Dermatology

Karen Rufo MS, PPCNP-BC
December 3, 2014

Disclosures
• I have no conflicts or financial investments pertaining to the School Health Institute
• Please turn cell phones to vibrate
• Please limit side bar conversations
• “Common Sense Prevails”

Goals of the Session
• To share information regarding dermatological issues, abdominal pain, gynecological and genitourinary systems
• Have a few laughs
• Get CEU’s

Clicker Use
Anonymous
Short window to answer
Keeps the learner engaged
Verifies to the presenter if the lesson was learned
How far did you travel to get here?

1. 1-10 miles
2. 10-20 miles
3. 20-30 miles
4. 30-40 miles
5. 40-50 miles
6. Over 50 miles
7. So far, I flew in by plane

How long have you been in school nursing?

1. 
2. 
3. 
4. 
5. 
6. 

What level of school nursing do you practice?

1. Preschool
2. Elementary
3. Middle
4. High School

What documentation system do you use in your practice?

1. SNAP
2. Health Office
3. Another electronic health record system
4. Paper Records
The Philtrum can be found on the:

1. Arm
2. Fingernail
3. Face
4. Knee

A “Bell Clapper Deformity” involves the:

1. 
2. 
3. 
4. 
5. 

The Rule of 9’s applies to:

1. IV Infusions
2. Burns
3. Medication Dosing
4. Hematocrit and Hemoglobin Ratio

What is the largest organ of the body?

1. Liver
2. Brain
3. Skin
4. Lungs
Wounds

1. Lacerations
2. Incision
3. Abrasions
4. Puncture
5. Avulsions
6. Amputations

Laceration

Abrasions

Puncture Wound
Purpose of Wound Closure

1. Assist in homeostasis
2. By closing the wound, you decrease the risk of infection
3. Minimize scarring

To suture or not to suture......

1. Depth
2. Width
3. Location
4. Type of Wound-Mechanism of Injury
5. Time Elapsed Since Injury
6. Underlying Health and Immune Status
### Depth
- If you can see subcutaneous fat
- If bleeding doesn’t stop within 10 minutes of pressure and elevation
- More than ¼ inch deep

### Width
- Are the edges of the wound easily approximated?
- Are the edges jagged?

### Location
- Areas of body that “stretch” i.e over joint
  
  FYI- Dermabond “glue” is not usually used on hands/fingers or over joints
- Any wounds on face- including mouth, eye, nose, lip, and/or ear

### Parts of the Lips
- Cupid’s Bow
- Philtrum
- Vermillion Border
- Oral Commissures
- Oral Commissures
Lip Wounds

Lip-important to repair if through the vermilion border - even 1 mm of vermilion misalignment may be noticeable

Call Plastic Surgeon if:
- Large flaps where food can get lost
- Large amounts of the vermilion border missing
- Macerated wounds
- Involvement of the commissure (corners of lips)
- Loss of more than 25% of the lips
- Lacerations through the eyelid, the philtrum, and vermilion border

Time Elapsed Since Injury

- Not clearly defined
- Most resources say up to 6-8 hours post injury
- Face and Scalp Wounds can be sutured up to 24 hours post injury due to the extensive blood supply

Type of Wound

- Is it a bite?
- Is it a “clean” vs “dirty” wound?
- Is it a puncture wound?
- Is there dirt, debris or foreign bodies in wound?
- Is the bleeding controlled?

General Health

- All students with diabetes
- All immunocompromised students
- Other co-morbidities
### Topical Anesthetics

**LET Cream**
- Combination of Lidocaine, Epinephrine and Tetracaine
- Gel based
- Apply 30 minutes before wound repair, cover with gauze
- Can be left on for up to 2 hours
- Other preparations are available: EMLA

### Tissue Adhesives

- Bonds in 2.5 minutes
- Same strength as sutures 7 days out
- Can be applied using a topical anesthetic
- Faster repair time
- Water resistant covering
- Does not require suture removal
- Adhesive peels off in 5-10 days

### Tissue Adhesives

**Contraindications**
- Jagged lacerations
- Bites, puncture or crush wounds
- Contaminated wounds
- Mucosal surfaces
- Axillae and perineum- high moisture areas
- Hands, feet and joints-unless kept dry and immobilized

**Do not apply topical antibiotic as it can interfere with wound healing**

Can shower but no bathing until adhesive falls off
### Puncture Wounds - Need MD Eval if:

