough lumps on the skin (1mm to over 1cm). They can appear anywhere but often appear on the hands and feet and look different depending on where they are on the body and how thick the skin is. They can be:

- Firm and raised with a rough surface that looks a little like a cauliflower (common on knuckles, knees and fingers)
- Round, flat topped and yellowish (common backs of hands, especially around the nails and fingers)
- Long and slender (common on eyelids, armpits and neck)
- Verrucae are warts on the soles of the feet. These grow inwards and can be painful. They often have a black dot in the centre

Treatment

Most warts disappear without treatment, although this may take up to 2 years. There are several treatment options including gels and creams from pharmacies; chemical treatments on prescription; cryotherapy (using liquid nitrogen) at GP/skin clinics; surgery to cut the wart out of the skin; laser treatment or electrocautery (burning).

Complications

People with a weak immune system are more likely to develop a large number of treatment resistant warts.

Advice and implications for contacts

None

Natural immunity / Vaccination

- It is thought that people do develop immunity to wart viruses but that this immunity is short-lived.
- There is no vaccine against the types of HPV that causes warts.

Do

- ✓ Avoid contact with warts or verrucae on another person
- ✓ Maintain high standards of environmental hygiene in swimming pools and other communal areas
- ✓ Ensure verrucae are covered in swimming pools, gymnasiums and changing rooms
- ✓ Encourage children to check their feet for signs of verrucae
- ✓ See a GP if a wart or verruca bleeds, changes in appearance or spreads

Do Not

- X Exclude children from school
- X Scratch or pick warts - this may spread the infection
- X Share towels, flannels or other personal items with someone who has a wart
- X Share socks or shoes with anyone who has a verruca

WHOOPIING COUGH (PERTUSSIS)

Facts

Whooping cough, also known as pertussis, is an acute respiratory infection caused by *Bordetella pertussis* bacteria. The infection is very contagious and can be serious, particularly in the very young.

- **Spread** Primarily by direct contact with respiratory secretions of infected persons, probably by droplet
- **Incubation period** 7-10 days, occasionally up to 3 weeks
- **Period of communicability** From the start of symptoms, until 5 days after antibiotics have started (longer if antibiotics are not given early). If untreated, whooping cough remains infectious for approximately 3 weeks after onset of the coughing
- **Exclusion** 5 days from starting antibiotic treatment. If no antibiotics are given, exclude for 21 days after paroxysmal coughing starts

Symptoms

- Nasal congestion
- Runny nose
- Sneezing
- Red and watery eyes
- Mild fever
- Dry cough

After about a week, the cough becomes paroxysmal (uncontrollable), with the bouts of violent coughing ending with a whooping sound, or vomiting. Coughing spasms may be followed by a temporary pause in breathing. The cough often lasts for two to three months.

Treatment

Antibiotics.

Complications

- Pneumonia
- Weight loss
- Seizures
- Blindness
- Brain damage

Severe complications and deaths occur most commonly in babies under 6 months of age. Other complications include bleeding affecting the eyes and nose, facial swelling, ulceration of the tongue and ear inflammation.

Implications for contacts

The following people are more susceptible to whooping cough:

- Unimmunised or partially immunised children or adults
- Those who have a chronic illnesses, such as asthma or heart disease
- People with a weak immune system

If whooping cough is suspected, unvaccinated or partially vaccinated contacts should be immunised. In some circumstances, close contacts may need antibiotics - the HPU will advise when this is necessary.

Natural immunity/Vaccination

- Natural infection usually gives prolonged immunity, although second attacks occasionally occur as there are different types of the bacteria.
- Immunisation is highly effective and is given at age 2, 3, 4 months with a booster at 3-5 years.

Do

- ✓ Send the child home and advise parents to take affected children to see their GP
- ✓ Allow the child to return to school after exclusion period even if they are still coughing
- ✓ Notify the HPU

SCHOOL HEALTH MATTERS

SECTION THREE

Infection Control

Infection Control Principles

Infection Control (IC) refers to the different methods and strategies used to:

- Reduce or remove the source of infection
- Reduce or prevent the spread of infection

This can be achieved in part by the use of standard infection control precautions. Examples are as follows:

- Hand hygiene
- Protective clothing
- Safe disposal of waste
- Safe handling of sharp instruments
- Food hygiene
- Cleaning, disinfection and sterilisation
- Correct management of blood and body fluids
- Correct handling and decontamination of laundry

If staff work with children who have devices such as intravenous lines, catheters or feeding tubes, standard infection control precautions must always be followed. Further advice can be obtained from the school nurse or specialist nurses (e.g. continence, enteral feeding).

All facilities providing care for children must have written policies and procedures for infection prevention and control.

It is important to ensure that staff are aware of these policies and have adequate training.

PREVENTION OF BLOOD BORNE INFECTION IN SCHOOLS

Facts

Some infections can be transmitted through significant exposure to others' blood or body fluids. This exposure can occur by a variety of ways, for example:

- if skin is pierced with a sharp object contaminated with another person's blood or body fluid
- via bites, and splashes of blood and body fluids to the eyes, nose, mouth or broken skin.

The three most important infections transmitted in this way are hepatitis B, hepatitis C and HIV, all of which can cause severe or fatal illnesses. Information on these blood borne viruses can be found in section one.

Individuals may be unaware of their diagnosis or have no symptoms. It is, therefore, important that ALL blood and body fluids are treated as potentially infectious and that standard infection control precautions are followed when dealing with blood and body fluids in all circumstances.

Additional precautions are not usually necessary when dealing with children who are known to have such infections and confidentiality must be maintained at all times.

There is no evidence that blood borne infections can be transmitted if blood or body fluids fall on intact skin, or if an infected person coughs or sneezes near others. Similarly, skin contact, shared use of facilities such as toilets, water fountains or telephones, sharing glasses, plates and cutlery, or swimming in a pool do not pose any risk of these infections.

Do

- ✓ Wear protective clothing when dealing with blood and body fluids
- ✓ Cover all cuts and grazes with waterproof dressings
- ✓ Ensure that all clinical waste, including sanitary towels, is disposed of properly. (See Clinical Waste section)
- ✓ Ensure that razors, toothbrushes or other implements that could become contaminated with blood or body fluids are not shared.
- ✓ Ensure that syringes, lancets and needles are single use and are disposed of properly (see Section on Sharps Injuries). Never re-sheath or re-use needles, lancets or other sharps
- ✓ Ensure that guidance on sharps injuries and spillages is followed.
- ✓ Include children with hepatitis B, hepatitis C or HIV infections in all school activities. No precautions, other than standard infection control precautions, are necessary in relation to these children.
- ✓ Ensure that the need for hepatitis B vaccination for staff and children (especially in residential settings or in severe learning disability schools/centres) is assessed at a local level.
- ✓ Ensure that in situations where blood or other body fluids may be spilt, or where sharps are handled that open footwear is not worn.

Do not

- X Take short cuts or ignore procedures.

BLOOD AND BODY FLUID SPILLAGES

Facts

It is important that spillages of blood, faeces, vomit or other body fluids are dealt with immediately, as they can pose a risk of transmission of infection and disease. Head teachers should ensure that protocols are in place to deal with these spillages immediately and appropriately.

If a spillage occurs:

- Cordon off the area where the spillage has occurred
- Cover cuts and abrasions on any areas of the skin with a waterproof dressing
- Use personal protective equipment (PPE - see cleaning section) to protect body and clothing. Disposable gloves and apron must be worn. Facemasks and eye protection should be worn if there is a risk of blood/body fluid splashes to the face or facial contact with contaminated debris
- Carefully dispose of any broken glass or sharp instruments, using a disposable scoop (or cardboard), without touching them directly with hands. Discard into a sharps container (See waste section)
- Use disposable equipment when cleaning spillages and dispose of as clinical waste, re-usable cloths and mops should **not** be used
- Discard items that cannot be cleaned or decontaminated
- Wash hands after removing PPE and dry thoroughly

The Control of Substances Hazardous to Health Regulations 2002 (COSHH) must be adhered to for all hazardous substances used at work – including bleach and other chemicals (www.hse.gov.uk/coshh). PPE (e.g. gloves and aprons) should be worn when handling bleach. Contact with skin, eyes and mouth should be avoided. Bleach should be used in a well ventilated area and not used on urine, carpets, soft furnishings, or metal or wooden surfaces.

A suitable disinfectant must be used to kill the viruses and bacteria that may be present in blood and fluid spillages, Household bleach (hypochlorite) can be used at the correct concentration or other chlorine-releasing agents (e.g. in the form of granules) to achieve this. As with other chemicals, bleach should be stored, handled and used in accordance with the manufacturer's instructions. Product data sheets and instructions should be accessible, with details of measures required in the event of accidental ingestion, inhalation or contact with skin or eyes. All chemicals must be stored in their original containers, in a cool, dry, well-ventilated place that is lockable and inaccessible to children/visitors/public.

