

## The Fear-Inducing Symptom: Diagnosing the Cause of Chest Pain

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There are few things that are more alarming for a patient, be it child or an adult, than chest pain.

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There are few things that are more alarming for a patient, be it child or an adult, than chest pain. I can recall the last time it happened to myself after over-indulging at a summer barbeque. A retro-sternal discomfort that can culminate in tachypnea and tachycardia. A tickle of uncertainty floats through your consciousness as to the nature of the pain that is being felt. It invokes a fear that may be based on the collective (and sometime misguided) knowledge of heart attacks in adult patients. It also brings to the forefront the terrifying question: “Am I going to die?”

This fear-inducing symptom represents an extremely common reason for presentation to local emergency rooms and cardiology clinics. Thankfully, the vast majority of children with chest pain do not have an underlying cardiac disease. The source of chest pain can often be isolated to another organ system like the musculoskeletal or pulmonary. September’s *Pediatric in Review* article “[Pediatric Chest Pain](#),” by Gal Barbut and Joshua Needleman, is an excellent review of the cardiac and non-cardiac causes of chest pain in children. Recognizing that the cardiac chest pain represents less than 1% of all causes of chest pain, this review provides reassurance to pediatric caregivers and helps to lay an organized approach to tackling the cause.

The key to unlocking this diagnosis is truly dependent on taking a good history and performing a thorough physical exam. Applying a first principles approach, the history should include detailed characterization of the chest pain that includes timing of onset and duration, the location/quality of the pain, whether it is reproducible, radiation of the pain, and aggravating factors, to name just a few. The review also explores when cardiac testing is appropriate for a child presenting with chest pain and the appropriateness of the particular test. In the hopes for judicious resource management, the authors also describe the role of standardized clinical assessment and management plans, or SCAMPS, and how they have been successfully used for pediatric chest pain management.

The essential part of what a thorough history, physical exam (or SCAMP), and electrocardiogram can do is help raise suspicion when abnormalities arise. This should then help trigger a more detailed search into the

rare cardiac causes that can be potentially life threatening such as cardiomyopathies or arrhythmias.

Although most causes of pediatric chest pain are benign, it is important to remain vigilant for more serious causes. The approach and management as highlighted in this month's *Pediatrics in Review* is a great resource for providers to help give the reassurance and guidance to the child and their family.

- [Case 5: Chest Pain and Elevated Troponin in a Teenager](#)
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