Identification of Common Childhood Rashes and Diseases

Adapted from
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INTRODUCTION

The skin is an important and very complex part of our bodies. The outermost stratum comeum’s major function is to be a barrier preventing access against penetration of irritants, toxins, and organisms. It also limits the loss of body fluids and acts as a membrane to keep these in place. The rest of the epidermis has a function to provide a protective layer. (Cohen, 1993)

Definition: Rash; A temporary eruption on the skin. (Miller & Keane, 1987)

When assessing rashes it is important to include the appearance, the onset of the lesions, describe the type of lesions, progression, pattern of the lesions and distribution as well as other associated symptoms. (Cohen, 1993)(Committee of infectious diseases, 2000)(Field, et al., 1997)

To properly assess a patient with a rash it is important to obtain a history of what the patient’s preceding days have been like, and if they have been exposed to any infectious diseases recently.
**CHICKEN POX**

**Incubation:**
2-3 weeks
it is nearly impossible to diagnose chicken pox on day 1, and still difficult to know for certain on day 2.
When you first notice some spots draw a circle around a few of them. If they change into blisters within 24 hours, consider it chicken pox.

**Symptoms:**
Associated fever and runny nose. Mild fever, backache, headache, sore throat,
Rash begins as a few red spots or bumps (often mistaken for insect bites).
Raised pink/red rash that forms vesicles.
Vesicles then crust over.

**Cause:**
Virus- Varicella-zoster (VZV), part of the herpesvirus family.

**Contagious:**
Yes. Respiratory droplet infection or direct contact with secretions of infected persons
Skin vesicles contain the virus but are not the primary sources. Crusted lesions are not infectious.
Patients are contagious from 2 days before onset of the rash until all lesions have crusted.
Once the fever is gone and all the blisters are crusted over, the child is no longer contagious

**Treatment:**
Symptomatic treatment is given to provide relief from fever and pain

**Immunisation available:**
Yes, children > 18 months
Figure 1 - Raised pink/red rash that forms vesicles Eg. Chicken Pox.
COXSACKIE VIRUS (Hand, foot and mouth disease)

This is a common cause of mouth sores, in children ages 6 months to 3 years

**Incubation:**
3-7 days

**Symptoms:**
- High fever – often up to five days, appearing for 1 day, then disappears for 2 to 3 days, then returns for 2 to 4 days more
- Severe mouth pain or sore throat, copious drooling, refusal to eat or drink
- Small, red or white spots and blisters can, but not always, often appear on the hands or feet.

**Cause:**
*Enteroviruses*- The enterovirus group includes polioviruses, coxsackieviruses, echoviruses and other enteroviruses that live in the human digestive tract.

**Contagious:**
Yes. Primarily by droplet via saliva or by contact with surfaces contaminated by faeces.
No longer contagious when fever has been gone for 2 days without use of antipyretics, and child is back to playful, happy self.

**Treatment:**
Symptomatic treatment is given to provide relief from fever, aches, or pain from the mouth ulcers

**Immunisation available:**
no

**Figure 2** - Small, white Vesicle, appears on hands, feet & mouth. Eg. Coxsackie Virus.
DIPHTHERIA

Incubation:
2 to 4 days.

Symptoms:
Early symptoms are a sore throat and mild fever.

A membrane forms over the throat and tonsils causing dysphagia and compromised airway. The infection also causes the lymph glands and tissue on both sides of the neck to swell to an unusually large size.

If diphtheria is not properly treated, or not treated in time, the bacteria can produce toxin, which can damage cardiac muscle, causing heart failure or paralysis of respiratory muscles.

Cause:
Bacteria – Corynebacterium diptheriae

Contagious:
Yes. Airborne droplet infection via cough or sneeze of infected person or contact with these secretions.
Treatment:
Diphtheria is a medical emergency. A delay in treatment can result in death or long-term heart disease.
Treated with antibiotics and anti toxin
Mechanical ventilation may be required in severe cases.

Immunisation available:
Yes, DTP
Administered at 2, 4 & 6 months and 4 years of age.

