

## Pharmacology Rounds - NSAID Allergies

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### Take Home Points

- ☐ **The true incidence of NSAID allergies is unknown but they do occur.**
- ☐ **Reactions to NSAIDs may be divided into pseudoallergy due to COX inhibition and true allergic reactions, although you are unlikely to be able to distinguish between the two in the ED.**
- ☐ **Patients with an allergic reaction may have cross-reactions to other NSAIDs.**
- **There are many patients who claim severe allergies to NSAIDs. Some may have ulterior motives for reporting NSAID allergies. Is there any data on this?** The true incidence of NSAID allergies is unknown. However, patients can be allergic to NSAIDs. They typically experience one of two types of reactions.
  1. **The pseudoallergic reaction.** This is related to COX inhibition. They may experience a reaction with aspirin or any of the cross-reacting COX-1 inhibitors like diclofenac, naproxen, indomethacin or ketorolac. These are usually seen in patients with certain pre-existing conditions such as asthma, nasal polyps, chronic sinusitis, etc. You may see urticarial reactions and angioedema.
  2. **True allergic reactions.** These are mediated by IgE. They have a reaction to a single drug or one that is structurally related to it. In the United States, most of these reactions have been documented in association with ibuprofen. This is most likely because it was the first over-the-counter NSAIDs and the most widely available.
- **In the ED, you will never be able to differentiate between pseudoallergic and true allergic reactions.** You will treat them both in the same way. If your patient comes in with symptoms of an allergic reaction, treat it as a true allergic reaction. Give them instructions that they should avoid other NSAIDs and potentially aspirin.
- **When patients report NSAID allergies, find out their previous reaction.** It is important to distinguish allergic reactions from side effects.
- **Can you use a different NSAID?** If a patient has a true allergy to one NSAID, they will likely have allergic reactions to others. If the patient reports symptoms concerning for a severe allergy, don't test them with a dose of another NSAID. They can be referred to an allergist.