Procedure to follow for blood or blood stained body fluid spills:

- Wear disposable gloves and disposable apron, and face protection if required
- Place disposable paper towels on blood spillage to mop up excess and then dispose in a clinical waste bag
- Pour bleach solution (10,000 parts per million or a one in ten dilution of household bleach) on top of spillage area and leave for at least two minutes. Please refer to the cleaning section regarding the use of bleach
- Alternatively, use chlorine granules found in spillage kits or another product proven to kill blood borne viruses and use as directed by the manufacturers
- Use paper towels to wipe up the bleach and spillage and then discard into clinical waste bag
- Using disposable paper towels wash the area with water and detergent and dry thoroughly. Discard paper towels into clinical waste bag
- Discard gloves and apron and other protective clothing used into a clinical waste bag
- Mops used to clean up body fluids should be cleaned in a sink used solely for cleaning equipment (not a kitchen sink), rinsed with a disinfectant solution and dried
- Wash and dry hands thoroughly
- Record and report the incident

If the spill is on soft furnishings or carpets, bleach should not be used. Detergent and water should be used to clean the spill and dry as soon as possible. Steam

cleaning the area as soon as possible is also recommended as microorganisms may still be present.

If blood spillage has already dried:

- Apply chlorine granules/ bleach solution to a wet paper towel & clean spillage area
- Discard waste as above

Blood spills on clothing:

- Wear gloves to handle soiled clothing
- Remove affected clothing and put in a plastic bag for parent/carer/member of staff to wash at home
- If able to wash on site, wash clothes as soon as possible in a cool wash, followed by the hottest wash cycle that the garments will stand
- Always use gloves to remove soiled clothing from bag
- Do not soak or manually rinse garments first
- Discard the bag in a yellow clinical waste bag
- If children's clothing is soiled, place directly and tie/seal plastic bag for parents to collect

Body fluid spillages

- Wear disposable gloves and disposable apron, and facial protection if required
- Remove any spills (e.g. faeces, vomit) immediately from the area, using paper towels. Using disposable cloths/paper towels, clean and disinfect the surrounding area using hot water and detergent, then dry. Please note that certain disinfectants may damage soft furnishings and carpet and therefore should not be used on these surfaces
- If necessary, use a suitable disinfectant
- Discard all waste (e.g. used cloths, paper towels, gloves and aprons) as clinical waste
- Wash and dry hands thoroughly

Do Not

- X Use reusable cloths or mops to clean up spillages or blood or body fluids

BITES

Facts

Human bites resulting in puncture or breaking of the skin are potential sources of exposure to blood borne infections. (See Sharps injuries and other potential exposures to blood borne viruses (p.98).

Animal bites can also transmit infection.

If the bite has punctured the skin then there can be a risk of infection from bacteria, such as *Staphylococcus aureus* and viruses such as hepatitis B, hepatitis C and HIV. To reduce the risk of infection, treatment may be needed for the biter and recipient such as antibiotics or tetanus immunisations. Medical attention and advice must be sought for all bites. There is a risk of a blood borne virus, such as hepatitis B or HIV, being transmitted if the skin is broken and the risk is higher if there is blood in the biter's saliva.

Do

- ✓ Clean the wound thoroughly under copious amounts of running water and gently encourage bleeding
- ✓ Cover with a waterproof dressing
- ✓ Seek medical attention without delay if the skin is broken
- ✓ Refer to the following sections on prevention of blood borne infections in schools, especially the information on sharps injuries

SHARPS INJURIES AND OTHER POTENTIAL EXPOSURES TO BLOOD BORNE VIRUSES

Facts

Any break in the skin caused by a sharp object contaminated with blood or body fluids, bites and splashes of blood or body fluids into eyes, nose, mouth or broken skin are all a potential source of exposure to blood borne viruses (BBVs), such as Hepatitis B or HIV.

There is no evidence that blood borne viruses can be transmitted by blood contamination of intact skin.

The risk of acquiring BBVs in schools or through occupational exposure is low. However, exposure to known or suspected BBV infected material is always stressful and risks should be minimised. As not all people with BBVs will be diagnosed, all blood and body fluids should be regarded as potentially infectious and standard precautions taken.

Please refer to section one for more information on hepatitis B, hepatitis C and HIV and to the guidance on prevention of blood borne infections in this section.

Do

- ✓ Ensure that all used syringes, needles, lancets and sharp objects are discarded in a sharps container immediately, at the point of use
- ✓ Ensure that sharps containers are labelled and disposed of correctly
- ✓ Avoid sharp injuries by careful handling and management of any sharp items

- ✓ Follow the proper procedure if a needle stick injury or other exposure does occur (see flow chart p.101)

Do not

- X Touch any discarded syringes or needles. Instead cordon off the area and telephone your local council to arrange safe removal
- X Attempt to retrieve discarded syringes or other contaminated sharp objects which are not in view. Do not feel with your hands for needles and sharp objects
- X Attempt to replace a needle's protective cover (sheath). Re-sheathing is the most common cause of needle stick injuries
- X Pass an exposed sharp to another person
- X Try to manipulate/remove a needle/other sharp from its holding implement with your hands. Utilise blade removal devices
- X Overfill sharps containers

A sharp injury/contamination incident includes:

- Inoculation of blood by a needle or other 'sharp'
- Contamination of broken skin with blood
- Blood splashes to mucous membrane e.g. eyes or mouth
- Swallowing a person's blood e.g. after mouth to mouth resuscitation
- Contamination where clothes have been soaked by blood
- Human bites that puncture the skin

What should I do in the event of a sharps injury/contamination event?

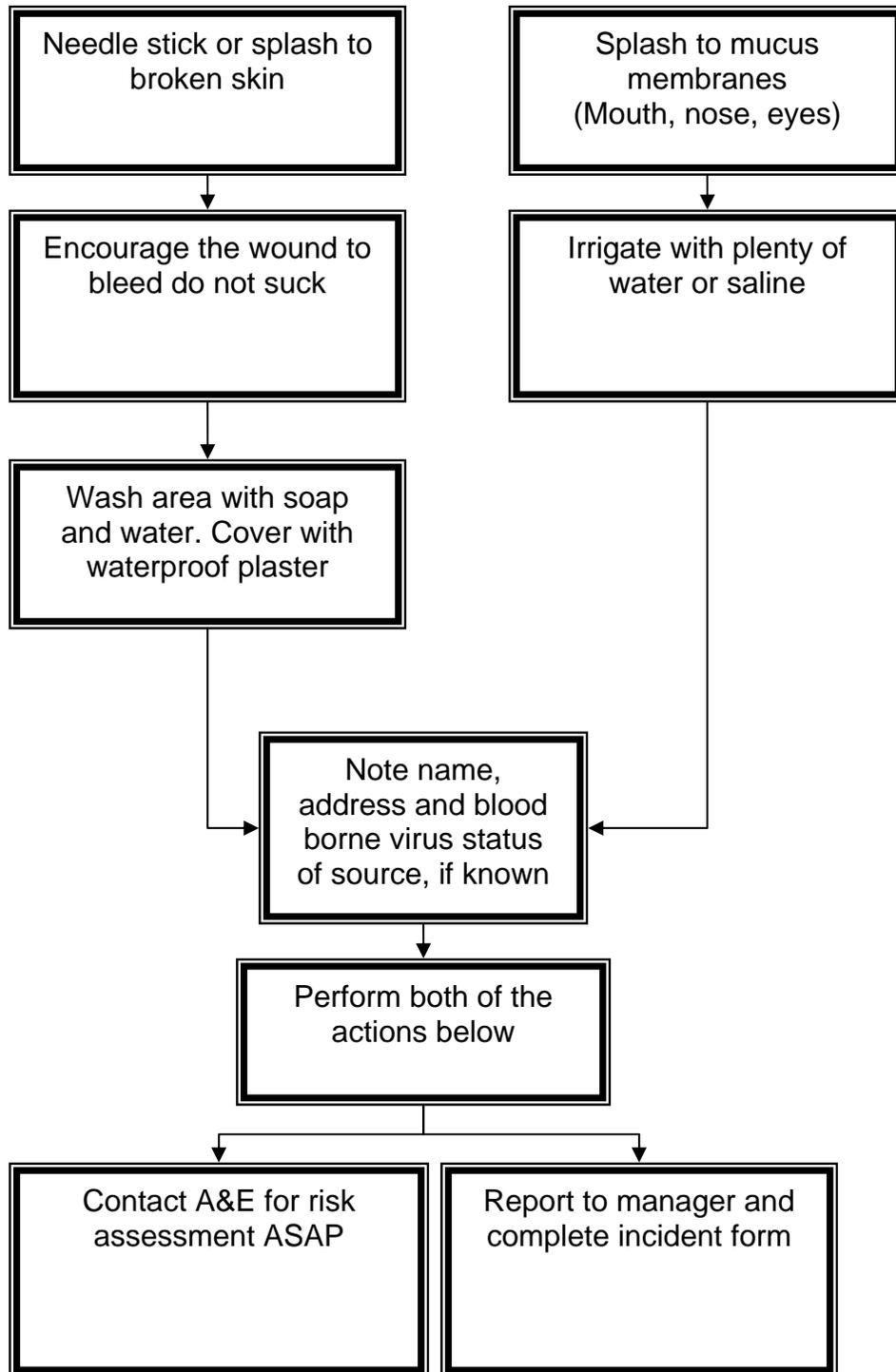
- Immediately stop what you are doing, if it is safe to do so, and attend the injury
- Wash under running water and encourage bleeding of the wound using gentle pressure - but do not suck
- Dry and apply a waterproof dressing if necessary.
- Irrigate eye or mouth splashes with copious amounts of saline or cold water
- If body fluids get into your mouth, do not swallow - rinse out several times with cold water.