1. Bleeding over 10 minutes
2. PW in head, neck, chest, abdomen, or throat
3. PW overlying joint
4. Tip of object is missing or broken off
5. Feels like something is in wound
6. Won't stand or bear weight on foot
7. Needle stick from used needle
8. Tetanus Prophylaxis
9. Can't clean wound
10. Severe Pain
11. Signs of infection
12. Fever
13. PW is caused by rusty object

### Puncture Wound

1. Do not remove impaled object
2. PW penetrates sneakered object
   - Pseudomonas grows well in the inner layers of sneakers (work boots too)
3. Send students with PW to foot wearing the sneakers he/she had on, to PCP for eval
4. There is an increase in risk of infection in foot due to structure of foot and increased cartilage

### Tetanus Prophylaxis

- Tetanus - caused by Clostridium tetani
- Dtap & DT- given to children younger than 7 yo
- Tdap &Td- given to individuals over 7 yo

### Animal and Human Bites

- Hands carry an increase risk of infection than to bites in any other part of the body
- No consensus for prophylactic antibiotic coverage
- If Rx- dog and human bites- Amoxicillin, Ampicillin, Doxycycline, Clindamycin, Ciprofloxacin
Which wound would you most likely refer for sutures?

1. A severe abrasion on the back
2. A puncture wound of the tongue
3. A laceration to the lower lip that extends through the vermilion border
4. A superficial laceration on the forearm with clean edges

Types of Burns

1. Thermal
   - Flash-explosions
   - Flame-fires
   - Scalds-hot liquids
   - Contact—hot items-metals, glass, coals
2. Chemical
3. Electrical
4. Radiological

Great Resources

http://hospitals.unm.edu/burn/classification.shtml

http://ameriburn.org

Burn Awareness Week February 1-7, 2015

Incidence of Burns

(Massachusetts Burn Injury Reporting System M-BIRS)

1. Scalds account for most common type of burn

   47% in 2013
   vs female
   Preschoolers highest incidence (83%)
<table>
<thead>
<tr>
<th>Burn Classification</th>
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<tbody>
<tr>
<td>First Degree Burn</td>
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<tr>
<td>Second Degree Burn</td>
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<tr>
<td>Third Degree Burn</td>
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<tr>
<td>Fourth Degree Burn</td>
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<table>
<thead>
<tr>
<th>Anatomy of Skin</th>
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**First Degree Burn**

- **Depth**: Epidermis (outer layer of skin)
- **Appearance**: Red and painful, no blisters
- **Texture**: Dry
- **Healing**: Usually in one week or less, injured layer of skin peels away from healthy skin
- **Level of Sensation**: Painful, tender, sore
- **Complications**: None
<table>
<thead>
<tr>
<th><strong>Second Degree Burn</strong></th>
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<tbody>
<tr>
<td><strong>Can be classified as Partial or Full Thickness</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Partial Thickness</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Depth:</strong></td>
<td>Involves entire level of epidermis and the upper layer of dermis</td>
</tr>
<tr>
<td><strong>Appearance:</strong></td>
<td>Pink, Red, Clear Blister</td>
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<tr>
<td><strong>Texture:</strong></td>
<td>Wet appearing, moist, wound will blanch when pressure applied</td>
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<tr>
<td><strong>Healing:</strong></td>
<td>10-21 days without grafting, scarring minimal</td>
</tr>
<tr>
<td><strong>Level of Sensation:</strong></td>
<td>Very painful</td>
</tr>
<tr>
<td><strong>Complications:</strong></td>
<td>infection</td>
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<td><strong>Full Thickness</strong></td>
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</tr>
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<td><strong>Depth:</strong></td>
<td>Involves entire level of epidermis and most of dermis</td>
</tr>
<tr>
<td><strong>Appearance:</strong></td>
<td>Can be red or white, oozying blisters</td>
</tr>
<tr>
<td><strong>Texture:</strong></td>
<td>Will appear dry, blanching is sluggish or absent</td>
</tr>
<tr>
<td><strong>Healing:</strong></td>
<td>Usually 4-6 weeks depending on surgery, will need excision and grafting</td>
</tr>
<tr>
<td><strong>Level of Sensation:</strong></td>
<td>Painful, but may have decreased sensation</td>
</tr>
<tr>
<td><strong>Complications:</strong></td>
<td>infection, scarring, may evolve into 3rd degree burn</td>
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<tr>
<td><strong>Depth:</strong></td>
<td>Hypodermis, involves all layers of the skin</td>
</tr>
<tr>
<td><strong>Appearance:</strong></td>
<td>Black, brown, red, pale pink or white; may or may not have blisters</td>
</tr>
<tr>
<td><strong>Texture:</strong></td>
<td>Will appear dry, charred, leathery, blanching is sluggish or absent</td>
</tr>
<tr>
<td><strong>Healing:</strong></td>
<td>May take weeks to months, depending on surgery, will need excision and grafting, scarring present</td>
</tr>
<tr>
<td><strong>Level of Sensation:</strong></td>
<td>very little or no pain</td>
</tr>
<tr>
<td><strong>Complications:</strong></td>
<td>Infection, Tetanus, Contractures, Scarring, Hypothermia</td>
</tr>
</tbody>
</table>
Third Degree Burn

