

Childcare and children's health

Health care information for childcare staff and families from the Centre for Community Child Health

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Infection Control and Some Common Infections in Young Children

As young children begin to have contact with the wider world it is inevitable that they will be exposed to viruses and bacteria that cause a range of infections. Most of these thankfully are not serious – colds and upper respiratory infections and other viral infections are part and parcel of growing up.

Infections can be spread in several ways. The most common is from person to person. A child or adult may have an active infection or else is incubating an infection which is not yet apparent, and inadvertently spreads it to others whom he comes into contact with. The infection can be spread in a number of ways.

- Droplet spread, by coughing or sneezing. This is the most common way that colds and upper respiratory infections are spread, especially in winter when people tend to be in close contact in confined spaces.
- Direct contact, either from person to person or with infected surfaces. This is why washing of hands is so important after changing a nappy or wiping a child's runny nose. Also important in preventing the spread of infections is washing toys and utensils that are shared by young children, properly wiping down benches and table tops, and properly disposing of soiled nappies or tissues.

While it is impossible to completely prevent the spread of infections, there are effective measures that can be taken to minimise infections in settings where children congregate. All children's services operate within a framework of government regulations and there are Child Care Quality Assurance principles which address infection control. There are many effective precautions and measures that can be taken to prevent the spread of infection. Research has shown that where these are implemented, there is an often dramatic reduction in infections.

Each state also has health regulations that govern the exclusion of children who have specified infectious diseases; these vary from state to state. Information can be obtained by contacting the local health department.

Immunisation:

Immunisation is just about the most effective of all strategies designed to protect the health of young children. All children should be fully immunised. Checking immunisation status and encouraging full immunisation is an



important responsibility of those working in community settings with young children.

The way immunisation works is that a killed or weakened strain of a germ (virus or bacteria) is given to the child (or adult), either by mouth or injection. This causes the body's immune system to make antibodies to that particular disease; antibodies recognise and fight the real and active viruses or bacteria when the child is exposed to them. There are vaccines which protect against a number of very serious and potentially fatal diseases, and there are new vaccines being introduced from time to time.

Currently children are immunised against the following infectious diseases:

- Diphtheria
- Measles
- Mumps
- Rubella (German measles)
- Tetanus
- Pertussis (whooping cough)
- Polio
- Haemophilus B (HIB)
- Hepatitis B
- Meningococcus

There are other recommended vaccines which are now available, though they are not yet on the schedule for all children. These include:

- Pneumococcus (causes pneumonia, blood infections, meningitis and ear infections)
- Varicella (chicken pox)
- Influenza

This list of conditions is being added to on a regular basis as new vaccines are becoming available. Information about the current schedule is available at <http://immunise.health.gov.au/schedule> and clarification can also be obtained from a GP or paediatrician.

Due to the success of immunisation programs, many of these conditions are rarely seen today. This has led to a sense of complacency in some sections of the community. Apart from the clear benefits of immunisation for each individual child, it is also important from a community view that all children are immunised. As well as being at great risk of contracting these infections, non-immunised children also help spread infection in the community.

Despite it being the single most effective public health measure for children, some parents still hold reservations about immunising their children, and there are still misconceptions about different aspects of immunisation. Non-health professionals cannot be expected to engage in discussions with parents about detailed aspects of immunisation programs – they should encourage parents to speak to their child's doctor or community nurse about these, or there is information available from the state and commonwealth health departments. But it is reasonable to



expect all child care professionals who come into contact with children and their parents to check on immunisation status and encourage parents to make sure that all children in their care are fully immunised.

Reactions to Immunisation:

Immunisations are not totally without side effects. Many children will have a reaction following immunisation; these are nearly always minor and transient. The most common, perhaps inevitable, is the child's reaction to the pain of the injection.

Many children may have swelling and redness at the injection site; some have a mild fever; parents may report that their child is irritable, or not hungry, or 'not herself'. These reactions are usually mild and last anywhere from a few hours to a few days; they can be minimised by giving paracetamol immediately before and then for 24 hours following immunisation. Serious reactions are rare. The child is at far greater risk of harm (or even death) from contracting one of the infections because she is not immunised than from the immunisation itself.

Information on some common infections in young children follows.

Ear infections (otitis media)

Ear infections are one of the commonest infections seen in toddlers and preschool children. Like colds and upper respiratory infections, they occur especially in the winter months. The majority of children will have an occasional ear infection, which will resolve quickly, and mostly ear infections are not serious. Some have recurrent ear infections, and a number of these will develop chronic

otitis media or 'glue ear', which can lead to hearing loss. This is the main complication of ear infections and if the hearing loss is prolonged or even intermittent, a child's language and communication skills may be affected resulting in delayed language acquisition.

Cause

Ear infections can be caused by bacteria or viruses; often they are associated with a viral upper respiratory tract infection.

