

Title: Should my child have X-rays for their ankle injury?

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Abstract: Ankle injuries have been reported to constitute up to 12% of emergency department visits. However, only one in five of these patients have an ankle fracture. For this reason, the Ottawa Ankle Rules (OAR) were developed to help clinicians decide which adults should have radiographs. With the success of this model, a study was designed to assess the validity of the OAR in the evaluation of pediatric patients. The results of the study showed that although the OAR were successful in detecting most fractures, it missed a significant number of "pediatric fractures." However, the data indicated that the rules were valid for children older than 15 years-old. Finally, the study indicated a new set of rules more appropriate for pediatric patients under 15 years-old.

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**Are there any models specific to kids, for who get X-rays?**

-One study published a set of rules specific to kids.

-It recognized 93% of ankle fractures and reduced x-rays by 22%

**Tips for parents taking their child into the emergency room with ankle injuries**

-Ask your doctor why they are suggesting x-rays.

-If they do not suggest x-rays, make sure there is a plan for follow-up.

**Internet Resources**

**WebMD**

<http://www.webmd.com/a-to-z-guides/toe-foot-and-ankle-injuries-check-your-symptoms>

**Wheeless Textbook of Orthopaedics**

[http://www.wheelessonline.com/ortho/ankle\\_fracture\\_menu](http://www.wheelessonline.com/ortho/ankle_fracture_menu)

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**Should my child have radiographs for their ankle injury?**

-Ankle injuries compose up to 12% of all visits to the emergency room.

-Less than one of five of these patients has an ankle fracture.

-Millions of X-rays are taken of ankles with no fracture, costing patients money, and exposing them to unnecessary radiation.

-There is one well-proven set of rules for deciding which adults need x-rays, but several less-proven models for kids.

## What are the signs of an ankle fracture?

- Swelling in or around the ankle with the appearance of fullness, redness, and/or warmth
- Inability to bear weight for at least four steps
- Tenderness at the bony areas around the ankle



## What are the signs of an ankle sprain?

- Walking with a pronounced limp
- Pain without significant swelling
- Injury with lack of pain around the bony prominences of the ankle

## What are the emergent signs associated with an ankle injury?

- Bone sticking out of the skin
- loss of sensation and motor function of the foot
- Cold, pale, pulseless foot

## Are there any ways to help clinicians decide who gets x-rays

- When the Ottawa ankle rules have been applied to children, they spot 83% of ankle fractures with a 44% reduction in radiographs.
- They were able to isolate 100% of the ankle fractures in patients older than 15.
- Almost all of the fractures missed, are those treated similarly to sprains.
- Despite this, many physicians are not satisfied with missing this many fractures.