Reportable to the Public Health Unit
(Diphtheria, 1998)
ECZEMA (Atopic Dermatitis)

**Incubation:**

n/a

**Symptoms:**

Dry, red, extremely itchy patches on the skin. Mild- flat, dry, white patches.

Exacerbation- red, irritated, raised patches.

Younger Child/infant- Characteristically occurs on the inner elbows and behind the knees

Older child- usually affects the front of the knees and outside of elbows.

It can also appear on the trunk, face, hands and feet.

A child can have as little as one patch, or dozens of patches.

**Cause:**

Generally, atopic dermatitis will come and go, often based on external factors. Although its cause is unknown, the condition appears to be an abnormal response of the body’s immune system caused by:

- genetic tendency toward dry, irritated skin
- skin allergies to a variety of irritants and foods.

**Contagious:**

No

**Treatment:**

Application of lotions or creams to keep the skin as moist as possible. These treatments are generally most effective when applied directly after bathing (within three minutes is a common recommendation) so that the moisture from the bath is “locked in”.

Hydrocortisone cream 1%.

For severe itching, sedative antihistamines are sometimes used to reduce the itch.
Immunisation available:

n/a

Figure 5a – Acute or chronic cutaneous inflammatory condition with erythema, papules, vesicles, pustules, scales, crusts, or scabs, alone or in combination. Eg. Eczema

(What is Eczema?, 2007)

http://www.eczemaguide.ca/images/eczema2.jpg
FACIAL RASHES

**Incubation:** n/a

**Symptoms:**
Infants and young children will get a rash/irritation around the mouth and cheeks at some point during their childhood. It usually appears as flat patches, or slightly raised patches, with tiny red bumps scattered around the mouth and chin.

**Cause:**
Drooling, pacifiers, allowing smeared food to remain too long on the face, or rubbing face against parent’s clothes. This rash will often remain for weeks at a time.

**Contagious:**
No

**Treatment:**
Rash will clear without treatment. Lanolin, hydrocortisone 1% creams have been shown to be helpful.

**Immunisation available:** n/a
FIFTH DISEASE (Slapped Cheek)

Incubation:
1-2 weeks

Symptoms
Causes bright red cheeks (appearance of child being slapped), often with associated fever. Then a generic lacy or pimply rash spreads from the trunk to the extremities. There may also be a runny nose and cough.

Cause:
Human Parvovirus B19 (HP-B19)

Contagious:
Yes. Respiratory droplet infection or direct contact with secretions of infected persons
Most infectious before rash appears

Treatment:
Symptomatic treatment is given to provide relief from fever and pain

Immunisation available:
No

(Parvovirus B19 (Fifth Disease), 2005)

CAUTION: Pregnant woman should be aware of potential risks for unborn child in the case of exposure, and should contact GP.

Children with haemolytic blood disorders, sickle cell, or undergoing chemotherapy should be aware of the dangers of being in contact with affected patient.

Figure 7a- Fifth Disease 2 e.g. Fifth Disease 1

Figure 7 - Maculopapular Rash on the cheeks. E.g. Fifth Disease
http://www.robynsnest.com/images/fifths.jpg
GLANDULAR FEVER (Kissing Disease)
(Medical Name: Infectious Mononucleosis)
(Teen Health - Teen Topics - Glandular Fever, 2008)

Incubation:
4 to 7 weeks

Symptoms:
- Feeling generally unwell, headache, tiredness, nausea, abdominal pain, general aches and pains, High temperatures (>39 °C).
- A severe sore throat develops after 1-2 weeks. Tonsils are usually inflamed and may develop white spots.
- Swelling of the glands, especially those in the neck.
- Swollen spleen causing pain beneath the ribs on the left side.
- The liver is usually affected (hepatitis) however jaundice is uncommon.

Cause:
Glandular fever is caused by the Epstein-Barr virus

Contagious:
Yes, but only through contact with saliva. Does not require isolation.

Treatment:
No specific treatment is available. Supportive treatment of symptoms as they occur. Patients should rest when tired and drink plenty of fluids. Patients should avoid sport due to the possibility of a ruptured spleen.

