




ChildrensMD

Free mobile app

- Symptom checker
- Child dosage tables
- Access to 24/7 nurse hotline
- Emergency and Urgent Care location finder

Scan the appropriate QR code for your device to download the free mobile app or visit childrenscolorado.org/childrensMD

iPhone Android

Scan the QR Code to Download the ChildrensMD mobile app

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Telephone Triage Case Studies: Triage in School Nursing

Presented by the CHCO Pediatric Call Center

PRESENTERS:


- Elizabeth Kaleugher, MSN, RN, CPNP, CNII
- Lauren VanArsdel BSN, RN, CNII
- Kathleen Seckinger DNP, APRN, CPNP-PC, CNII
- Julie Klingel BSN, RN, CPN CNIV



Children's Hospital Colorado
www.chco.org

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Everything you wanted to know about the Pediatric Call Center



Elizabeth Kaleugher MSN, BSN-RN, CPNP
Pediatric Call Center
Children's Hospital Colorado

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WHAT THE CALL CENTER DOES AND HOW IT BEGAN

- Our telephone triage guidelines were created by telehealth pioneer Dr. Barton D. Schmitt, starting in 1988
- He is professor of Pediatrics at University of Colorado School of Medicine. He initially created them to support primary care providers in the community
- Used world-wide with a total of 355 afterhours and 259 office hours pediatric triage guidelines
- The Pediatric call center opened in 1992
- All calls are prioritized into a queue based on severity of symptoms.
- Specialized software is used to triage each call
- All call documentation is entered into MyChart or faxed to PCP

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PURPOSE OF THE PEDIATRIC CALL CENTER


- Provide expert nurse triage - all PCC nurses go through rigorous 3 months training with continued support
- We have many master prepared level 3 and 4 nurses
- Focused nursing assessment using evidence-based these guidelines to provide the best disposition
- Educate and empower caregivers for home care as well as direct to appropriate place and timing of care



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BENEFITS OF THE PEDIATRIC CALL CENTER

- Direct caregivers to proper level of care and may decrease unnecessary ED/UC visits and direct to 911 an immediate care when needed
- Encourage contact and follow up with primary care
- Increases safety and decreases healthcare costs



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Scope of the Pediatric Call Center

CHCO primary Care Clinics Nurse Triage (M-F 0800-1700 and After Hours)

After Hours Nurse Triage for subscribing community practices
Currently cover 107 practices in 5 different states Montana, Wyoming, Nebraska, Colorado, New Mexico

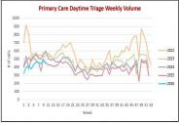
Parent Smart Health Line: Community Nurse Triage (24/7)

Free resource for anyone
CHCO Subspecialty Answering Service (Answer Hours)
Urology, ENT, Barbara Davis Center

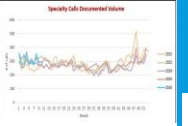


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Primary Care Daytime Triage Weekly Volume



Specialty Calls Documented Volume



Afterhours Triage Call Volumes




335,979

CALLS IN 2025

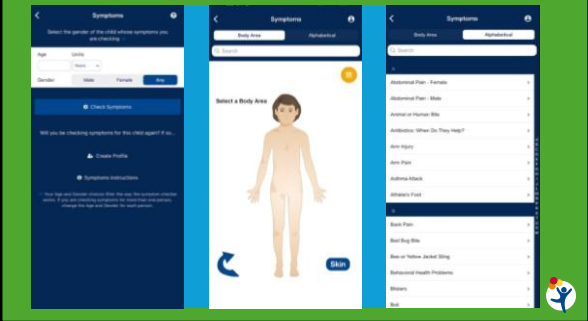
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ChildrensMD Mobile App

- A **free** mobile ap for community use that allows caregivers and families to look up symptoms and determine what action is needed, based on our PCC guidelines
- Home care tips and advice is available for any illness or injury that can be treated at home
- **BONUS perks**
 - Pediatric OTC medication dosage tables
 - Pictures to help identify symptoms, like rashes
 - First-aid illustrations to help users act immediately, if needed
 - Emergency and Urgent Care location finder
 - Access to 24/7 nurse hotline




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Telephone Triage Case Studies: Triage in School Nursing

Rashes:
Triage not Diagnosis


PRESENTER:
Lauren VanArsdel BSN, RN, CNII



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Have it all done™

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Rash Triage



- Red – Emergency/Urgent
- Yellow – Urgent/Semi-urgent
- Green - Routine

Take the pressure of diagnosis off yourselves. Your job is to know which rashes are an emergency, which rashes are urgent, and which ones just need routine care and monitoring.