After carrying out the above steps, report incident to the manager and **ATTEND A&E IMMEDIATELY** for risk assessment and medical advice

When able:

- Report the incident to your occupational health department, Health Protection Unit and your manager.
- Complete an accident form
- Seek help to initiate an investigation into the cause of the incident

Risk assessment and management following exposure to blood/body fluids



CLEANING

Facts

A clean dry environment is vital to prevent the spread of infection. A written cleaning schedule clearly stating what to clean, when to clean and how to clean it, is essential and should include guidelines for toilets, sinks, toys, equipment and general the environment. A record should be kept identifying the date and name of the person who completed the cleaning.

Shared equipment

Shared equipment is a potential source of infection. Objects, such as high chairs or toys can become contaminated when handled, chewed or sucked by children and are of particular significance. Toys and dressing up clothes should be regularly washed in hot water and detergent or in the washing machine. Soft toys are not recommended for schools as they can become quickly contaminated and are not easily cleaned.

Toilets

Toilet seats, flush handles and toilet bowls must be cleaned every day and when visibly contaminated. Other surfaces, such as door handles and taps, which may have been touched by contaminated hands should also be cleaned daily. Regular checks should be made on toilet areas so that any accidental spillage or contamination can be dealt with promptly.

Recommended cleaning agents for the environment

Detergent and warm water is adequate for cleaning most surfaces and furniture, including toilet areas. Cream cleanser should be used for dirt that is difficult to remove.

A risk assessment should always be undertaken and use of gloves and plastic apron may be advisable. Please note that there are specific regulations regarding hygiene in the kitchen. For further advice please contact the local Environmental Health Department.

Disinfectants should not be used routinely for environmental cleaning. In specific circumstances, however such as during an outbreak of diarrhoea and vomiting, or other infection they may be required. For example, if the cause of the outbreak is due to a viral infection then the use of good quality bleach (Hypochlorite) may be required.

The following table summarises the above information.

Recommended Cleaning Agents for Environmental Cleaning	
<ul style="list-style-type: none">• Disinfectant spray disinfectants	<ul style="list-style-type: none">• Used for cleaning surfaces in between use
<ul style="list-style-type: none">• Bleach (Hypochlorite)	<ul style="list-style-type: none">• Used to disinfect the areas and equipment above (after they have been cleaned with warm water and detergent) to a dilution of 1 in 100 of household bleach. Available chlorine 1,000 parts per million (ppm).
<ul style="list-style-type: none">• Detergent and hot water	<ul style="list-style-type: none">• Used for cleaning surfaces and equipment. Please note: disinfection with hypochlorite should follow cleaning.

Cleaning equipment

To avoid the transfer of microorganisms from one area to another, separate cleaning equipment should be used for toilets, hand wash areas and non-toilet areas. A standard colour coding system is a useful way of preventing cross contamination from the dirtiest areas to the cleanest.

The British Institute of Cleaning and Science has an appropriate coding system that can be adopted:



Red for toilets and wash room surfaces



Yellow for wash hand basins and sinks



Blue for general areas



Green for kitchens

All equipment, (see below), used for cleaning should follow the national colour coding system, including mops, buckets, gloves and disposable cleaning cloths.

Cloths

Clean, disposable cloths should be made from non-shedding fibre and used within a colour-coded system. They should be thrown away at the end of each day. If non-disposable cloths are used they should be disinfected at the end of each day.

Mops

Mops with heads that can be removed should be washed at the end of each day at high temperatures in the washing machine. Otherwise, clean with hot water and detergent, rinse with disinfectant and left to dry with the head facing upwards or hanging. Never leave a mop in a bucket of water. Mops used in toilet areas must not be used elsewhere.

Buckets

Buckets should be rinsed out with hot water after use and left to dry. Do not leave water in a bucket as this can quickly become contaminated and if used later, can be a potential source of infection.

Personal protective equipment

Gloves

General-purpose rubber gloves should be worn for environmental cleaning tasks and when cleaning potties or toilet areas. Whilst still on hands gloves should be thoroughly washed with ordinary soap and water and left to dry. Damaged gloves should be replaced. Always remember to wash your hands after removing the gloves.

Disposable plastic aprons

Disposable plastic aprons/or cleaning overalls must be worn when cleaning. Remove and discard once the procedure is complete, then wash hands. Cleaning overalls must be laundered regularly.

Single-use/disposable gloves

Gloves should be used when contact with blood or body fluids or non-intact skin is anticipated. Sensitivity to natural rubber latex in staff and other personnel must be documented, and alternatives must be available, e.g. nitrile gloves. Washing disposable gloves rather than changing them is not safe and therefore not recommended. Hands should always be washed following the removal of gloves.

FOOD HANDLERS, ILLNESS AND EXCLUSIONS

Facts

For the purposes of schools and other child care settings the term food handler refers to any person who prepares, handles or serves food, whether unwrapped or packaged.

Food handlers must notify their line manager immediately if they are suffering from, or are a carrier of, any disease (or symptoms) likely to be transmitted through food. These include:

- Diarrhoea and/or vomiting
- Typhoid or paratyphoid
- Salmonella infection
- Dysentery
- Staphylococcal infection

Any person suffering from the above must not be permitted to handle food or enter any food handling area in any capacity if there is any likelihood of direct or indirect contamination.

In addition, it is good practice to notify the appropriate Environmental Health Department who would liaise with the Health Protection Unit for further follow up.

No one should return to work following diarrhoea and/or vomiting, for forty-eight hours after the symptoms have resolved (48 hour rule). For certain conditions, such as typhoid and *E.coli* the exclusion period will be much longer and further stool specimens should be taken and proven to be negative before clearance is given to return to work. These situations will be coordinated by the Health Protection Unit and Environmental Health Department.

If there are any queries regarding food hygiene or food handling, please contact your local Environmental Health Department (see useful contact numbers).

HAND WASHING

Facts

Hand washing is the single most important means of controlling the spread of infection. Hands are the most common way in which microorganisms, particularly bacteria are transported.

Failure to wash and dry hands thoroughly before and/or after certain activities, such as after using the toilet and before preparing and eating food, provides the means by which many infections spread. This can potentially lead to serious consequences.

Soap dispensers

Liquid soap is recommended as bar soap can become contaminated with microorganisms. Soap dispensers should be wall mounted, maintained regularly and have individual replacement cartridges that are discarded when empty.

Drying hands

Disposable paper towels are recommended for drying hands, as reusable damp towels can harbour microorganisms and re-contaminate hands. Drying hands thoroughly after washing is important as wet surfaces transfer microorganisms more effectively than dry ones and it is thought that paper towels rub away more organisms that are loosely attached to hands. Ineffective drying can also lead to skin damage.

Facilities

Facilities in schools should include:

- Dedicated wash hand basins (not sinks used for food preparation)
- Adequate supplies of liquid soap and paper towels,
- Comfortable water temperature
- Adequate numbers of sinks at appropriate heights

Method

Thorough hand washing with soap and water is sufficient to remove organisms for most routine daily activities. Hands should be washed using the following method:

- Wet hands under tepid running water
- Apply a liquid soap
- Ensure the soap comes into contact with **all** the surfaces of the hand
- Rub hands together vigorously for a **minimum** of 10-15 seconds, paying particular attention to tips of fingers, thumbs, and between fingers.
- Rinse hands thoroughly under running water
- Dry hands thoroughly with good quality disposable paper towels
- Turn the tap off. Try to avoid touching the tap directly, as there is a risk of recontamination

Points to remember:

- Communal nail brushes, cloths or bowls of standing water should not be used to clean hands, as they can become contaminated and spread infection
- Waste bins should be foot operated so that hands do not become contaminated when disposing of paper towels
- Children may not know how to wash their hands and may need to be shown
- Nails should be kept short and free of nail polish in all staff involved in food preparation
- Cuts and abrasions should be covered with waterproof dressings.
- Ideally, all wrist and hand jewellery should be removed

Situations where hand washing is recommended:

- Whenever visibly dirty
- After using the toilet
- After touching any potentially contaminated surface (e.g. drains, cleaning cloths/equipment, waste)
- After sneezing/blowing nose
- After touching animals and/or their cages, feeding utensils, toys
- After contact with blood/body fluids (e.g. faeces, vomit)
- Before handling food/drink and after handling raw food (e.g. chicken)
- Before and after toileting/handling potties
- Before and after handling any wounds/dressings
- Before handling sterilised feeding equipment or preparing a feed
- Before giving or applying any medication, or applying contact lenses
- After removing gloves and/or aprons

As a minimum, hands must be washed before an activity that could introduce an infection to a susceptible site or person, and after an activity that could result in the hands becoming contaminated by microorganisms such as contact with urine or faeces.

Children may need to be supervised when hand washing to ensure it is effective, especially in the event of an outbreak of infectious disease.

LAUNDRY

Facts

Linens and clothing can potentially be sources of cross-infection. Laundering reduces contamination and the risk of infection. The laundry operator should always use disposable gloves and aprons when dealing with linen and hands should always be washed after handling linen and detergent.

Correct high temperature wash programmes plus detergent products that remove organic residues such as faeces, urine and blood from fabric, should always be used as the fabric could otherwise continue to harbour harmful microorganisms.

Handling linen

If used linen is foul/infected or seepage is likely, it must be placed directly into a water soluble linen bag and then into a red linen bag (see section on colour coding) and brought directly to the laundry area. The water soluble bag is then placed directly into the machine. The washing machine needs to be compatible with such a bag so that it dissolves in the hot water. The water soluble bag prevents unnecessary manual handling of foul/infected linen.