Immunisation available:
No
HEAT RASH

Incubation:
Varies

Symptoms:
Rash of small pimples, bumps, or spots
Usually appears on the back of the neck, shoulders or lower back, but can involve the entire trunk.

Cause:
Obstruction of the sweat glands, due to a mix of sweat, heat and clothing.

Contagious:
No

Treatment:
Cooling the child, airing out the area, tepid baths etc.

Immunisation available:
n/a
Figure 8 - Maculopapular Rash Eg. Heat Rash..

Prickly heat rash

http://www.webmd.com/hw/health_guide_atoz/tp12532.asp

http://www.theboisverlifte.com/galleries/hawaiib2/page_9.jsp
HENOCH-SCHONLEIN PURPURA (HSP)

Incubation:

n/a

Symptoms:

Headaches, anorexia, fever, followed by a rash, commonly accompanied by abdominal pain, peripheral edema, vomiting and/or joint pain. Renal disease may develop.

Cause:

Immunoglobulin A (IgA)–mediated autoimmune phenomenon. An unknown antigenic stimulant or infectious agent is thought to cause a rise in IgA. Multiple infectious agents have been associated with the disease.

Contagious:

No

Treatment:

Supportive, with symptomatic treatment including elevation of swollen extremities, bland diet and adequate hydration.

Patients with renal involvement require monitoring of their fluid balance, electrolyte status. Antihypertensives may be used when indicated.

Immunisation Available:

No

(Pediatrics, Henoch-Schönlein Purpura, 2007)
HERPES SIMPLEX

**Incubation:**
2-10 days

**Symptoms:**
Initial infection is more severe, causing lymphadenopathy, pain, tenderness, paresthesias, and burning at the site of infection, accompanied by malaise, headache and fever.

Recurrent Herpes is milder by contrast and shorter in duration than the initial outbreak. (Visual DX Health, 2007)

Most commonly, it is seen in children with painful blisters and erosions of the gums and the skin around or lining the mouth. Blisters form a moist scab in a few days the fall off. The child may also have a fever, swollen lymph nodes in the neck, irritability, and a poor appetite. (Cohen, 1993) (Committee of infectious diseases, 2000)

**Cause:**
Herpes Simplex Virus 1.

**Contagious:**
Contagious while lesions are present. 2-21 days but peaks at 6. (Visual DX Health, 2007)

**Treatment:**
Treatment is supportive treatment only. Xylocaine viscouse can be used in the mouth to help with pain. In severe infections, if the child is immunocompromised or if the lesions are around the eyes, IV acyclovir may be given. (Miller & Keane, 1987) (Weston, 1995)

**Immunisation available:**
n/a
**IMPETIGO (School Sores)**

**Incubation:**
1 to 3 days

**Symptoms:**
Red, raised bumps or patches with a honey-colored crust on the surface

Commonly on face (around mouth and nose), arms, hands and scalp, but can occur anywhere.

**Cause:**
Mild impetigo is often caused by streptococcus or staphylococcus bacteria

**Contagious:**
Yes. Contact with lesions.

**Treatment:**
Discourage child from scratching lesions
Topical antibiotic preparations
Oral antibiotic preparations

**Immunisation available:**
n/a

(Childhood Illnesses - Impetigo - Infection of the Skin)

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**Figure 11** – Thin-Walled vesicles & bullae which become pustular & thin-crusted, appearing in crops e.g. Impetigo

www.emedicine.com/emerg/images/287ABullImp.jpg
KAWASAKI DISEASE
Kawasaki disease is a systemic vasculitis that predominantly affects children <5 years of age (Royal Children's Hospital, Melbourne)

Incubation:
NA

Symptoms:
Fever for more than 5 days, plus 4 out of 5 of the following.

- Polymorphous rash
- Bilateral (non purulent) conjunctivitis
- Mucous membrane changes eg. Reddened or dry cracked lips, strawberry tongue, diffuse redness of oral or pharyngeal mucosa
- Peripheral changes, eg erytema of the palms or soles, oedema of the hands or feet, and in convalescence desquamation
Symptoms may be sequential or concurrent.