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Initial Assessment

ABC's and fever	Demeanor – Is the child looking and acting sick?	Location – What part of the body? All over?	Color – red, pink, purple, flesh toned?
Flat/Raised – can you feel it when you run your finger over it?	Size – pinpoint? Pencil eraser? Quarter? Each one different?	Distribution – does it look the same everywhere?	Pruritic? Painful?

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Emergent Rash: Petechiae/Purpura

Non-blanching & purple/blood-colored (petechiae/purpura)
Especially with a fever and ill-appearing child.

These photos are from a triage call




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Emergent Rash: Hives with Anaphylaxis

Hives
WITH difficulty breathing, wheezing, coughing, abdominal cramping/vomiting.

Anaphylaxis is 2 or more body system involvement



This photo is from a triage call

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Urgent/Semi-urgent Rashes

Localized infection: cellulitis (characterized by redness, swelling, pain, hot to touch, and pus/discharge), ex: paronychia

Allergic reaction: Hives without other systemic symptoms, such as difficulty breathing.

Contagious infectious rashes (especially with fever): Measles, Chicken pox, Herpes, HFM, 5th disease, Scarletina

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Urgent/Semi-urgent rash: Measles

Measles is a viral infection characterized by:


- Fever
- Cough
- Runny nose (coryza)
- Red, watery eyes (Conjunctivitis)
- Rash

Measles is very contagious, spread by droplet.

Remains airborne up to 2 hours after the infected person has left the room.

9 out of 10 people near infected person, will develop an infection, if not protected.

Can develop symptoms within 21 days of exposure.



About Measles | Measles (Rubella) | CDC
Photos of Measles | Measles (Rubella) | CDC

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Urgent/Semi-urgent Rash: Chickenpox

Chickenpox is a viral infection caused by Varicella-Zoster, characterized by:

- Fever
- Tiredness
- Loss of appetite
- Headache
- "Chickenpox" - this widespread rash of Itchy, fluid-filled blisters that eventually become scabs. It usually lasts ~4 to 7 days.
- Chickenpox is very contagious.
- Individuals who have been vaccinated for VZV, can still get Chickenpox, though symptoms are milder with a shorter duration.
- Chickenpox can also be serious, even life-threatening, in babies, adolescents, adults, pregnant women, and people with **weakened immune systems.**



Chickenpox (Herpes zoster) | Chickenpox (Varicella) | CDC
Photos of Chickenpox | Chickenpox (Varicella) | CDC

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⚠ Urgent/Semi-urgent Rash: Scarletina



Symptoms of Scarlet Fever | Group A Strep | CDC

Scarlatina is a symptom of Scarlet fever, caused by Group A Strep

Signs of scarlet fever on the skin include:

- A red rash that **feels rough like sandpaper**
- Brighter red skin in the creases of the underarm, elbow, and groin
- Pale area around the mouth
- Skin peeling as the rash fades

This student will likely also have:

- Fever (101°F or higher) or chills
- Headache or body aches
- Nausea or vomiting
- Sore throat and pain when swallowing
- Stomach pain

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⚠ Urgent/Semi-urgent Rash: Impetigo

Impetigo is a contagious bacterial skin infection - caused by Group A Strep, Staph A, or both.

- Red, itchy sores that break open and leak a clear fluid or pus.
- Can affect any part of the body, most commonly arms, legs, mouth, and nose.
- Crowded conditions increase risk of spread, including school & daycares.



About Impetigo | Group A Strep | CDC

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🍀 Routine Rashes

Usually localized. Not very painful, red, or draining. Not associated with fever.

- Ringworm
- Molluscum Contagiosum
- Eczema
- Contact dermatitis
- Sunburn
- Canker sores
- Roseola

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🍀 Routine Rash: Molluscum Contagiosum

Molluscum Contagiosum is a common rash, most common in age 1-10 years old.

White, pink, or flesh colored and usually have a dip in the center.

Can appear anywhere on the body, except the hands & feet.



About Molluscum Contagiosum | Molluscum Contagiosum | CDC

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Routine Rash: Ringworm

- Ringworm is a fungal skin infection (athlete's foot & jock itch too).
- Most commonly affects the scalp, skin, or nails.
- It causes an itchy, scaly, ring-shaped rash – it will look pink/red on light skin and grey/brown on darker skin.
- Ringworm is very common and spread by skin-to-skin contact, shared objects and surfaces (locker rooms and public bathroom floors), and contact with infected animals.