Depth:
Down to bone and muscle

Appearance:
Brown, charred, eschar

Texture:
Dry, leathery open wound

Healing:
May take years without a graft, will need excision and grafting, scarring present; Has high mortality rate

Level of Sensation:
No pain

Complications:
Infection, Amputation, Tetanus, Contractures, Scaring, Functional Impairment, Gangrene

Emergency Treatment of Burns

1. Wash with mild soap and cool water
2. Remove any jewelry (or clothing if it is not in the burn) around the area
3. Do not break blisters
4. Can put a thin layer of Bacitracin, Neosporin, Aloe or Silvadene
5. Apply a sterile, non-adhering dressing
6. Check tetanus status

Fourth Degree Burn

Depth:
Down to bone and muscle

Appearance:
Brown, charred, eschar

Texture:
Dry, leathery open wound

Healing:
May take years without a graft, will need excision and grafting, scarring present; Has high mortality rate

Level of Sensation:
No pain

Complications:
Infection, Amputation, Tetanus, Contractures, Scaring, Functional Impairment, Gangrene

Factors to Consider in Burns

1. Very young and very old have thinner skin, so it is easier to damage

2. Scar formation—depends upon level and location of skin destruction and the individual’s tendency to scar
Rule of “nines”
- used to calculate body surface area

Pediatric Rule:
  Head is assigned 18%, 14% each leg
  Each year above one, add 0.5% to each leg and subtract 1% from head
  Do that until reach adult numbers (9% for head and 18% for each leg)

Alternative to Rule of Nines

Compare burn area to size of patients palm

Patients palm size is 1% BSA

When to Refer Burns for Medical Attention
1. On feet, face, hands, genitals or buttocks
2. Larger than 3 inches in diameter
3. There is impaired breathing/circulation
4. Burn is over a joint-knee, shoulder
5. Pain
6. Tetanus Prophylaxis
Macule

Papule

Pustule

Vesicle
**Stevens-Johnson Syndrome (SJS) and Toxic Epidermal Necrolysis (TEN)**

- Severe cutaneous hypersensitivity reactions
- Very similar syndromes
  - SJS affects < 10% of BSA
  - TEN affects > 30% of body
- Rare: affects 1-5 people out of a million
- Increased incidence in: bone marrow transplant recipients, Pneumocystis jirovecii-infected HIV pts., SLE pts

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**SJS and TEN**

**Etiology**
- Medications cause 50% SJS and 95% TEN
- Other causes: Infections, Vaccinations and graft-vs-host disease

**Dx:**
- Clinical Picture/History
- Skin biopsy

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**SJS and TEN**

**Sx:**
- Prodrome: malaise, fever, headache, cough, conjunctivitis
- Macules appear on face, neck and upper trunk then progress to the rest of the body
- Macules turn into large fluid bullae
- Bullae slough off over 1-3 days
- May have respiratory involvement
- May develop Hepatitis and Glomerulonephritis
SJS and TEN

Tx:
- Most successful with early dx & treatment
- Supportive care- ICU or burn unit
- Drug treatment: controversial
  - Cyclosporine
  - Corticosteroids
- Plasma Exchange
- IVIG

Steven Johnson Syndrome

Toxic Epidermal Necrolysis

DRESS-Drug Reaction with Eosinophilia and Systemic Symptoms

- Rare, unexpected reaction to a medicine
- Affects multiple organs-skin, liver, kidneys, lungs and/or heart
- Generally starts 2-8 weeks after taking medication responsible for syndrome
DRESS