**Cause:**

Although the specific aetiological agent remains unknown, it is believed that Kawasaki disease is a response to some form of infection.

**Contagious:**

No.

**Treatment:**

Intravenous immunoglobulon.

Aspirin.

**Immunisation available:**

No.
MEASLES

Incubation:
10-12 days until first symptoms, and day 14 until rash develops

Symptoms:
Respiratory virus, lasting approx 2 weeks. Red blotchy rash starting at face and spreads down the body. Lasts 4-7 days.
Associated fever, runny nose, hacking cough and sore eyes
Koplik's spots inside the mouth that look like a tiny grains of white sand surrounded by a red ring.
Measles can lead to secondary illness ie. croup, bronchitis, bronchiolitis, pneumonia, conjunctivitis, otitis media, myocarditis, and encephalitis.

Cause:
Rubeola virus

Contagious:
Yes. Respiratory droplet infection or direct contact with secretions of infected persons
Highly infectious
Isolate child for a min. 4 days post onset of rash

Treatment:
Symptomatic treatment is given to provide relief from fever and pain

Immunisation available:
Yes, MMR – Administered at 12 months and 4 years of age.

Reportable to the Public Health Unit

(Infections - Measles, 2005)
Figure 13 – Eruption first on face, as small maculopapular lesions. Enanthem (Koplik’s Spots) Eg. Measles
MENINGOCOCCAL DISEASE

Incubation:
From 2-10 days

![Petechiae/Purpura Rash example](http://www.nlm.nih.gov)

Figure 14 – Petechiae/Purpura Rash eg. Meningococcal Disease

Symptoms:
Sudden onset of fever and petechiae or purpura.
In addition, a combination of headache, nausea, neck stiffness, photophobia, vomiting and drowsiness.
The child is also infectious for seven days prior to the infection arising. A precaution for people that have been in contact during this time.

Cause:
Meningococcal bacteria- *Neisseria meningitides*

Contagious:
Yes. Respiratory droplet infection or direct contact with secretions of infected persons.

Reportable to the Public Health Unit.


**Figure 14a Petechiae or Purpura Rash eg. Meningococcal Disease**

**Treatment:**
Antibiotic treatment.
Steroids may also be beneficial at this time.

**Immunisation available:**
Yes – Meningococcal C, at 12 months of age.

NOTE: Petechiae should be considered urgent until further history has been obtained. Intense coughing or vomiting can cause petechiae to face and neck PETECHIAE OR PURPURA FOUND ANYWHERE ELSE ON THE BODY OR IN ABSENCE OF INTENSE VOMITING/COUGHING REQUIRES IMMEDIATE MEDICAL ATTENTION!
MONGOLIAN BLUE SPOT

Mongolian blue spots are a blue-black nevus that is found typically on the sacral area of a baby from birth. They are usually found on oriental, black and American Indian babies. (Miller & Keane, 1987)(Weston, 1995)

Occasionally, Mongolian blue spots are mistaken for bruises, which can raise a question about possible child abuse. It is important to recognize that Mongolian blue spots are birthmarks, NOT bruises.

**Incubation:** NA

**Symptoms:**
Blue or blue-gray spots on the back, buttocks, base of spine, shoulders, and other body areas
Flat area with irregular shape and unclear edges
Normal skin texture

**Cause:**
NA

**Contagious:**
No

**Treatment:**
No treatment necessary or recommended

**Immunisation available:**
n/a
MOTTLING (Cutis Marmorata/Livedo Reticularis)

Figure 16- A marbled look about the skin caused by the uneven distribution of blood flow about the skin Eg. mottling
http://162.129.70.33/thumbnails/cutis_marmorata_2_060523.jpg

Incubation:
NA

Symptoms:
A marbled or mottled look about the skin of a newborn caused by the uneven distribution of blood flow about the skin

Cause:
The cause is felt to be due to both the immature vascular and neurologic system in the newborn. In other words, the normal adaptations of the skin adults have when exposed to heat or cold are not very efficient in the newborn. So, when a baby is exposed to the cold, the flow of blood in the skin becomes jagged in appearance. This is often accompanied
by uneven flow of blood to the hands and feet, so it is not uncommon for newborn babies to have a bluish coloration to these parts of the extremities.