A sluice cycle is necessary for foul/soiled (heavily contaminated or contaminated with blood/body fluid) or knowingly infected linen. Foul/infected linen should NOT be soaked, rinsed or sluiced by hand as the operator is subjecting themselves to inhaling fine contaminated aerosol droplets.

Used (foul and soiled) linen should be laundered by a process in which the temperature in the load is maintained at 65°C for not less than ten minutes or preferably at 71°C for not less than three minutes. For non-industrial washing machines, at least four minutes mixing time must be added to these times (eight minutes if heavily loaded). If lower temperatures are necessary, there would be a need to consider adding a chemical disinfectant to the wash/rinse (e.g. sodium hypochlorite (150 parts per million (ppm) available chlorine for at least five minutes), if tolerated by the fabrics involved).

Soiled clothing

Do NOT manually rinse/soak soiled items (see above). Flush any solid material (e.g. vomit, faeces) into the toilet, carefully avoiding splashing, and then put items in the washing machine, using the pre-wash/sluice cycle followed by a hot wash cycle (as above for foul linen), as tolerated by the material. If this service is not provided at your facility then the soiled clothing should have the solid waste flushed away as before and then be placed into a sealed, waterproof bag for the parent to collect and wash at home. This latter procedure is the preferred option for best practice as manual handling of foul/soiled clothing is thus minimised for staff. Explain to parents that washing

or rinsing soiled clothing increases staff exposure to organisms that can cause disease. Although receiving soiled clothing is not pleasant, parents should be reminded that such a policy protects the health of all staff and children.

Do

- ✓ Ensure there is a designated laundry area with hand washing facility
- ✓ Ensure that foul and soiled linen is processed separately
- ✓ Ensure that soiled and foul linen is washed for the appropriate time at the appropriate temperature
- ✓ Bag children's soiled clothes so that they can be taken home

Do not

- X Manually rinse/soak soiled items

NAPPIES

Facts

Hygienic nappy changing practice is **vital** in reducing the opportunity for harmful microorganisms to be transmitted, not only to the baby and staff, but to the surrounding environment.

Nappy Changing Procedure:

Do

- ✓ Ensure that there is adequate access to dedicated hand wash facilities for staff. These should be close to all nappy changing areas, at an appropriate height for adult use and have hot and cold running water supplies
- ✓ Ensure that all necessary nappy changing equipment is kept in the nappy changing area
- ✓ Ensure that hands are washed thoroughly before and after each nappy change, including after disposal of nappy and removal of gloves and apron
- ✓ Always wear disposable aprons and gloves
- ✓ Ensure the changing mat is waterproof and is not cracked/dirty
- ✓ Ensure disposable towels are used on top of the mat for its added protection. These should be changed between each child's nappy change
- ✓ Ensure creams and lotions are not shared between children. Each child should have all of their own creams labelled and they should be supplied by their parents/carers. Use gloved fingers each time to remove cream from containers
- ✓ Clean both the changing mat and any other environmental surfaces that become soiled or have been touched during the nappy changing procedure. Clean by using hot water and detergent, followed by a disinfectant or bleach solution, rinse and then dry thoroughly. Use disposable paper towels

- ✓ Place all nappy waste in a clinical waste bin for safe disposal
- ✓ Place reusable nappies in a nappy bucket and disinfect using a disinfectant product. After disinfection, pour the contents of the bucket down the toilet, not a sink. Then launder nappies on a hot wash. Tumble dry if possible
- ✓ Ensure the nappy changing area is designated for that use only and is not near play or kitchen areas

OUTINGS TO FARMS AND ZOOS

Facts

Whilst visits to farms and zoos are popular, there are a number of diseases that can be passed on to staff and pupils from infected animals. Serious outbreaks of infection in children have been associated with visits to farms and zoos.

Organisms such as campylobacter, salmonella and cryptosporidium can be present in farm animals. Animals naturally carry a range of microorganisms and some, such as the verocytotoxin-producing bacterium *Escherichia coli* O157 (*E coli* O157) present a serious hazard and can cause severe or fatal illness. Organisms can survive for a long time in animal faeces and in soil and if accidentally ingested, can cause disease. Potential hazards include contact with animal faeces or items and surfaces contaminated with faeces, contact with animal feed, raw milk, or untreated water and putting fingers into animals' mouths. Infection is usually acquired by eating contaminated material, putting contaminated fingers in mouths or by eating without washing hands.

If visits to farms or zoos do take place, a few general precautions and advice will help minimise the risk of children becoming ill. It is very important that children are advised on hygiene before the visit and are **constantly supervised** at the farm or zoo.

Copies of the HSE guidance on avoiding ill health at open farms-advice to farmers and teachers supplements can be obtained from:

www.hse.gov.uk/pubns/ais23.pdf

Updated guidance (April 2010) is also available on:

http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1270122184581

Detailed HSE guidance for teachers regarding farm visits is available (HSE AIS23 and HSE AIS23 supplement). The person in charge of the group should be aware of the possibility of transmission of disease from direct or indirect contact with the animals. It must be ensured that the premises meet the HSE standards and a risk assessment should be carried out. Further information for planning safe trips can be found at:

www.teachernet.gov.uk

It may be possible to determine either from the establishment themselves or the HSE whether staff have been trained in hygiene and whether the establishment has been inspected regarding hygiene matters.

Sheep can carry particular infections such as chlamydiosis, toxoplasmosis and listeriosis, which pose a risk for pregnant women and their unborn babies. Although not common, advice about these disease/risks should be made clear to pregnant staff/supervisors who should be discouraged from visiting farms during the lambing season. Further advice on risks to health during pregnancy can be obtained from:
www.direct.gov.uk/

Do

Before the visit

- ✓ Discuss visit arrangements with the farm management. The trip organiser should ensure that the farm facilities meet the recommendations made in the HSE AIS23, such as adequate hand washing facilities and designated eating areas away from animals
- ✓ Decide what the ratio of pupils to teachers/assistants/parents should be, according to guidelines. A risk assessment must be made taking into account the age, group, location and efficient use of resources. Depending on the level of supervision, it may be necessary to avoid direct contact with the animals for children less than eight years.
- ✓ Discuss with pupils the rules for the visit. Stress that they must not touch food, eat, drink, chew or put fingers in their mouths anywhere except in designated eating areas after washing hands (in particular not near areas where animals are housed, or where there is animal bedding or foodstuffs), due to risk of infection. They must not eat or chew anything that has fallen to the ground (e.g. food, toys, pens). Ensure pupils understand that they must listen to information and instructions given by farm staff
- ✓ Make sure pupils wear appropriate clothing, including sturdy outdoor shoes (not sandals) or wellington boots if possible
- ✓ Check that cuts, grazes, etc. are covered with a waterproof dressing

During and after the visit

- ✓ Ensure pupils do not kiss or have facial contact with the animals

- ✓ Make sure hands are thoroughly washed
 - after handling animals (or their excretions or equipment)
 - before and after eating or drinking
 - before leaving the farm/zoo

Only allow eating and drinking in the designated eating areas, after thorough hand washing. Hand washing should be supervised. Allow plenty of time for eating/leaving so everyone can wash hands properly

- ✓ Remove sweets, crisps, chewing gum, etc., from pockets before the visit

- ✓ Discourage children from sucking their fingers or putting pens, pencils or crayons etc. in mouths

- ✓ Make sure children do not drink raw, unpasteurised milk or eat any animal food. They should eat only food that they have brought with them, or food for human consumption they have bought on the farm

- ✓ Ensure, where possible, that impervious shoes and outer clothing are worn in wet and muddy pastures or on any land contaminated with animal faeces

- ✓ Ensure children remove soiled clothing and wash their hands after the visit. Remember to wash hands after any contact with animal faeces on footwear or clothing. If clothing is contaminated it should be removed, sealed in a plastic bag and taken home to be cleaned in a hot wash

- ✓ Clean or change footwear before leaving and wash hands after any contact with footwear or animal faeces. Clean boots and footwear with hot water and detergent to ensure faecal material is removed

- ✓ Ensure care is taken with children in wheelchairs or push chairs when it is wet and muddy. This is because the wheels create spray, putting children at greater risk of illness

Do Not

- X** Allow children to eat food or put toys or pens etc that have fallen to the ground in their mouths
- X** Approach sick or distressed animals under any circumstances. Precautions should be in place to prohibit visitors' access to areas where sick animals, slurry or compost are held
- X** Allow children to drink from taps unless clearly marked 'Drinking Water'. Drinking water taps should be in a suitable separate area – away from animals and toilet areas
- X** Let any member of the visiting party who is pregnant handle ewes who are feeding lambs or lambs who are not yet weaned
- X** Allow children to handle farm equipment (e.g. spades, forks) unless permitted by farm staff

If any member of the group shows signs of illness (e.g. sickness or diarrhoea) after a farm or zoo visit, advise them or their parents/carers to visit the GP and explain the recent contact with animals. If two or more members are ill, please follow action as above, but also contact the HPU or Environmental Health Department as further action may be necessary.

PEST CONTROL

Facts

Pests can cause damage to buildings and food and can spread a number of infections. Infections can be transmitted to humans via biting, direct or indirect contact with the pest (or its blood or body fluids), or by consuming food that has been contaminated by the pest.