Sx:
- High fever
- Widespread rash (last several weeks)
- Enlarged lymph nodes
- Blood dyscrasias
- Liver enlargement
- Kidney Disease
- Myocarditis/Pericarditis
- Meningitis
- Pneumonia, ARDS

Drugs associated with DRESS in two or more cases

- Abacavir
- Allopurinol
- Amlopiptyline
- Captopril
- Carbamazepine (Tegretol)
- Celecoxib
- Celecoxib
- Dapsone
- Hydroxychloroquine
- Ibuprofen
- Lamotrigine
- Mexiletine
- Minocycline
- Nevirapine
- Oxcarbazepine
- Phenobarbital
- Phenytoin (Dilantin)
- Sulfasalazine (Azulfidine)
- Sulfamethoxazole
- Vancomycin


DRESS

Dx:
- Clinical Picture/History
- Skin Biopsy
- Blood Work

Tx:
- Stop the Offending Medication
- Supportive Care-Hospitalization
- Steroids
- IVIG, Plasmapheresis
- Imminomodulatory Drugs
Staphylococcal Scalded Skin Syndrome (SSSS)

- Skin infection caused by Staph bacteria that produces a toxin, creating skin blisters and desquamation
- Usually occurs in students under age 5 yo
- Also known as Ritter’s Disease

SSSS

Sa: Blisters
Fever
Painful Skin
Red Skin
Large areas of desquamation
Nikolsky’s Sign – weepy open skin areas

Dx: Clinical Picture/History
CBC
Skin, Nose, Eye, Throat and Blood Cultures

SSSS

Tx: Depends on age and severity of case
Hospitalization – Burn Unit
Antibiotics
Supportive Care
Fluid and electrolyte replacement

Complications:
Cellulitis
Septicemia
Meningococcal Meningitis

Caused by bacterium *Neisseria meningitidis*

Causes infection of the brain and spinal cord or bloodstream

Spread via respiratory secretions of infected person

Dx: Made by clinical picture/history
    CSF Testing and Blood Work

Symptoms of Meningococcal Disease

- Sudden onset high fever
- Headache
- Stiff neck
- Nausea
- Vomiting
- Photosensitivity
- Rash (in septicemia)
- Confusion
- Seizures (meningitis)

Meningococcemia

Meningococcal Disease

Treatment:
- Hospitalization-ICU
- Antibiotics-Ceftriaxone, Penicillin

Complications:
- Death
- Brain damage
- Hearing loss
- Loss of limbs
- Renal failure
Prevention of Meningococcal Disease

Vaccine
First vaccine-1978-MPSV4
Second Vaccine-2005- MCV4
  Menveo- ages  2yo-55 yo
  Menactra- ages 9 mos-to 55 yo

When to give?
First vaccine: 11-12 yo
Booster: 16 yo ( or 3-5 years after primary dose)

How many in the room have had Chicken Pox?

1. Yes
2. No
3. Got the vaccine

Chicken Pox (Varicella)
Caused by the varicella-zoster virus
Highly Contagious-droplet, contact
Contagious-up to 5 days (usually 2) before rash and five days after rash appears or until lesions have crusted over
Incubation: 10-21 days (usually 14-16)
Sx: fever, anorexia, malaise, rash (trunk ➔ limbs)
Tx: Supportive
Complications: pneumonia, encephalitis
Chicken Pox and School Attendance
State reported disease - report to local BOH

- When can they come back to school?
  - Not until all lesions are dried (usually 5 days)
  - No new lesions appear (usually 5 days)

- Check immunosuppressed students who would have had contact with the case

Varicella Vaccine
Live attenuated vaccine
Came out in 1995
In 2005, MMRV for ages 12 months through 12 years
First Dose: 12-15 months of age
Second Dose: 4-6 years of age
Catch Up Schedule: 13 yo two doses at least 28 days apart

- If they do get chicken pox, will get a milder, shorter case
- About 1% get chicken pox from vaccine
- Can be given up to 72 hours after exposure to chicken pox

Shingles (Herpes zoster)
Painful rash caused by same virus that causes chickenpox, varicella zoster virus
After getting chicken pox, virus lies dormant in nerve root
Shingles can not cause shingles in another person, BUT if you have not had chickenpox or been vaccinated, you can get chicken pox from exposure to shingles
Shingles is contagious while rash is blistering-no before rash erupts or after crusting

Shingles
Lesions should be completely covered
If they can’t be covered, stay home until the lesions are crusted over
May need to remove students who are not immunized or immunocompromised from class

Shingles (Herpes)