Ringworm Basics | Ringworm | CDC

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Rash Case Study #1

A first-grade student (6-7 year old) is sent to your office from the cafeteria because she is reportedly "not feeling well" and felt warm to the cafeteria para. You take her temp - She has a 102.6F fever. She has a rash on her face, neck, and shoulders. The spots are pink/red, slightly raised, not fluid-filled or itchy. She has a mild cough and runny nose but is not having any difficulty breathing.

Choose the rash. . .

- 1) **Emergency/Urgent** - Call EMS/Call Parent to take to ER
- 2) **Urgent/Semi-urgent** – Call parent for immediate pick-up
- 3) **Routine** – send back to class

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Rash Case Study #2

A fifth grade student is sent to your office because his teacher noticed him scratching his cheek and it has become distracting for him. You ask him about what is going on and he tells you that he's been itching since he was in line to go to the playground, right after eating lunch. He's scratching at his rib cage/under his arms, his inner thighs, and his left cheek. On his cheek he has an irregularly-shaped quarter-sized raised area, that is very red. He pulls up his shorts to show you his inner thighs – the rash looks the same there. You ask what he ate for lunch, You take his temperature - no fever. While checking that, you are now close enough to appreciate a wheezing and you realize that he is not speaking in full sentences while telling you about his lunch. He tells you he love lunch today because his classmate traded him a Reese's cup for his Oreos.

Is this rash...

- 1) **Emergent/Urgent** - Call EMS/Call Parent to take to ER
- 2) **Urgent/Semi-urgent** – Call parent/send a letter home to parents
- 3) **Routine** – send back to class

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Case Study #3

You are walking down the hallway and a 16 year old male student calls out to you. He looks like he doesn't feel well. He tells you he was just coming to the office to see you because he just noticed during PE that he has dark purple spots in different places on his body. He tells you he feels cold, his forehead is hot to touch.

Is this rash. . .

- 1) **An Emergency/Urgent rash** – Call EMS/Call Parent to take to ER
- 2) **Urgent/Semi-urgent rash** – Give Tylenol and send back to class.
- 3) **Routine** – send back to class and reassure him he'll start feeling better soon.

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Telephone Triage Case Studies: Triage in School Nursing

Drug Ingestion: Intentional or Unintentional

How to recognize and assess

PRESENTER:
Kathleen Seckinger DNP, APRN, CPNP-PC, CNII

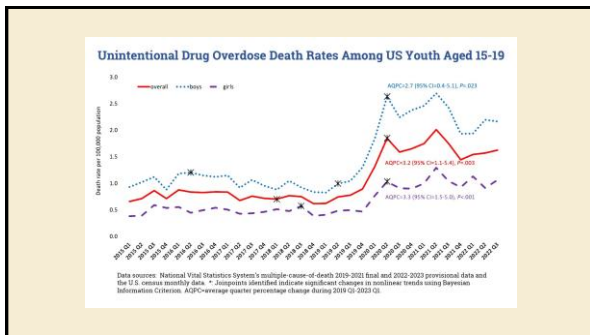
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Part of UCHealth

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OBJECTIVES

- Recognize that illegally obtained substances could/may contain fentanyl or other synthetic chemicals
- How to utilize Children's MD app for assessment
- Signs and symptoms of fentanyl ingestion as well as opioid toxicity and overdose in general, include respiratory depression and apnea, altered mental status, confusion, hypoxia, diaphoresis, miosis (constricted pupils), and slurred speech.
- Be aware of nitazenes, a class of opioids even more potent than fentanyl!

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Colorado 2024 Overdose Stats

- 1,455 total OD deaths
- 23 in nation
- 77.2% of drug overdose deaths had at least one potential opportunity for intervention
- 36.5% Mental Health diagnosis
- 53% had a potential bystander present
- Opioid/Methamphetamine combination is #1 cause of overdose deaths

Number of Pills Containing Fentanyl Seized by Law Enforcement in the United States, 2017 - 2023




Estimates based on data reported by the Office of National Drug Control Policy's High Intensity Drug Trafficking Source program.
Reference: J. P. Frisvold, et al. International Journal of Drug Policy, 2015, 35(10):1049-1054.