**Treatment:**
None, the condition generally goes away over the first month of life although it can remain more constant in certain children particularly those with Down syndrome and other genetic disorders.

**Contagious:**
No

**Immunisation Available:**
n/a

(Cutis marmorata: Another normal newborn rash)

CAUTION: Mottling may appear when the child is peripherally shut down. Usually the child appears sick (febrile, etc.)
MUMPS

**Incubation:**
14-25 days

**Symptoms:**
Swollen parotid glands over 1-3 days with associated pain when chewing, swallowing, speaking. Swelling may be unilateral or bilateral.
Associated fever, myalgia and malaise.
Mumps in adolescent adult males may also result in the development of orchitis.
In females, mumps may affect the ovaries, causing pain and tenderness in parts of the abdomen.
In some cases, signs and symptoms of mumps are so mild that no one suspects a mumps infection. Doctors believe that about one in three people may have a mumps infection without symptoms.

**Cause:**
Virus- Paramyxovirus

**Contagious:**
Yes. Respiratory droplet infection or direct contact with secretions of infected persons
Most contagious from 2 days before symptoms begin to 6 days after they end.

**Treatment:**
Symptomatic treatment is given to provide relief from fever and pain

**Immunisation available:**
Yes, MMR – Administered at 12 months and 4 years of age.
Figure 17 – Swollen Parotid Glands – Eg. Mumps
http://www.ecbct.org/Diseasepic.html

(Infections - Mumps, 2006)
NAPPY RASH

Nappy rash is a dermatitis confined to the area covered by the nappy. It is most commonly characterised by confluent erythema of the convex surfaces of the buttocks, the areas of skin in closest contact with the nappy and it spares the groin folds. (Royal Children's Hospital Melbourne)

**Incubation:** NA

**Symptoms:**
Candidiasis lesions, usually pin or red with moist patches border by a thin collaret of scale.

**Cause:**
Candida Albicans present in the faeces) combined with:
- Excess skin hydration
- Skin trauma, due to friction between the nappy and skin
- Other irritants such as
  - Ammonia produced from urine
  - Diarrhoea
  - Soap and detergent residue
  - Powders, creams and nappy wipes.

**Contagious:** Yes, nappy rash may be considered infectious, because of its fungal nature.

**Treatment:**
Anti-fungal creams eg. Daktozin ointment.

ALERT: Children should also have their mouth checked for Candida infection. If baby is breast fed mum’s nipples also need to be treated as well. Mothers with Candida breast infections of the nipple typically describe sharp shooting pain from the nipple radiating into the breast

Extreme nappy rash may be a child protection issue.
**NON SPECIFIC VIRAL RASH**

The most common rash suddenly appearing on a child is rash due to a variety of viruses. Some viruses can be easily identified, including chicken pox, fifth disease, and roseola. Most viruses, however, do not cause their own specific type of rash. These generic viral rashes can have many different appearances, such as lacy or pimply, raised or flat, bumps, spots, or blotches, and they often (but not always) start on the trunk, and then spread to the extremities.

![Image of non-specific viral rash]

**Figure 19 - Macular Rash. Eg. Non Specific Viral Rash**

Contagious period of viral illnesses – in general, most viral illness are contagious starting the day before the rash and fever start, and are no longer contagious after the fever has been gone for 24 hours (without use of antipyretics, to mask the fever), even though the rash will continue. Chicken Pox is the exception.
RINGWORM

Incubation:
Varies

Symptoms:
Small scaly patches surrounded by a pink ring

Cause:
Several different fungus organisms that all belong to a group called *Dermatophytes*

Contagious:
Yes. Direct skin-to-skin contact with an infected person or pet. Indirect contact with objects or surfaces that an infected person or pet has touched. In rare cases Ringworm can be spread by contact with soil

Treatment:
Treated with oral and topical anti fungal preparations.