Signs and symptoms

While sometimes ear infections are 'silent' and do not cause any specific symptoms, mostly they are associated with a fever and often an upper respiratory tract infection. General signs of infection may be present, including fever and flushed face, runny nose, loss of appetite, and general misery. There is usually pain in the ear, and infants will cry and may pull at their ear. Some children will have temporary loss of hearing. Occasionally the eardrum may rupture and result in a discharging ear sometimes with blood mixed in. This actually relieves the pain, and makes the child feel better.

Glue ear may not cause any noticeable symptoms at all, or parents or professionals may notice the child does not seem to listen, wants to have things repeated, speaks loudly, or turns the television up loud – all signs of a hearing loss. If a child's language is delayed then hearing loss possibly due to glue ear should be suspected.

Treatment

It is very difficult to know if the cause of the infection is bacterial (where antibiotics are effective) or viral (where antibiotics do not work). For this reason, most children are treated with antibiotics. Paracetamol can help with fever and pain, as can nose drops in some children if they are very blocked up. Blowing the nose is helpful in reducing the pressure felt in ears, but younger children find this difficult. There is no reason to exclude the child with an ear infection from child care.

The treatment of glue ear is not straightforward. Some children will be prescribed antibiotics to be taken over a long period, sometimes months.

Others may have surgery to drain their ears and sometimes ventilating tubes (grommets) are inserted.

When to seek medical advice

If the child complains of pain in the ear, or an infant is crying and flushed and pulling at her ear, and especially if a fever is present, or if there is a discharge from the ear, then she should be seen by a doctor. Sometimes the doctor will want to check the child when she is better to make sure the infection has cleared up and there is no evidence of glue ear.

Prevention

Ear infections cannot be prevented, though those that are caused by Haemophilus will not occur if the child is fully immunised. If a child has recurrent ear infections, she should be promptly treated and closely monitored to ensure she does not develop glue ear and subsequent hearing loss.

Conjunctivitis

Conjunctivitis is an infection or irritation of the lining (conjunctiva) over the eyeball and inside the eyelids. It is common in young children and is very contagious.

Cause

Usually conjunctivitis is caused by an infection with a virus or bacteria, but it can also be due to irritation of the eye due to an object or chemical that has entered the eye, or to an allergic reaction. Sometimes it can occur as part of a cold with the same virus causing both conditions.

Signs and symptoms

The child's eye will be red and teary, and she might complain of sand in the eye or use other words to describe a grittiness in the eye. Sometimes there will be a greenish thick discharge from the eye, and when the child wakes from sleep the eyelids may be puffy and stuck together. The child will be constantly rubbing her eye because of the discomfort, and in this way can easily spread the infection to the other eye. The child may have symptoms of a cold.

Treatment

The eye is washed and cleaned gently several times a day with cotton wool soaked in warm water. If the conjunctivitis is associated with a cold, it is most likely to be viral and no other treatment is necessary. Otherwise it is often difficult to tell the difference between a viral and bacterial infection, and eye drops and/or ointment may be



prescribed. If the conjunctivitis is due to another cause – irritation due to something in the eye or to allergy – then this is treated according to the cause. The eye may be washed with water to wash away a chemical, or the allergy treated with eye drops. It is best to exclude a child who has conjunctivitis from child care until there is no more discharge or tearing from the affected eye.

When to seek medical advice

It is best to have a doctor check a child with conjunctivitis, unless it is mild or part of a cold. Medical advice should always be sought if the child is also unwell, or if the conjunctivitis does not clear up after a few days.

Prevention

Conjunctivitis in young children cannot be prevented. However, it is possible to prevent the spread of infection from one child to another with proper hygiene and infection control procedures, for example having the child not use a common towel and other articles and having her wash her hands after rubbing her eyes.

Hand, foot and mouth disease

This is a common condition in young children, so called because of the location of the blisters which are characteristic of the condition. It is very contagious and spreads easily from one child to the next.

Cause

The condition is caused by a specific virus called Coxsackie A.

Signs and symptoms

The incubation period is about 4-6 days. The child may have a slight fever and be off-colour and without an appetite for a day or two before the rash appears. Small ulcers appear in the child's mouth causing pain and discomfort, and then small blisters appear on the hands and feet, especially on the palms and the soles. The rash clears up after about a week.

Treatment

There is no specific treatment for this condition. The child needs to be encouraged to drink to avoid dehydration, though this may be a problem because of the ulcers present in the mouth. Giving small drinks at frequent intervals is often the key, and icy poles or ice blocks may sometimes be easier because of their coldness which 'freezes' the inside of the mouth and makes the discomfort less. Paracetamol may lessen the pain and lower the fever if it is high.

Hand, foot and mouth disease is a minor illness in young children; it generally runs its course and clears up quickly without any problems.

When to seek medical advice

If the child is refusing to drink or looks sick then medical advice should be sought.

Prevention

Hand, foot and mouth disease is highly infectious and spread mainly by direct contact. The likelihood of spread may be reduced by the usual hygiene and infection control measures.

QIAS Principle: 8.4 FDCQA Principle: 4.3

Prof. Frank Oberklaid

"Health in Early Childhood Settings: From Emergencies to the Common Cold"
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