Updated Feb 5, 2026

NIDA
National Institute on Drug Abuse
nida.nih.gov

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SIGNS & SYMPTOMS OF OPIOID INGESTION

- Respiratory Depression 
 - Apnea/ agonal
 - Hypoxia and or Cyanosis
- Altered Mental Status 
 - Confusion
 - LOC
- Diaphoresis 
- Miosis (constricted pupils)
- Slurred speech

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CASE STUDY

- You get a call over the walkie-talkie there is a student on the playground who is unresponsive
- You grab the radio, emergency bag, and notify the office you are heading outside
- You find a 3rd grader, sitting, eyes open and gazing distantly, hand is pill rolling, unresponsive to voice or touch. HR104, RR28, SpO2 97%

1) **Emergency/Urgent** - Call EMS/Call Parent to take to ER

2) **Urgent/Semi-urgent** –Call/ send a letter home to parents with information

3) **Routine** – send back to class

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You contact the GMOC and she reports the child may have been given an extra dose of ADHD med this morning by accident

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HOW TO TRIAGE FOREIGN SUBSTANCE INGESTION

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HOW TO TRIAGE FOREIGN SUBSTANCE INGESTION

Substance use is a Mental Health issue.

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HOW TO TRIAGE FOREIGN SUBSTANCE INGESTION

Substance use is a Mental Health issue.

- Physical harm or abuse is occurring now. Reason police are needed.
- Child is threatening serious harm to others now. Reason police are needed.
- Child has attempted or is threatening suicide now.
- Threats of harm to self or others, but not present now (or call 988, the Suicide and Crisis Lifeline)
- You do not feel safe at home now.
- Drug or alcohol use is suspected and has symptoms now.
- Confused or bizarre behavior.
- Child is very upset, can't be calmed down (or call 988, the Suicide and Crisis Lifeline)

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HOW TO TRIAGE FOREIGN SUBSTANCE INGESTION

Substance use is a Mental Health issue.

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HOW TO TRIAGE FOREIGN SUBSTANCE INGESTION

Substance use is a Mental Health issue.

- LOC
- Respiratory depression/Apnea
- Confusion
- Unable to walk/stand
- Unresponsive

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HOW TO TRIAGE FOREIGN SUBSTANCE INGESTION

- GET HELP IN THE NEXT FOUR TO 24 HOURS
- Refer to School Counselor
- Refer to PCP
- Care and Concern Report

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HOW TO TRIAGE FOREIGN SUBSTANCE INGESTION

Care at Home If

- Needs a resource or info on getting help for a mental health problem that is not urgent

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**HOW TO TRIAGE
FOREIGN SUBSTANCE INGESTION**

Not in Active Distress

Care at Home If

Needs a resource or info on getting help for a mental health problem that is not urgent

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**HOW TO TRIAGE
FOREIGN SUBSTANCE INGESTION**

Not in Active Distress
Home Care

Care at Home If

Needs a resource or info on getting help for a mental health problem that is not urgent

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**HOW TO TRIAGE
FOREIGN SUBSTANCE INGESTION**

Not in Active Distress
Home Care
Give Advice and Resources

Care at Home If

Needs a resource or info on getting help for a mental health problem that is not urgent

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Case Study

- You are leaving the clinic for the day. Walking out to your car, you notice a car with the door open, and a student slumped in the driver seat.
- You call out to the student, with no response.
- You approach the student tap and call out. There are empty cans in the back seat, and the car has a strong odor.
- Student is breathing, LOC, pulse is irregular and thready.

- Emergency/Urgent** - Call EMS/Call Parent to take to ER
- Urgent/Semi-urgent** -Call/ send a letter home to parents with information
- Routine** - send back to class

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Telephone Triage Case Studies: Triage in School Nursing

Chest Pain


PRESENTER:
Julie Klingel BSN, RN, CPN CNIV



Children's Hospital Colorado
Have. It. Different.

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DEFINITION



- Pain or discomfort in the chest (front or back)
- The chest includes from the top to the bottom of the rib cage

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Traumatic vs. Atraumatic

- Traumatic
 - Direct blow to chest
 - Sore muscles
- Atraumatic
 - Known heart disease or pain occurring only with exercise
 - Trouble breathing or recent cough
 - Heartburn
 - Cause is not clear



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Assessment



Pain Scale

- **Mild:** your child feels pain and tells you about it. But, the pain does not keep your child from any normal activities. School, play and sleep are not changed.
- **Moderate:** the pain keeps your child from doing some normal activities. It may wake him or her up from sleep.
- **Severe:** the pain is very bad. It keeps your child from doing all normal activities.