Immunisation available:
n/a

Figure 20 – Red-ringed patch of vesicles, itchy & Painful. E.g Ringworm
http://againstthegrain.blogs.com/photos/celta/ringworm.html
ROSEOLA

Figure 21 – Papular Rash eg. Roseola

Incubation:
Approx 10 days

Symptoms:
Fever for several days often with no other symptoms. Rash appears after fever breaks. Child appears to be well, despite rash.
Some children will have swelling of the glands in the front and back of the neck, runny nose, cough, ear pain, vomiting or diarrhea with this illness. Children can have one or all of these symptoms.
Rash appears as red, flat or bumpy red rash. Usually appears around the neck, back and chest, then spread out. The rash lasts a few days to a couple weeks.
Almost only in children age 3 months to 3 years, most often between 9-12 months

Contagious:
Yes. Respiratory droplet infection or direct contact with secretions of infected persons
It is contagious from about 2 days before the fever starts until 1 or 2 days after the fever subsides.

Treatment:
Symptomatic treatment is given to provide relief from fever and pain.

http://kidshealth.org/parent/infections/skin/roseola.html
RUBELLA (German Measles)
Commonly known as German measles or 3-day measles

**Incubation:**
2-3 weeks

**Symptoms:**
Rash pink blotchy rash lasting for up to 3 days. The rubella rash can look like many other viral rashes.
Mild fever, runny nose, swollen nodes, arthralgia, conjunctivitis
Note: Rubella may cause congenital rubella syndrome if mother is infected during pregnancy. Including risk for growth retardation; mental retardation; malformations of the heart and eyes; deafness; and liver, spleen, and bone marrow problems.

**Cause:**
Rubella Virus, not the same virus that causes measles.

**Contagious:**
Yes. Respiratory droplet infection or direct contact with secretions of infected persons
Isolation for at least 4 days after rash appears
Most contagious from 1 week before to 1 week after the rash appears.

**Treatment:**
Symptomatic treatment is given to provide relief from fever and pain

**Immunisation available:**
Yes, MMR – Administered at 12 months and 4 years of age.
(Eliminating measles and rubella and preventing congenital rubella infection, 2006)
SCABIES

Incubation:
New infections- 2-6 weeks. Reinfections 1-4 days

Symptoms:
Scabies is an infection of the skin by a mite. Two to four weeks after infection, red itching bumps or blisters occur. These bumps are an allergic reaction to the insects. New insects hatch from the eggs and can be spread to other areas of the skin by scratching.

Itching worsens at night. Worst around wrists, axilla, buttocks and groin.

Cause:
Mite *Sarcoptes scabiei*. The mite makes a shallow burrow into the skin and lays eggs in this burrow. Spreads via scratching

Contagious:
Yes. Direct contact. Contagious until 1 day after treatment has begun.

Treatment:
Topical Permethrin cream should be applied to clean and cool skin. Oral antihistamines can be used to control itching.

Immunisation available: no

(Scabies - More Details/Information for Students, 2007)
SCALDED SKIN SYNDROME

Also known as Pemphigus neonatorum or Ritter’s disease

**Incubation:**
NA

**Symptoms:**
Usually presents following a respiratory type illness when there is development of a faint erythematous eruption, which begins on the face, neck, axilla and groin. Crusting begins around the mouth and eyes and the skin becomes very tender. Slight rubbing of the skin causes it to peel off or form blisters. General shedding of the skin usually occurs 14 days post acute infection. (Cohen, 1993), (Weston, 1995)

**Cause:**
Caused by *Staphylococcus aureus* bacteria.

**Contagious:**
No

**Treatment:**
Usually self limiting in healthy children., but may respond to oral antisaphylococcal antibiotics. (Cohen, 1993), (Weston, 1995)