Measles (Rubeola)
German Measles (Rubella)
- Contagious viral infection (parvovirus B19)
- Seen more commonly in late winter and spring
- "slapped cheek disease"
- Spread by respiratory route (droplet)
- Not contagious once rash appears
- Little health risk EXCEPT to pregnant women

Fifth’s Disease
Sx:
- Initially: fever, runny nose, headache
- 1-3 days later: “slapped cheek rash”
- followed by “lacy rash” on rest of body
- May get painful or swollen joints

Fifth’s Disease
Dx:
- Clinical Picture/History
- Blood test to check immunity after infection

Tx:
- Supportive

Refer pregnant teachers to their OB MD’s
Fifth’s Disease

Dr Willy Burgdorfer
Swiss-born researcher

Discovered the bacteria that caused Lyme disease-1982

The spirochete was named Borrelia burgdorferi

Lyme Disease

Caused by bacterium *Borrelia burgdoferi*

Spread through the bite of ticks

In most cases ticks need to be attached for 36-48 hours or more before the Lyme disease can be transmitted

Dr Willy Burgdorfer

Discovered the bacteria that caused Lyme disease-1982

The spirochete was named *Borrelia burgdorferi*

Lyme Disease

Sx:
Classic, red “bulls eye” rash-usually within 7 days
Facial or Bell’s Palsy
Headaches and stiff neck

Dx:
Clinical Picture/History
Blood Work
Lyme Disease Treatment

Antibiotics
- Doxycycline for children over 8 yo
- Amoxicillin or Cefuroxime under 8 yo
- 14-21 day course is recommended
- Treatment is based on pts symptoms and stage of disease

Complications of Lyme Disease

- Fatigue
- Arthritis
- Cardiac Conduction Issues
- Parasthesias
- Cognition and Memory Issues

Hand, Foot and Mouth Disease

Common viral illness affects children younger than 5 yo
Enterovirus –Coxsackievirus is most common

Virus can be found in infected person’s: nose and throat secretions, blister fluid and feces

Virus can be spread by:
  - close personal contact
  - through the airborne (droplet) route
  - contact with feces
  - contaminated objects and surfaces

Lyme Disease

Complications of Lyme Disease
Hand, Foot and Mouth Disease

Dx: Clinical Picture/History
Throat or Stool Culture

Tx: Supportive
Tylenol/Motrin for fever and pain
Mouth swishes for oral lesions

Scarlet Fever

Bacterial infection caused by group A strep

Sx: Fever, Chills
Sore Throat
Vomiting and Abdominal Pain
“strawberry tongue”
Rash (1-2 days after other sx)- first appears on neck, underarm and groin- then rest of body
Rash is fine, red bumps-“sandpaper rash”

Scarlet Fever

Dx: Clinical Picture/History
Throat Culture

Tx: Antibiotics

Complications: Rheumatic Fever
Kidney Disease
Abcesses
Pneumonia
Scarlet Fever

**Impetigo**

Bacterial skin infection caused by strep or staph

Is contagious and can be spread by contact with infected lesions

**Dx:** Clinical Picture/History
  Culture of lesion

**Impetigo**

**Sx:** small red spots, that turn into blisters
  lesions ooze fluid and look crusty
  lesions increase in size and number
  lesions are not painful, but maybe itchy

**Tx:** Antibiotic Cream
  Can return to school after 24 hours of treatment
**Molluscum Contagiosum**

Contagious viral infection

Spread by direct contact or contact with an object that has the virus on it, i.e. a towel

Sx: pearly or flesh colored bumps
bumps may appear alone or in clusters

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**Ringworm (Tinea corporis)**

Skin infection caused by a fungus

Spreads easily, transmitted by direct contact or from contact with contaminated objects

Sx: Rash — starts as small area of red, raised spots and pimplles
rash becomes “ring shaped”, red raised border and a clearer centers
rash can be “itchy”
Ringworm (Tinea corporis)

Dx: Clinical Picture/History
   Scrapping of skin- using a KOH test

Tx: Antifungal Creams
   Use cream bid X 7 days
   can take up to 4 weeks to heal

Symptoms of Physical Abuse

Bruises
Unexplained bruises and welts:
  o On face, lips, mouth
  o On torso, back, buttocks, thighs
  o In various stages of healing
  o Cluster, forming regular patterns
  o Reflecting shape of article used to inflict (electric cord, belt buckle)
  o On several different surface areas
  o Regularly appear after absence, weekend or vacation

