Pathways to Appropriate Penicillin Allergy (de)Labelling:

Support tool for primary care physicians developed by the OMA Section on allergy

OMA section on ALLERGY AND CLINICAL IMMUNOLOGY

This tool reflects the current evidence, guidance and recommendations for penicillin allergy labelling in patients with suspected and/or confirmed allergies. This knowledge has evolved drastically over the past 10 years.

? Did you know?

More than 80 per cent of patients with a suspected penicillin allergy may be safely de-labeled. This number is closer to 95 per cent in children.

Type of allergies/events	Referral to Allergist needed?	Test type
Can be prescribed penicillin safely		
Allergy issues such as food allergy, allergic rhinitis (including mould allergy), asthma and eczema **History of allergic reaction, including anaphylaxis, to any allergen not related to penicillin:** • Food (e.g., peanuts, dairy) • Vaccine • Venom (e.g., bee stings) • Latex **History of reaction to the non-penicillin class antibiotics or other medications, including injectables** **Mild, common side effects to an antibiotic** such as abdominal pain, headache, nausea or diarrhea **Family history of penicillin allergy**	**No referral to Allergist** needed prior to prescribing penicillin	Medication can be prescribed as routine **No testing is needed**
Most can be de-labelled and prescribed penicillin in future		
Previous positive testing to penicillin > five years ago **IgE mediated symptoms within 14 days of starting penicillin.** For example, a child developing a rash within a few days of use of amoxicillin.	**Refer to Allergist** with supportive, detailed documentation of reaction	**Skin testing, and/or challenge to penicillin**
High risk of lifelong penicillin allergy		
Severe cutaneous reaction to penicillin **End organ damage related to penicillin (e.g., liver, kidney, etc.)** **Intensive care unit management for reaction to penicillin**	**Refer to Allergist** with supportive, detailed documentation of reaction	**Possible testing.** Guidance on desensitization verus medication alternatives as appropriate*

Common IgE mediated symptoms of a drug allergy:

Skin: Rash (e.g., urticaria), erythema, angioedema, pruritus
Respiratory: Hoarse voice, tightness in throat, difficulty swallowing, stridor, wheeze, chest tightness, difficulty breathing, persistent coughing
Cardiovascular: Pallor, hypotension, dizziness, presyncope/syncope

*Document as accurately as possible when symptoms appeared in relation to when medication was started or given.

**Consider retesting sooner if clinical need for this class of medications sooner, or if testing conducted outside of Canada without any history of use of these antibiotics.*

Common questions

Why are penicillin allergies over-diagnosed?

Most antibiotic reactions are not caused by the medication itself. Infections or drug-bug interactions are more common causes, which is why each reaction should be evaluated.

How is penicillin allergy tested for?

Some patients, depending on history and risk factors, can proceed directly to an oral challenge under medical observation. Other patients may require additional testing to determine if an oral challenge can be pursued.

What should I do if a patient develops serum sickness like reaction while on amoxicillin?

Document symptoms carefully for referral. An allergist will assess the appropriateness and risks/benefits of an oral challenge.

Penicillin and cephalosporin allergies

- **Cross-reactivity is no longer a concern**: Past reports of high cross-reactivity were from the 1980s and were because cephalosporins had contamination issues with penicillin antibiotics in production. True cross-reactivity is very low.
- **Risk of cephalosporin allergy is low**: In those with a true penicillin allergy, there is about a two per cent risk of cephalosporin allergy. For those with a self-reported (unconfirmed) penicillin allergy, the risk is about one per cent (the same as the general population)
- **A similar chemical structure doesn't typically contribute to allergy**: Amoxicillin and penicillin do not have similar side chains to cefazolin. Although penicillins and cephalosporins share a beta lactam ring structure, it is rarely the cause for allergy to either of these medications.

Connecting with an Allergist

✓ Refer patients with **cutaneous or systemic symptoms** affecting airway, breathing, or circulation (e.g. angioedema, hives, wheezing, hypotension, tachycardia, loss of consciousness). Refer these patients sooner rather than later, as diagnosis relies on patient history and recall.

X **Do not refer** for antibiotic-related side effects (e.g., nausea, diarrhea)—these are not allergic reactions and require only reassurance

How can I find an allergist to refer to?

The Canadian Society of Allergy and Clinical Immunology (CSACI) provides a geographic look-up service.

What should I include in a referral to an Allergist?

Please include the following information with your referral:

- Details of the reaction of concern the patient had, including timing and symptoms
- What penicillin antibiotic they received (if applicable)
- Full past medical history and medication list

Can I get advice about possible penicillin reactions from an Allergist without referring my patient?

Yes, you can get advice from an Allergist through:

- Ontario eConsult
- Ontario Telemedicine Network

A referral should include all relevant information, including the patient's allergy or condition, medical history and any drugs they are taking.

You can use these services when you have a general question or a question about a patient who does not require a referral (refer to page one for more details).

References

- Canadian Society of Allergy and Clinical Immunology (CSACI) Position Statement on beta lactam allergy. November 2020
- Canadian Society of Allergy and Clinical Immunology Podcast: The Allergist on Penicillin allergy. March 2025
- Choosing Wisely Canada: Allergy and Clinical Immunology. August 2021
- Canadian Pediatric Society Practice Point: Beta Lactam allergy. January 2020