Red Flag symptoms of Cardiac Etiology

- Chest pain exclusively with exertion
- Syncope or near-syncope during exercise
- Chest pain associated with palpitations, sweating or dizziness
- A strong family history of sudden unexplained death, cardiomyopathy or premature coronary artery disease
- A history of Kawasaki disease, Williams syndrome or congenital heart conditions including sickle cell

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ATRAUMATIC CHEST PAIN

```

    graph LR
      A[Exercise  
• Cardiac  
• Asthma] --> B[Cough  
• Pleurisy  
• Pneumonia]
      B --> C[Laying down,  
eating  
Heart burn]
  
```

- **If cause is not clear**
 - Ask about recent caffeine intake, muscle over use, cramps, recent screen use, cocaine or other illegal substances, new or increase in ADHD medication or other medications that may affect heart rate (like beta blockers)

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CASE STUDY

- 12y middle school student, Joe, was in an altercation with another student where he got shoved backward into an open lower locker door. He is complaining of back pain under scapula on the R side, you can see a significant bruise starting to form in that area. He is having labored breathing, but is able to stand, walk and talk to you in short sentences
- What do you do next?
 - 1) **Emergency/Urgent** - Call EMS/Call Parent to take to ER
 - 2) **Urgent/Semi-urgent** - Call parent for immediate pick-up
 - 3) **Routine** - send back to class

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Get Help Now

Chest Pain

Select the first symptom that applies

Get Help Now if

- Severe trouble breathing (struggling for each breath, can barely speak or cry)
- Passed out (fainted)
- Bluish lips or face
- Not moving or too weak to stand
- You think your child has a life-threatening emergency
- Severe constant pain (child not able to move or do anything)
- Your child has heart disease
- Trouble breathing, but not severe
- Taking a deep breath makes the pain worse
- Heart is beating very rapidly
- After a direct blow to the chest
- Your child looks or acts very sick
- You think your child needs to be seen, and the problem is urgent

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Commotio Cordis


- Commotio cordis is a rare cardiac phenomenon that occurs when a sudden, nonpenetrating trauma to the chest wall, such as a direct blow from a projectile or blunt impact, interrupts the cardiac cycle, leading to ventricular fibrillation and sudden cardiac arrest
- The average age of young athletes who experience commotio cordis is around 15 years, and the condition is more prevalent in young males.
- The key to survival is prompt CPR and use of an AED to restore normal heart rhythm

Commotio Cordis, Athletes, and Sudden Cardiac Arrest from Impact

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Case study

- 14y high school student, Amy, comes to the nurses' office complaining of L sided chest pain. It is the week before finals and Amy has been studying a lot at her computer. She says the pain gets worse when she takes a deep breath or bends over. It's a sharp 'pinching' pain that last a few seconds and then goes away. She is worried because it has happened at least 3 times in the last few hours. She has not been sick and has no known medical history
- What do you do next?
 - 1) **Emergency/Urgent** - Call EMS/Call Parent to take to ER
 - 2) **Urgent/Semi-urgent** - Call parent for immediate pick-up
 - 3) **Routine** - send back to class



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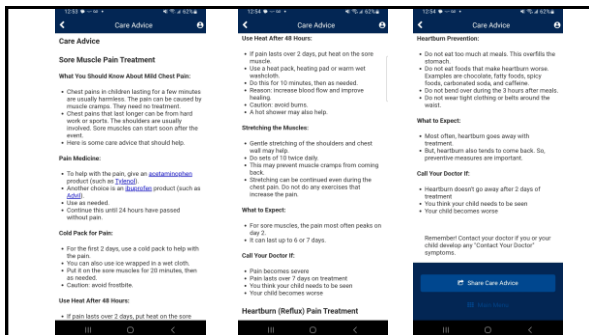
Get help soon if

- See help soon if**
- 1) Fever is present
- 2) Cause of chest pain is not clear. Exception: pain due to coughing, sore muscles, heartburn or other clear cause.
- 3) You think your child needs to be seen, but the problem is not urgent
- 4) Chest pains only occur with hard exercise (such as running)
- 5) Sore muscles last more than 7 days
- 6) Heartburn lasts more than 2 days on treatment
- 7) Chest pains are a frequent problem
- 8) You have other questions or concerns

Care at home if

- 1) Normal chest pain from sore muscles
- 2) Normal chest pain from heartburn

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Sore Muscle Pain Treatment

What You Should Know About Mild Chest Pain:

- Chest pains in children lasting for a few minutes are usually harmless. The pain can be caused by muscle cramps. They need no treatment.
- Chest pains that last longer can be from hard work or sports. The shoulders are usually involved. Sore muscles can start soon after the event.
- Here is some care advice that should help.