Burns
  o Unexplained burns: Cigar, cigarette burns, especially on soles, palms, back or buttocks
  o Immersion burns (sock-like, glove-like doughnut shaped on buttocks or genitalia)
  o Patterned like electric burner, iron, etc.
  o Rope burns on arms, legs, neck or torso
Symptoms of Physical Abuse

Unexplained fractures:
- To skull, nose, facial structure
- In various stages of healing
- Multiple or spiral fractures

Unexplained laceration or abrasions:
- To mouth, lips, gums, eyes
- To external genitalia

Cellulitis
- Acute bacterial infection of the skin and subcutaneous tissue
- Most often caused by strep or staph
  - strep: diffuse, rapidly spreading
  - staph: more local, mostly occurs in open wounds or abscesses

Sx: unilateral red, tender, warm area
Dx: Clinical Picture/History
Tx: Antibiotics
  - Dicloxacillin or Keflex
Cellulitis

MRSA

Necrotizing Fasciitis

- Rare infection, very rare in children
- Also known as “flesh eating bacteria”
- Bacteria can enter the body via surgery or injury
- Commonly caused by Group A Streptococcus (GAS) bacteria
- Occurs when bacteria infect the fascia (under the skin)

Necrotizing Fasciitis

Sx: Initial Sx

- Increase pain at site of skin opening
- Redness and warmth at site
- Flu-like symptoms-diarrhea, nausea, fever, dizziness, weakness and malaise
Necrotizing Fasciitis

**Sx:** Three to 4 days later:
- Swelling (purplish rash)
- Large violet colored marks\\blisters(foul smelling)
- Discoloration, peeling as gangrene sets in

**Sx:** Four to Five Days Later
- Severe hypotension
- Septic Shock

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**Necrotizing Fasciitis**

**Dx:**
- Clinical Picture/Exam
- Cultures

**Tx:**
- Hospitalization
- Supportive Care
- Antibiotics
- Medications to treat hypotension
- IVIG
- Surgery

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**Henoch-Schönlein Purpura (HSP)**

- Exact cause is not known
- Vasculitis of small blood vessels
- Most commonly seen in children ages 2-11 yo
- In 2/3 of cases, it is preceded with a URI
- Usually resolves in 4-6 weeks
Henoch-Schönlein Purpura

**Sx:**
- Rash → initial appearance is hive-like, then looks like bruises
- Rash → lower legs, buttocks, knees, elbows
- Joint pain and swelling
- Abdominal pain
- Kidney issues

**Dx:**
- Clinical Picture/History
- Biopsy
- Urine and Blood Tests

**Tx:**
- Supportive
- NSAID’s – Tylenol, Ibuprofen

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**Henoch-Schönlein Purpura**

**ITP**-Idiopathic Thrombocytopenic Purpura

Bleeding disorder where the immune system destroys the platelets

Usually follows a viral infection

**Dx:**
- Clinical Picture/History
- CBC with Platelet Count
- Clotting Studies
- Bone Marrow Aspiration
**ITP-Idiopathic Thrombocytopenic Purpura**

**Sx:** Bleeding into Skin (pinpoint red spots)
Easy Bruising
Nosebleed or bleeding in mouth
Heavy menstrual bleeding

**Tx:** Steroids
Danazol
Gamma Globulin infusions
Drugs that simulate bone marrow to make platelets

Precaution: Do not have them take ASA, or ibuprofen, as they interfere with platelet production

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**Scabies**

Contagious parasitic (mite)

**Sx:** Itching (worse at night)
Rashes (between fingers)
Thin, pencil lines on skin

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**Scabies**

**Dx:** Clinical Picture/History
Skin Scraping

**Tx:** Premethrin 5% cream
Environmental Control
Supportive Care
Children should not attend school until treated
1. Identify the suspected insect
2. Track “bed bug” sightings-where and how many
3. Avoid overreacting and panic, remain calm and professional
4. Do NOT isolate the student OR send the student home
5. Provide education to all staff and community
   a. Should include a written handout/pamphlet
   b. Should have copy of the school/district policy
6. Know the policy in your school and community
   1. a. Develop a school/district policy
   2. b. Policy should include letter for parental notification
7. Avoid clutter in classrooms and closets
8. Consider storing personal belongings in a covered plastic bin
9. Reduce carpeting and upholstered furniture
10. Minimize items brought to school
Contact Dermatitis

Mosquito Bites

Bee Sting