Infestations

A wide range of pests may be encountered on school sites, these include:

- Rats
- Mice
- Cockroaches
- Fleas
- Wasps
- Houseflies
- Garden or pharaoh ants
- Insects in dried foods
- Bedbugs
- Pigeons

Pest Control Arrangements

The initial arrangements for a pest control service differ between Boroughs. Pest control services may be provided at a charge by the Environmental Health Department. In all cases a reputable pest control service must be used, preferably one who is a member of the British Pest Control Association: http://www.bpca.org.uk/home.asp?parent_id=1

Treatment

The pest control contractor will inspect the area of infestation to determine the appropriate treatment. The contractor will require some information regarding the premises and its usage.

Do

- ✓ Reduce risks of an infestation by:
 - Keeping the school and grounds clean and tidy and remove rubbish and debris
 - Storing/keeping food securely in pest-proof containers
 - Checking food and food storage areas for pests
 - Ensuring waste bins are pest-proof
 - Blocking routes in for pests and ensuring building repairs are carried out quickly (e.g. openings around pipes and drains)

- ✓ Ensure that staff are aware of the signs of pests such as droppings, urine stains, chewed items or materials, grease smears, unusual odours, eggs and moulted skins,

- ✓ Employ a pest control service to carry out regular inspections

- ✓ Ensure that those on site know what is happening when pest control measures are put in place

- ✓ Ensure that the contractor provides you with information on the baits laid or treatment (substance) applied together with safety advice to be followed. The contractor should leave a workbook or file, recording the baits placed, their numbers, location and material used, or a Safety Sheet recording the treatment applied, i.e. spray treatment. In all cases the contractor must provide the safety advice to be followed

- ✓ Ensure that the contractor's advice and guidance is followed and staff, pupils or visitors do not enter the treated area until it is safe to do so

- ✓ Ensure that all food work surfaces in an infested or treated area are thoroughly cleaned and disinfected immediately before use

- ✓ Ensure that any food that comes into contact with pests and/or their products, baits, treatments, or chemicals is disposed of immediately

- ✓ Seek advice from the contractor whenever carpets have been spray-treated for infestation of fleas on how long to defer cleaning of those carpets in order for the treatment to be fully effective

- ✓ Check the treated area/s regularly and ensure the contractor immediately removes dead pests, droppings and/or contaminated items

- ✓ Ensure any baits or other treatment materials are safely removed by the contractor upon cessation of infestation
- ✓ Contact the Council's environmental health services if the pests are emanating from property outside the school boundaries, as they may be able to help

Do Not

Allow anyone to interfere with treatments or baits, other than the pest control service

PETS

Facts

School pets and other animals in school can often add significantly to children's education.

Such animals can, however, pose a risk of infection including gastro-intestinal infection, fungal infections and parasites. This can be from direct contact with the animal or their equipment, their blood or body excretions or from scratches and bites. Sensible protocols and precautions such as hand washing can reduce this risk to an acceptable level.

The Head Teacher should ensure that a knowledgeable person is responsible for animals kept within the school, and that there is no risk of contravening relevant safety legislation. There should be written agreements and policies within the school to ensure full understanding of:

- a) The types of animals allowed in the school
- b) Their control and permitted behaviour whilst on the premises
- c) Areas where animals are not allowed
- d) Any insurance liability of owners and handlers

Toxoplasmosis in pregnancy

Toxoplasmosis is a common infection caused by the parasite *Toxoplasma gondii*, which can be passed from animals to humans. Pregnant women and people with a weakened immune system are most at risk from this infection.

In the UK toxoplasmosis is thought to affect about two of every thousand pregnancies. Less than half of these infections are transmitted to the unborn baby. Even when transmission occurs, the majority of babies (90-95%) have no symptoms.

When a woman becomes infected with toxoplasma for the first time while she is pregnant, although she may not experience any symptoms, the infection can be passed on to her unborn child and cause congenital toxoplasmosis. The severity of this congenital disease depends on the stage of pregnancy at which the mother is infected.

It is rare for a mother to become infected early in the pregnancy. However if this does occur, the effect on the fetus may be severe, and lead to complications such as miscarriage, stillbirth or birth defects. Babies whose mothers are infected during the last 28 weeks of pregnancy very rarely experience any problems or symptoms at birth, although some affected babies may develop eye disease in later life.

Subsequent pregnancies are not at risk.

Transmission and prevention

Transmission of the organism can occur from hand-to-mouth contact with faeces of infected cats, contaminated soil, poorly washed garden produce and ingestion of cysts in undercooked meat, and from direct contamination of cuts and grazes. Contact with infected sheep at lambing can therefore result in either ingestion or contamination.

The main way to prevent toxoplasmosis is to take general hygiene precautions to avoid ingesting the parasite. If contact with ewes at lambing time is unavoidable, open wounds (cuts and grazes) should be covered with waterproof dressings, and hands should be thoroughly washed after handling animals to prevent the possibility of infection. Pregnant women should also avoid contact with the live vaccine used in sheep.

Diagnosis and treatment

Blood tests can be carried out to detect antibodies to the organism. Since these may reflect past infections, additional confirmatory tests have to be carried out to see whether the infection is recent. Toxoplasmosis is usually a mild self limiting disease and does not require specific treatment when it occurs in normal, healthy people. A range of anti-toxoplasma drug treatments are available for those at greater risk of severe toxoplasmosis. There is no vaccine available for human use.

Do

- ✓ Ensure all animals are regularly groomed and checked for signs of infection or other illness
- ✓ Seek diagnosis and treatment from a vet if pets become ill
- ✓ Ensure that all animals have received relevant immunisations before being brought to the school and that immunisations are kept up to date
- ✓ Ensure that any animals kept in the school receive recommended treatments, e.g. for fleas and worms
- ✓ Trim claws to reduce risk of scratches
- ✓ Ensure that everyone washes their hands after they have handled animals (or their equipment, bedding etc) in the school
- ✓ Keep animal feeding areas clean. Animals should have their own feeding dishes and utensils, which should be washed separately from other dishes and utensils. Children should not be allowed access to feeding dishes
- ✓ Keep containers of pet food separate from food for human consumption
- ✓ Clean and disinfect all cages, living areas and equipment regularly
- ✓ Advise pregnant women of the risk of toxoplasmosis infection from contact with cat faeces
- ✓ Clean litter boxes daily using the following procedure:
 - a) always have someone who is not pregnant and who is healthy clean the litter box;
 - b) always wear disposable protective apron and gloves when cleaning the litter box;
 - c) litter should be sealed in a plastic bag and disposed of properly;
 - d) the litter box should not be sited near food preparation, storage or eating areas

- ✓ Disinfect litter boxes weekly either by filling them with boiling water which is allowed to stand for at least five minutes in the box or through chemical disinfection
- ✓ Use PPE if contact with blood/body fluids is expected
- ✓ Ensure a member of staff has responsibility for the animals, and daily care and routines are written in case the staff member is absent
- ✓ Supervise when animals have contact with children

Do Not

- X Permit animals to lick pupils, and discourage close facial contact
- X Allow animals or their equipment in the kitchen, food preparation or eating areas. If animals do come into contact with food preparation areas, decontaminate surfaces before food preparation
- X Allow animals to foul the school or grounds. If fouling/spillage occurs, clean promptly and appropriately
- X Allow children access to litter trays

PROTECTIVE CLOTHING

Facts

Under Health and Safety Legislation, employers are required to ensure the adequate provision of the correct protective clothing for staff. Basic protective clothing is required when dealing with incidents where contact with body fluid or blood is anticipated.

It is recommended that single-use, disposable plastic aprons and latex gloves should be worn for tasks where there is a risk of contact with blood or other body fluids, non-intact skin or mucous membranes.

This is whether through direct contact with children or contact with contaminated clothing, toys or equipment (e.g. nappy changing, cleaning potties) and applies whether a child is known to have an infection or not.

Gloves should be worn when handling any sharp instrument. Eye and face protection is necessary if there is a risk of blood or other body fluids splashing into face or eyes. Natural Rubber Latex (NRL) gloves are currently the material of choice for gloves due to their effectiveness in protecting against blood borne viruses while allowing easy hand movement. Where individuals have allergies and sensitivities to NRL, alternatives such as synthetic vinyl or nitrile, should be made available. All gloves must be powder free. Polythene gloves must never be used for procedures dealing with blood/body fluid, as they are permeable and damage easily.

Disposable gloves and aprons must be disposed of after each task into a clinical waste bag, and hands washed afterwards. When removing protective clothing remove gloves first and then aprons. **Never use the same protective clothing for more than one child.**

Do

- ✓ Ensure protective clothing is worn when handling blood, or body fluids or chemicals
- ✓ Refer to the sections on dealing with blood and body fluids and waste
- ✓ Ensure there is a range of glove sizes available
- ✓ Ensure protective clothing complies with the requirements of the Personal Protective Equipment Regulations 2002 and carries the CE mark (indicating that the PPE meets certain basic safety requirements)
- ✓ Ensure any alternatives to latex gloves that are used are suitable for the task and have the required protective levels
- ✓ Ensure that gloves and aprons are stored in a clean, dry place, readily accessible to staff, but away from children
- ✓ Wash hands after removing and disposing of protective clothing

STAFF HEALTH

Facts

Children and staff are at risk of contracting infections from each other. With this in mind schools should have appropriate infection control policies for:

- The protection of staff through immunisation
- Training and compliance with health and safety legislation

Such policies should apply to all agency/locum staff and to those on short term contracts.