Pain Medicine:

- To help with the pain, give an [acetaminophen](#) product (such as [Tylenol](#)).
- Another choice is an [ibuprofen](#) product (such as [Advil](#)).
- Use as needed.
- Continue this until 24 hours have passed without pain.

Cold Pack for Pain:

- For the first 2 days, use a cold pack to help with the pain.
- You can also use ice wrapped in a wet cloth.
- Put it on the sore muscles for 20 minutes, then as needed.
- Caution: avoid frostbite.

Use Heat After 48 Hours:

- If pain lasts over 2 days, put heat on the sore muscles.
- Use a heat pack, heating pad or warm wet washcloth.
- Do this for 10 minutes, then as needed.
- Reason: increase blood flow and improve healing.
- Caution: avoid burns.
- A hot shower may also help.

Stretching the Muscles:

- Gentle stretching of the shoulders and chest will help help.
- Do sets of 10 twice daily.
- Use the parent muscle cramps from coming back.
- Stretching can be continued even during the chest pain. Do not do any exercises that increase the pain.

What to Expect:

- For sore muscles, the pain most often peaks on day 2.
- It can last up to 6 or 7 days.

Call Your Doctor If:

- Pain becomes worse.
- Pain lasts over 7 days on treatment.
- You think your child needs to be seen.
- Your child becomes worse.

Heartburn (Reflux) Pain Treatment

Heartburn Prevention:

- Do not eat too much at meals. This overfills the stomach.
- Do not eat foods that make heartburn worse. Examples are chocolate, fatty foods, spicy foods, carbonated acids, and caffeine.
- Do not bend over during the 2 hours after meals.
- Do not wear tight clothing or belts around the waist.

What to Expect:

- Most often, heartburn goes away with treatment.
- But heartburn also tends to come back. So, preventive measures are important.

Call Your Doctor If:

- Heartburn doesn't go away after 2 days of treatment.
- You think your child needs to be seen.
- Your child becomes worse.

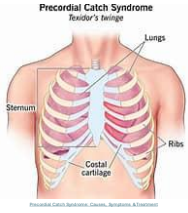
Remember! Contact your doctor if you or your child develop any "Warning Your Doctor" symptoms.

[Share Care Advice](#)

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Precordial Catch Syndrome

- Brief muscle cramps are the most common cause of recurrent chest pains, the medical name is precordial catch syndrome**
- Most brief chest pain lasting seconds to minutes is from muscle cramps. The fleeting pains can be caused by a pinched nerve. Chest wall pains are harmless.**
- Precordial catch syndrome is a sharp pain that appears without warning on the left side of your chest, near your heart.**
- It's not a medical emergency.**
- Cause is undetermined but it often appears when you don't sit or stand straight. It goes away within a few minutes.**



Precordial Catch Syndrome
Twiddler's Twinge

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Case study

- By Carlos comes to your office complaining that his 'heart hurts.' He has a history of ADHD, and you know he recently increased his medication dose. Carlos is rubbing the epigastric area and L side of chest. No increased HR, spends a lot of time on tablet at home, states he ate a bag of Takis for breakfast.
- What do you do?
 - 1) Emergency/Urgent** - Call EMS/Call Parent to take to ER
 - 2) Urgent/Semi-urgent** – Call parent for immediate pick-up
 - 3) Routine** – send back to class, monitor for complications

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Chest Pain

Select the first symptom that applies

Get Help Now if

- Severe trouble breathing (struggling for each breath, can barely speak or cry)
- Passed out (fainted)
- Bluish lips or face
- Not moving or too weak to stand
- You think your child has a life-threatening emergency
- Severe constant pain (child not able to move or do anything)
- Your child has heart disease
- Trouble breathing, but not severe
- Taking a deep breath makes the pain worse
- Heart is beating very rapidly
- After a direct blow to the chest
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- Fever is present
- Cause of chest pain is not clear. Exception: pain due to coughing, sore muscles, heartburn or other clear cause.
- You think your child needs to be seen, but the problem is not urgent
- Chest pains only occur with hard exercise (such as running)
- Sore muscles last more than 7 days
- Heartburn lasts more than 7 days on treatment
- Chest pains are a frequent problem
- You have other questions or concerns

Care at Home if

- Normal chest pain from sore muscles
- Normal chest pain from heartburn

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