**Immunisation available:**
No
SCARLET FEVER

Incubation:
2-5 days

Symptoms:
Child may present with a sore throat 1-2 days before developing a fine red popular sandpaper like rash, usually fiery red. The rash starts on the face and spreads to the trunk, arms and legs within 24 to 48 hours. A petechial line across the major skin folds in the axilla and antecubical fossa may also occur. This is known as Pastia’s signs. There is no rash on the palms or soles of the feet. By the 4th or 5th day the child will have a bright strawberry red tongue. (Cohen, 1993), (Committee of infectious diseases, 2000), (Miller & Keane, 1987), (Weston, 1995)

Figure 26 - Rose-coloured Maculopapular rash. E.g Scarlet fever stage 1
http://www.med.cmu.ac.th/dept/pediatrics/06-interest-cases/ic-14-fever-rash/case8-p1.htm
Cause:
Group A *streptococcus* bacteria.

Contagious:
Yes. Patient should be isolated for 24 hours after beginning antibiotic treatment.

Treatment:
Penicillin or amoxicillin may shorten the length of the fever and other symptoms. Sorbolene or other moisturizing creams may be used for the skin to assist with superficial flaking. (Miller & Keane, 1987), (Weston, 1995)

Immunisation Available:
no
SHINGLES
A painful eruption of acute, inflammatory, herpetic vesicles along a peripheral nerve often on one side of the trunk or face. (MIMS, 2006)

Incubation:
NA

Symptoms:
Intense pain, burning or tingling on an area of skin around the trunk or face. May be associated with a general feeling of being unwell or a fever. A painful red rash, often distributed as a band, appears on this area of skin after 2 or 3 days.

The rash begins as a group of small bumps that quickly become fluid filled blisters which eventually burst and form a crusty surface. It may take up to 5 weeks for the skin to heal and return to normal.

Cause:
Virus- Varicella-zoster (Same virus as Chickenpox). After a patient has recovered from Chickenpox, the inactive virus remains in the body around the base of nerve cells that supply sensation to the skin. In 10 to 20 percent of patients the virus will become active again and spread along the nerve it has been occupying.

Shingles are most likely to occur when the immune system is in a weakened state, such as can occur with a cold or more serious illness.
**Contagious:**
Yes however, while it is possible to contract Chickenpox from contact with someone who has shingles, it is not possible to contract shingles.

**Treatment**
Antiviral medication, best given within 3 days of the rash appearing. This will not stop shingles occurring but may shorten the recovery time and lessen the severity and likelihood of complications. Lotions and pain relief medications may also be used.

**Inoculation:**
No vaccine is currently available for shingles however Chickenpox vaccine is available for adults and children older than 18 months.
STEVENS-JOHNSON SYNDROME

(Erythema Multiforme (Stevens-Johnson Syndrome), 2006)

SJS is a severe and life-threatening condition. It is thought to be a hypersensitivity complex affecting the skin and mucous membranes. Some classify SJS as a severe expression of Erythema Multiforme and it is occasionally referred to as Erythema Multiforme Major.

![Figure 29- Vesicles on skin & mucous membranes, very painful. Eg. Stevens - Johnson syndrome](http://aidsmyth.addr.com/images/nevirapine/SJSchildface.jpg)

**Incubation:**
NA

**Symptoms:**
Painful, blistered lesions on the skin and mucous membranes of the mouth, throat, eyelids and genital region. May lead to serious eye problems.

**Cause:**
The root cause of SJS can be either an immune-caused adverse drug reaction or a viral or deep fungal infection.

**Contagious:**
No, although the root cause may be infectious.

**Treatment:**
No specific treatment exists for this disease, and survival and recovery ultimately depend on aggressive supportive care and removal of the offending agent.

**Immunisation available:**
No
URTICARIA- (Hives)

**Incubation:**
Can be sudden or gradual onset, and can spread rapidly

**Symptoms:**
Most common on the trunk, but can also be on the extremities, and occasionally on the face. Each welt will often come and go over a period of 10 to 15 minutes or as long as a few hours. Can appear small or very large weals, round or irregularly shaped, single or clustered together, often associated with pruritis.