Diarrhoea and/or vomiting

Diarrhoea and/or vomiting can be caused by a number of different microorganisms, including viruses, parasites and bacteria. Infections can be spread from person to person (via unwashed hands), especially in children. In general, it is recommended that any staff member with symptoms of diarrhoea and/or vomiting **stay away or be excluded** from the school until they have been symptom free for forty-eight hours and feel well (**48 hour rule**). Personal hygiene whilst ill should be very strict.

Pregnant women

Some childhood infections can cause or pose a risk to a pregnant woman or her unborn child. The Health Protection Agency poster guidance indicates these infections and outlines the actions required if exposure occurs for illnesses such as:

- Chicken pox,
 - Rubella (German Measles),
 - Slapped cheek syndrome (Parvovirus/Fifth Disease)
- http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1194947358374

Information can also be found in Section One of this document in the individual disease guidance. When situations of exposure arise, pregnant workers need to seek advice from their GP/ antenatal care team. Further expert advice can then be obtained from the local Consultant Microbiologist, Obstetrician or Health Protection Unit (HPU).

Female workers of childbearing age should ensure that they are immune to rubella (German measles) and have a blood test to confirm this, if necessary, as they could be at risk of exposure to infection. Women are advised to seek advice from their GP regarding any necessity for vaccination before starting work.

Chickenpox can affect the unborn child if a woman has not previously had the disease. A pregnant woman who has had contact with chicken pox should promptly see her GP/ antenatal care team. A blood test can show whether she is immune. In some cases, an immunoglobulin injection may be required. The HPU can advise.

Hepatitis B Vaccine

A safe and effective vaccine for the prevention of Hepatitis B is available. This vaccination is not routinely advised for school staff but is strongly advised for all staff working in facilities with learning disabilities or special school individuals and for such children if they live in institutional accommodation. A primary vaccination course usually consists of three injections over six months (1, 2 and 6 months). Around 2-3 months after the last injection, a blood test for hepatitis antibodies should be done to check that the vaccination has been effective. Vaccination and blood tests can be arranged through GPs or occupational health. Both managers and staff members concerned should keep copies of their antibody results following vaccination.

Staff should refer to their local occupational health department for further advice and support.

Other immunisations

All staff should be up to date with immunisations according to the immunisation schedule. For the schedule see page 10 of this document or visit: www.immunisation.nhs.uk

SWIMMING AND HYDROTHERAPY POOLS

Introduction

Swimming and hydrotherapy pools (or Spa pools) have the potential to pass on certain infectious diseases as the water can become contaminated with harmful microorganisms from pool users, or the pool water quality may be inadequate. These risks can be minimised by adopting simple precautions and by ensuring that the pool is managed properly.

Diseases that can be transmitted

There are essentially two types of contamination; that generated by bathers and that from external sources i.e. atmosphere, surface surrounds and bathing costumes. Contamination generated by bathers comes from:

- Nose – mucus
- Mouth – saliva
- Skin – perspiration, dead skin, sun tan lotion, cosmetics, shampoo and soap residues
- Urine and faecal matter
- Hair

Adequate levels of disinfectant will easily and rapidly kill bacteria and viruses but giardia and cryptosporidium cysts are more resilient and special considerations apply. In some instances smaller hydrotherapy pools may be fitted with filters. Pool filters are not designed to remove bacteria or infections but to make the water in the pool clear. The type of filter fitted will depend on the size and type of pool.

The following intestinal diseases can be a problem in pool water:

- *E.coli* O157,
- Typhoid fever
- Paratyphoid fever
- Bacillary dysentery

Water that is contaminated with faecal matter from someone who is ill can often lead to an outbreak of diarrhoea if other swimmers swallow the contaminated water.

Respiratory diseases such as colds and sore throats can be spread in pools as a result of close contact, or from inadequately treated water. Hydrotherapy (Spa pools) have also been implicated in outbreaks of legionella.

Skin infections such as verrucae and ringworm can also be passed on, via contact with others or from pool side or changing room floors.

Prevention

It is recommended that people do not go swimming if they are suffering from:

- Colds
- Throat infections
- Ear infections
- Gastroenteritis (diarrhoea and vomiting)
- Skin infections
- Skin condition or open wounds

In addition, exclusion from swimming should be for two weeks following the last episode of diarrhoea.

Before swimming it is advised that swimmers take a shower and use the footbath.

Cryptosporidium and swimming pools

Cases of cryptosporidium associated with swimming pools are almost always the result of faecal contamination of the pool by users who are themselves carriers of the organism. Prevention of infection in swimming pools therefore consists principally of good quality control of pool waters. Individuals can also help by trying to prevent such contamination occurring.

Action in the event of contamination

Advice for proprietors about disinfectant levels and action to be taken in the event of faecal soiling or vomit contamination is available from the:

Institute of Sport and Recreation Management
Pool Water Treatment Advisory Group from the HPA website
www.hpa.org.uk

More detailed information on the management (including infection control) of swimming and hydrotherapy pools can be obtained from your local authority or from guidelines produced by the HSE and the Health Protection Agency, 2006, Management of Spa Pools, Controlling the Risks of Infection.

Do

- ✓ Ensure that schools with their own pool have a specified person responsible for the management of the pool and the health and safety of the swimmers
- ✓ Ensure a written policy is available which covers issues of infection control (e.g. cleaning, disinfection, dealing with faecal contamination incidents) as well as safety
- ✓ Cover verrucae when using pools and changing rooms
- ✓ Have a shower and use the footbath before using the pool
- ✓ Use the toilet before you swim and get out of the pool if you need to go during your swim

Do Not

- X Allow pupils with diarrhoeal illnesses to use the pool whilst symptomatic or for 2 weeks following the last episode of diarrhoea
- X Swim if you have a tummy upset

TOILETS AND POTTIES

Facts

Transmission of organisms from toilets is more commonly associated with direct contact with contaminated surfaces of the toilet and the surrounding area by touching the following:

- Toilet handles
- Toilet seats
- Wash hand basin taps
- Door handles
- Waste bins

However, organisms can spray onto other surfaces during flushing. It is therefore essential to check toilet areas regularly throughout the day. Frequency of cleaning and maintenance will depend on how many children use the facilities and whether the children have good toilet habits. Toilets and frequent hand contact sites, as those mentioned above, in the toilet area, should be cleaned and disinfected daily and immediately if found to be soiled when inspected.

Handling potty waste

The contents of used potties should be emptied carefully into the toilet. The potties should then be cleaned with hot water and detergent, disinfected and dried thoroughly. They should be stored separately and not kept stacked inside one another. Ideally, children should have individual potties.

Toilet and wash hand basin facilities

Do provide enough absorbent toilet paper, liquid soap and disposable paper towels so that high levels of hygiene can be maintained.

Sanitary facilities

Sanitary bags and disposal units should be present for all female pupils and staff. Disposal units with lids should be present in every cubicle (or if this recommendation cannot be achieved, at least one within every set of female toilets). Access to sanitary protection should be available from either vending machines in female toilets or main office.

Cloths

Cleaning cloths used (within the suggested colour-coded system, see p.105) for toilets and potties should be easily distinguished from cleaning cloths used for cleaning other parts of the school environment. If re-usable cloths **have** to be used, they **must** be decontaminated after each use and at least once a day, and dried immediately (either in the tumble drier or by hanging up). Cloths should ideally be decontaminated by hot machine wash (65°C for at least 10 minutes, or 71°C for at least 3 minutes).

More information on toilet hygiene can be obtained from the Bog Standard website, the campaign promoting better toilets for pupils in schools. The site contains useful and up to date information for pupils and adults and provides links to organisations, suppliers and sponsors involved in Bog Standard.

www.bogstandard.org

The Education (School Premises) Regulations 1999 sets out the standards to be met regarding numbers of toilets and sanitary fittings required. It also includes regulations on ventilation, water supplies etc. Please follow link for further information:

<http://www.opsi.gov.uk/si/si1999/19990002.htm#3>

Do

- ✓ Inspect toilets throughout the day to ensure they are clean
- ✓ Teach children to wash their hands thoroughly after using the toilet or potty
- ✓ Use disposable cleaning cloths
- ✓ Bag and dispose of sanitary waste and wash hands afterwards
- ✓ Clean and disinfect toilets and surrounding fixtures/fittings regularly and as necessary
- ✓ Wear PPE if you are helping a child to use the toilet/potty if contact with body fluids is anticipated

Do Not

- X Clean potties in eating or food preparation areas
- X Restrict access to toilets or supplies (i.e. toilet paper, liquid soap, paper towels)
- X Use mops for cleaning faeces (see section on blood and body fluid spillages for correct cleaning method for faeces, soiled areas or equipment).

TOYS AND CLASSROOM/SPORTS EQUIPMENT

Sharing these items between children can be classed as a potential source of infection as they can become contaminated with microorganisms in sufficient numbers to present a risk of infection from:

- Unwashed hands
- Spills of body fluids, or
- By children putting their mouths to them.

Microorganisms can survive on the surface of equipment and toys, which have been implicated as important in the transmission of infection.

The following should be considered when selecting and managing toys and equipment from an infection control viewpoint.

Do

- ✓ Ensure that all toys and equipment can be easily cleaned
- ✓ Ensure that all toys/equipment are checked regularly and replaced if broken/damaged
- ✓ Ensure that all toys are cleaned daily if used by very young children or if they put them in their mouths
- ✓ Clean older children's toys and larger equipment on a weekly basis
- ✓ Immediately clean any toy/equipment that is visibly soiled. Ideally, toys should be washed and disinfected between use by different children. Although this practice may be overly cautious and somewhat impractical on a day-to-day basis, keeping toys hygienically clean is an important way to prevent transmission of infections
- ✓ Ensure that hard/plastic toys/equipment are cleaned by washing with water and detergent, followed by thorough rinsing and drying. If disinfection is required, use 'Milton' solution (one in ten dilutions from neat

to give 1000 ppm of available hypochlorite) and then rinse and dry thoroughly

- ✓ Make sure that if items cannot be submerged in water (e.g. fixed items), any visible dirt is removed and surfaces are wiped with disinfectant afterwards
- ✓ Wash soft toys daily (if possible) in a washing machine on a hot wash, taking care to follow the manufacturers washing instructions. Any item that cannot be washed at these high temperatures should be disposed of if it becomes contaminated
- ✓ Decontaminate or dispose of any toys or equipment that are contaminated with blood/body fluids (see blood and body fluid spillages p.94)
- ✓ Keep a written rota of cleaning equipment and toys to ensure they are all regularly cleaned
- ✓ Store toys and equipment in clean, washable containers or cupboard. They should be stock rotated so that not all are used at once
- ✓ Empty water play pools after use, wash with detergent and dry. Likewise paddling pools should be cleaned, dried and stored deflated or inverted
- ✓ Clean water play equipment and receptacles with detergent and dry after use
- ✓ Securely cover sandpits for protection from animals and keep the sand clean by regular sieving. Sand should be changed regularly (e.g. once a month or more frequently if contamination occurs). Outside sand such as sports jump pits should be raked regularly (daily when in use) but not less than weekly and changed as soon as it becomes discoloured and/or odorous
- ✓ Consider suspending communal play activities, such as sand and water play and cookery, to help prevent the spread of infections e.g. if there was a diarrhoea and vomiting outbreak. The HPU will be able to advise on this, as well as the need to increase the frequency for cleaning toys during an outbreak
- ✓ Replace soft modelling materials and dough regularly

- ✓ Wash hands after handling contaminated toys/equipment
- ✓ Wash hands before and after:
 - communal play
 - playing with water
 - ball pools
 - sand
 - dough play
 - baking and after playing outside
- ✓ Cover any cuts or grazes on hands with a waterproof dressing
- ✓ Prevent children taking toys or equipment into the toilet area
- ✓ Keep animals/pets away from toys, equipment and play areas
- ✓ Discourage staff or pupils from involvement with water activities if they have cuts or grazes that could contaminate the water with blood

Many nurseries now use leisure equipment that was initially used for people who have sensory impairment such as:

- Optical displays
- Bubble tubes
- Water beds,
- Ball pools
- Soft foam wedges
- Bean bags.

If they are used, it is important for nurseries to have a written cleaning schedule, detailing when and how equipment is cleaned and the cleaning products used. Most equipment can be cleaned using neutral detergent and hot water but manufacturers' instructions should be followed.

Other equipment that could present potential infection control problems in nurseries are toothbrushes and hair brushes. Such items must not be shared and systems must be put in place to control this.

PANDEMIC INFLUENZA

Influenza is a familiar winter infection in the UK. Almost every year new strains of influenza subtypes A and B emerge, giving rise to illness and sometimes death, mainly in older people and in young children.

Avian, seasonal and pandemic flu are all quite different. Avian flu is a disease, which mainly affects birds. Seasonal flu refers to viruses that circulate in human population that cause widespread illness each winter. Pandemic influenza is a global disease outbreak that appears when a new influenza virus emerges for which people have little or no immunity, and for which there is no vaccine. The disease can be spread easily from person to person, causes serious illness and has the potential to sweep across the country and around the world in a very short time.

It is impossible to say when a pandemic will arrive in the UK. Intervals between previous pandemics have varied widely from 11 to 42 years and have presented no recognisable pattern. Three influenza pandemics occurred during the last century – 1918-19 (Spanish flu), 1957-58 (Asian flu) and 1968-69 (Hong Kong flu). All affected large numbers of the population, causing many deaths and huge economic and social disruption.

Experts are concerned that the H5N1 avian flu virus, which has gained the ability to pass from birds to humans and can cause disease and death in humans, may emerge to form a pandemic.

It is anticipated that once the pandemic alert is made it could take probably less than six months to just a few weeks to arrive in the UK, but this will depend on the region in which the virus first emerges.

All government departments are planning for the inevitability of a flu pandemic, and advising businesses and other organisations to plan and be ready. In 2006, the Department of Education and Skills (DoES) produced guidance packages for children's services to assist local authorities, school head teachers and governors and parents and carers in planning for flu pandemic. The Department for Children, Schools and Families has now replaced the DoES but the guidance is available on <http://www.teachernet.gov.uk/>.

School closure

General advice given to all sectors is that they continue to operate as normally as possible during a pandemic – but should plan for much higher than normal staff absences and the consequences of this.

Schools have been asked to prepare flu pandemic plans as part of their emergency planning and ensure that these are shared with staff and, as appropriate, parents. Central Government will advise whether schools in affected areas should stay open or closed on the basis of scientific advice. If the government were to advise closure, local authorities would communicate the message to schools, but schools would not close at that point. Local authorities, acting on local authority information, would inform schools when their area is affected and the advice to closure applies.

Children are highly efficient ‘spreaders’ of respiratory infections, both among themselves and among adults in their families. The head teacher would also decide whether a school should close for other reasons (e.g. lack of staff).

If there were advice to close all schools in an area, the local authority would tell schools when this advice will be reviewed; after such a review, the local authority would advise schools whether to remain closed or to re-open and, if they are to re-open, whether any specific conditions should apply.

There is some evidence that such infections spread less among children in holiday periods than in term time. Closing schools and other childcare settings for a period of time may significantly reduce the number of children affected.

Each group setting should ensure that they have up to date contact details for all children including address, telephone numbers (home, work and mobile) and e-mail as appropriate.

Training and education

Staff and children should be taught the importance of hand hygiene and encouraged to wash and dry their hands using warm water, liquid soap and disposable paper towels. Covering mouths when coughing and sneezing and the use of tissues is good, as is the correct disposal of dirty tissues into bins.

More detailed guidance on pandemic flu planning and how schools and children’s services will be affected can be obtained by visiting www.dcsf.gov.uk

Further advice and guidance can be obtained from the following websites:

www.hpa.org.uk

www.surestart.gov.uk

www.teachernet.gov.uk

www.dh.gov.uk.

SCHOOL HEALTH MATTERS

APPENDICES

APPENDIX A

Report on Communicable Disease in Children and Young People's Group Setting
London Boroughs of Lambeth, Southwark, Lewisham, Bexley, Bromley & Greenwich

Name of Group Setting:

Telephone No:

Email:

Fax:

Address:

Date:

Important: Reporting is designed to help us to identify problems and to help you prevent the spread of infectious disease within the group setting

Please telephone us immediately on 0203 049 4338 if any children are suffering from the following conditions:

Diarrhoea and/or vomiting (more than 2 cases)	Tuberculosis	Food Poisoning
Meningitis	Typhoid or Paratyphoid	Whooping Cough

Please fill out this form if any children are suffering from the disease listed below and send it to the address at the bottom of the form, as soon as possible. We will contact you if there is need for action to prevent further spread.

Chickenpox	Impetigo	Ringworm (scalp)
Conjunctivitis (sticky eye)	Measles	Ringworm (body)
German Measles (Rubella)	Parvovirus/Slapped Cheek syndrome/ Fifth disease	Scarlet Fever
Hand, foot and mouth disease	Scabies	
Hepatitis/Jaundice	Mumps	

The following children are absent from this setting on grounds of infection or suspected infection.

Name	Age/ D.O.B	Address/phone number	Date last attended	Date illness reported to nursery/school	Disease or symptoms	GP's Name if known

Please return this form to: Dr R Heathcock, SEL Health Protection Unit, 4th Floor, 1 Lower Marsh, London SE1 7NT or fax on 020 7633 9734.

For Office Use:	
ID No:	Log No:

Appendix B

Diseases notifiable (to Local Authority Proper Officers) under the Health Protection (Notification) Regulations 2010:

- Acute encephalitis
- Acute meningitis
- Acute poliomyelitis
- Acute infectious hepatitis
- Anthrax
- Botulism
- Brucellosis
- Cholera
- Diphtheria
- Enteric fever (typhoid or paratyphoid fever)
- Food poisoning
- Haemolytic uraemic syndrome (HUS)
- Infectious bloody diarrhoea
- Invasive group A streptococcal disease and scarlet fever
- Legionnaires' Disease
- Leprosy
- Malaria
- Measles
- Meningococcal septicaemia
- Mumps
- Plague
- Rabies
- Rubella
- SARS
- Smallpox
- Tetanus
- Tuberculosis
- Typhus
- Viral haemorrhagic fever (VHF)
- Whooping cough
- Yellow fever



Appendix C

SCHOOL AND OTHER CHILD CARE SETTINGS MANAGEMENT GUIDANCE FOR DIARRHOEA AND VOMITING OUTBREAK

Aim

The purpose of this guidance is to provide an aide memoir for school management in the event of diarrhoea and vomiting outbreaks. It is to be used in conjunction with the Health Protection Agency poster Guidance on Infection Control in Schools and other Child Care Settings (2007). Although this resource reflects national guidance, it is important that establishments have their own policies and procedures based on evidence based infection control and outbreak management guidelines.