**Cause:**
Exposure to allergen including foods, medications, external irritants such as soap, detergent, clothing material, or grass. Urticaria is common in children during a normal illness ie. Cold or fever

**Contagious:** No

**Treatment:**
Antihistamine and determine cause of reaction. Observe for signs of worsening symptoms ie. anaphylaxis, angioedema

**Immunisation available:** n/a

If anaphylaxis is post immunisation, a mandatory report to Public Health Unit is required.
GLOSSARY - DESCRIBING RASHES

Macule
Small circumscribed discolouration of the skin (spots or blemishes) in the color of skin, that are neither raised nor depressed.
They are entirely flat and can only be appreciated by visual inspection

Papule
A small solid rounded bump rising from the skin that is usually less than 1 centimeter in diameter
Papules may open when scratched and become crusty and infected.

Vesicle
A vesicle is a small blister, as on the skin. Vesicles also occur on mucous membranes i.e. buccal mucosa. Vesicles are less than 0.5 centimeters in diameter.

Bulla
A large blister that is greater than 0.5 centimeters in diameter.

Pustule
A pus-filled blister

Petechiae
Pinpoint flat round red/purple spots under the skin surface caused by intradermal hemorrhage.
Petechiae are < 3mm in diameter and do not blanch when pressed upon.
Petechiae are commonly seen after violent vomiting or coughing episodes and also in the newborn right after birth.
Anticoagulants, aspirin, and cortisone can also cause petechiae.

Purpura
A hemorrhagic area in the skin. The area of bleeding within the skin, by definition, is greater than 3 millimeters in diameter.
The appearance of the purpura depends on age of the lesion. Early purpura is red and becomes darker, then purple, and brown-yellow as it fades. Purpura does not blanch when touched.

Urticaria
Hives or "welts" are known as urticaria.
They are the result of histamine and other compounds that are released from mast cells.
Hives can occur anywhere on the body, but are most commonly found on the trunk
Typically fade away and clear up within 2-48 hours.
There are many forms and causes of hives. Most often, the cause of hives is unknown.

**Angioedema**

Angioedema is similar to urticaria, but affects a dermal skin layer.

Patients with angioedema most commonly develop swelling around eyes, lips hands and/or feet due to leaking of small dermal blood vessels. Occasionally, angioedema of the throat, tongue or the lungs can obstruct the airway, impede breathing, and become life threatening.

Treatment is directed toward relief of symptoms, typically involves antihistamines. In more serious cases adrenaline is used.

The underlying cause will need to be determined.

**Erythema**

Redness of the skin due to capillary dilatation.

**Ecchymosis**

**Bruise:** A purplish patch caused by extravasation of blood into the skin, differing from petechiae only in size (larger than 3 mm diameter).

**Exanthem & Enanthem**

**Exanthem:**

Any external rash. The word "exanthem" comes from the Greek "exanthema" which means "a breaking out.

**Enanthem:**

A rash inside the body. An example: the spots in measles (Koplik's spots) inside the mouth that look like a tiny grains of white sand surrounded by a red ring.

**Nodule**

A soft of solid mass that can be felt on or below the skin surface.

**Wheal**

A flat topped palpable lesion varying in size and configuration with well demarcated edges. Blanches upon pressure.
BIBLIOGRAPHY


Eliminating measles and rubella and preventing congenital rubella infection. (2006, July). Retrieved February 2008, from World Health Organisation - Regional Office for Europe: http://www.euro.who.int/vaccine/20030808_4


*Scabies - More Details/Information for Students*. (2007, June 7). Retrieved February 24, 2008, from Royal Adelaide Hospital - Sexually Transmitted Diseases Clinic: 
http://www.stdservices.on.net/std/scabies/details.htm

*Some Infectious Diseases of Children*. (2001, September). Retrieved February 2008, from NSW Health: 

*Teen Health - Teen Topics - Glandular Fever*. (2008, January 2). Retrieved February 11, 2008, from Childcare, Youth and Women's Health Service, Child and Youth Health: 

http://www.visualdxhealth.com/child/herpesSimplexVirusHSV.htm


http://www.skincarephysicians.com/eczemanet/whatis.html