Definition

An outbreak may be defined as:

- Two or more linked persons with the same disease or symptoms or the same organisms, who are linked through common exposure, personal characteristics, time or location, or,
- A greater than expected rate of infection compared to the usual background rate for the particular place and time

Recognition

Infection can be spread within any establishment very easily. By using infection control policies and procedures and notifying promptly, the necessary action can be taken which will minimise the spread of infection. Once an outbreak has been notified then the local outbreak control plan will be initiated.

Action

1. Reporting /recording

As soon as an outbreak is suspected within the school, the head teacher or person in charge should contact the on call team at South East London Health Protection Unit (HPU): 020 3049 4338.

The on call team will decide whether there is a true outbreak and will initiate and co-ordinate any necessary action with the head teacher. Prompt notification and reporting cases of suspected infectious diseases to the HPU is essential in monitoring infection, and allows the investigation and control of its spread. If the outbreak is suspected to be food related then the local Environmental Health Officers (EHOs) will also undertake a joint investigation. In some instances the local Primary Care Trust and Education Departments may also be involved.

The importance of record keeping is recognised, particularly in an outbreak. Identification of an outbreak in the first place is facilitated if records are kept of symptoms, dates of onset of illness and the area within the school that the ill person usually is. **The Head Teacher or designated person should record both staff and child cases on the log sheets (see Appendix D) and fax them to the HPU without delay (FAX: 020 7633 9723).**

The on call team will telephone the school to discuss the situation and request the following initial information:

- A list of the names of affected children and staff
- The onset dates of illness
- Class
- Symptoms
- Duration of illness

These details will assist HPU staff to determine a full picture of events, as well as to liaise effectively with hospital laboratories regarding any specimen collections that might be necessary.

It may also be useful to have determined any movements in and out of the building such as children attending parties or visiting parks or zoos etc; breakfast clubs, after school clubs or other activities that are carried out on the premises and the use of intermittent staff such as bank or agency staff.

2. Practical management

The microorganisms responsible for diarrhoea and vomiting outbreaks are usually either bacterial or viral. Once an outbreak is suspected, prevention of the spread of the disease and protection of the unaffected children, staff and visitors is important. The HPU will advise on measures to control the outbreak.

It is not always possible to identify staff or children suffering from, or incubating, a disease. The school environment and close social interaction encourages the spread of infections by a number of transmission routes including food, aerosol, faecal-oral and direct contact. Good infection control measures will assist in limiting and controlling the spread of an infectious disease.

Symptoms will vary depending on the organism causing illness and may be either just diarrhoea or vomiting or both. The three most important practical aspects for the management of diarrhoea and vomiting outbreaks are:

1. **Exclusion of affected children and staff**
2. **Enhanced cleaning of the environment and equipment**
3. **Effective and thorough hand washing**

3 Exclusion

Exclusion is vital for **any** staff or children who have symptoms. They should not return to the school for **48 hours** after the symptoms have resolved. Exclusion should include affected bank, agency and visiting staff. It is the responsibility of the person in charge to check incoming people's health.

4 Cleaning of the environment and equipment

It is very important that a robust cleaning regime is carried out in the school. This should occur **twice** daily as a minimum during the outbreak (and as necessary) using an appropriate colour coded system for equipment. The British Institute of Cleaning and Science has coding system that can be adopted:

- Red for toilets and wash room surfaces
- Yellow for wash hand basins and sinks
- Blue for general areas
- Green for kitchens.

Cleaning equipment used should consist of the following:

- Clean disposable cloths, (or if non disposable cloths are used they should be disinfected after use)
- Dedicated mops/mop buckets for toilet areas,
- Hot water and diluted bleach (in recommended dilutions for environmental cleaning) in communal areas.

Particular attention should focus on:

- **Toilet seats,**
- **Door/ toilet handles**
- **Wash hand basin taps**
- **Horizontal surfaces**

Particular attention should also focus on

- Soft play areas
- Changing areas
- Water therapy areas and special equipment in nurseries and special schools.

Bleach (hypochlorite) is the preferable cleaning agent as it will kill both bacteria and viruses. For cleaning vomit or faeces bleach solutions should be used at a concentration of 0.1%, equivalent to 1,000 parts per million. For domestic bleach, this usually means diluting 1 part bleach to 100 parts of cold water. However, if there are manufacturer's instructions these should be followed.

Bleach solutions should be used to clean the areas where microorganisms are most likely to be transmitted, as mentioned above. Obviously on some surfaces, such as carpets and soft furnishings, bleach will not be suitable to use, in which case steam cleaning (or machine washing in the case of soft furnishings) can be used instead. If bleach can't be used any disinfectant can be used as long as it has anti-bacterial and anti-viral properties and used in accordance with manufacturer's instructions.

5 Restrictions

During an outbreak, hard toys should be washed daily in diluted bleach solutions, rinsed and dried. Stock rotation should occur to limit the number of toys accessible at once. Soft toys should not be used during an outbreak, nor should the sand or water play areas. Cookery activities for the children should also be suspended for the duration of the outbreak.

6 Guidance on cleaning up vomit and faeces

The following precautions should be used by individuals who clean up vomit or faeces in order to minimise the risk of infection to them.

- Spillages of body fluids should be cleared up immediately
- Wear disposable gloves and aprons
- Paper towels or tissues should help soak up the excess liquid and prevent further contamination. Dispose of directly into a clinical waste bag
- Clean the affected area with hot water and detergent, using a disposable cloth
- Disinfect the affected area with freshly made bleach solution (1 part bleach to 100 parts water)

7 Hand washing

Hand washing is vital to prevent person to person transmission. It must be actively encouraged before eating and after using the toilet, and applies to both staff and pupils. Staff and pupils should have easy access liquid soap and paper towels.

Alcohol gels can be used in addition to washing hands as a further measure to prevent person-to-person spread by contaminated hands. Alcohol gels are not effective in killing viruses' such as Norovirus (winter vomiting disease). To discuss the need for alcohol gels please contact the HPU.

8 Duty of Care

The Head Teacher has a duty of care to protect staff and children. Therefore, infection control and occupational health policies and procedures should be followed to reduce the spread of disease. Everyone has a duty of care to protect themselves and others. They therefore should disclose relevant information/symptoms etc. asked for and take the necessary action advised by the local

Health Protection Unit and relevant agencies. Adherence by everyone to policies, record keeping, hand washing, cleaning and prompt exclusion will stop the transmission of harmful microorganisms quickly.

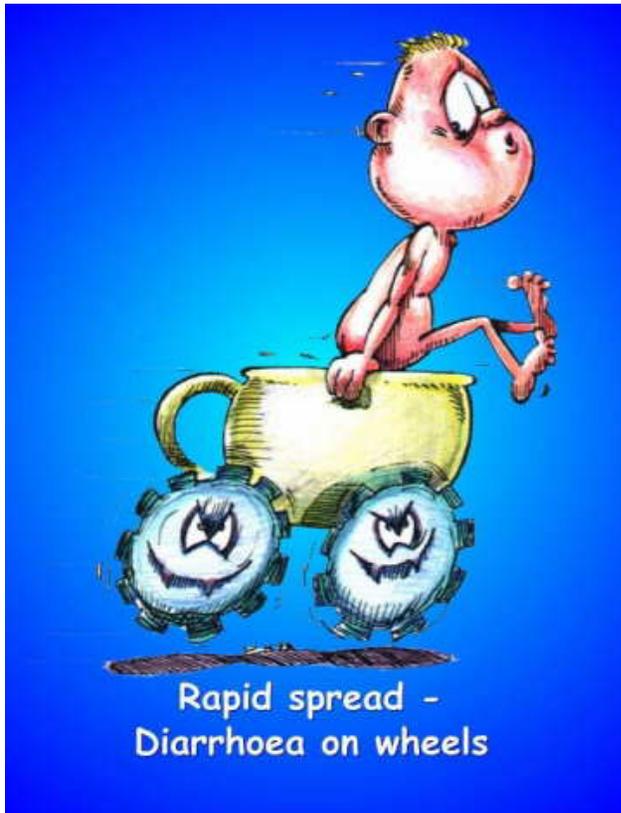
South East London Health Protection Unit

Contact telephone number: 0203 049 4338

Fax number: 020 7633 9734

This guidance has been adapted with kind permission from South West London Health Protection Unit

Give the bug the boot! Help us to stop tummy bugs spreading!



If your child is unwell with sickness or diarrhoea they should not return to school **for 48 HOURS AFTER** normal bowel habits have returned and/or vomiting has stopped.

Produced with permission by the South West London Health Protection Unit

APPENDIX D

SE London Health Protection Unit
Form for reporting outbreaks of diarrhoea and vomiting
Tel: 020 3049 4338 Fax: 020 7633 9734

Dear Headteacher

Thank you for informing us about the cases of illness you have in your school.

For the next week, we would be grateful if you could arrange for this form to be completed daily and faxed to us on 020 7633 9734. Please complete the form every day, even if there are no new cases.

We will ring you next week for an update and discuss any further action. However, please contact us sooner if you have any concerns or questions.

Many Thanks

Name of person completing this form:

Name of School:

Address:

Telephone:

Size of school (total number of children enrolled):

Today's date:

Total number of children absent today:

Total children absent with Vomiting and or Diarrhoea:

Of these, how many children are away today for the first time:

Total staff absent with Vomiting and or Diarrhoea:

Of these, how many staff are away today for the first time: