Aspirin/NSAID-intolerant asthma: pharmacy notes

Aspirin/NSAID-intolerant asthma (AIA) is a distinct type of asthma that affects about 3-11% of adults with asthma. Symptoms typically occur within 1-3 hours of taking aspirin or NSAID orally and include some or all of these symptoms: shortness of breath, severely watery nose or rhinitis, red eyes, puffiness around the eyes and skin redness. People who have experienced sensitivity to aspirin or one NSAID are likely to react to other NSAIDs.

Who is at risk?
Most people with asthma can tolerate aspirin and NSAIDs. The risk of a reaction to aspirin or NSAIDs is highest in:
- people with severe asthma who experience long-term nasal congestion and severely watery nose
- people with recurring nasal polyps
- people who experience sudden, severe asthma (e.g. have been admitted to intensive care with asthma)
- people who first experience asthma as adults and do not have known allergies as the cause.

AIA is much less common in children than in adults. The prevalence of ibuprofen-sensitive asthma was 2% in a challenge study in children with mild-to-moderate asthma.

Practice points for community pharmacy

All products that contain aspirin or any NSAID should be avoided by:
- anyone who has been diagnosed with AIA
- anyone who has previously experienced runny nose or wheezing 1-3 hours after taking aspirin or NSAIDs.

These people should be advised to use paracetamol instead, unless contraindicated. Some people with AIA also have mild reactions to higher doses of paracetamol (1000-1500 mg). Leukotriene receptor antagonists (e.g. montelukast) are used for long-term control of AIA, but people taking leukotriene receptor antagonists must still avoid aspirin and NSAIDs.

People with risk factors for AIA (severe asthma, long-term nasal congestion and severely watery nose, nasal polyps, sudden severe asthma, adult-onset asthma) should be advised to take precautions when using these medications:
- Always carry reliever medication.
- Know what to do if symptoms occur – have an up-to-date written asthma action plan and follow it.

AIA is unlikely in a person with risk factors who has used these medications regularly (e.g. daily low-dose aspirin) or recently (e.g. within past 6 months) without experiencing symptoms.

Selective COX-2 inhibitors are associated with lower risk than other NSAIDs in people with AIA. Celecoxib appears to be well tolerated. NSAIDs that are COX-2 selective only at low dose (e.g. meloxicam) may cause airway constriction (bronchospasm) at higher doses.

Any analgesic class can be considered for other adults with asthma who have not experienced reactions with aspirin or NSAIDs, with appropriate advice on potential risk.

“Also called “aspirin-exacerbated respiratory disease” or “aspirin-sensitive asthma”.

Everyone with asthma should have an up-to-date written asthma action plan prepared by their doctor.

AIA is not an allergy to these medications, but reactions can be clinically significant and even life-threatening if severe airway narrowing occurs.

References

AIA facts
- Some people may not know that they have AIA. Higher rates have been reported in challenge studies, in which people with asthma were given test doses of these medications in a medically supervised setting.
- A person with AIA typically begins to experience symptoms at around age 30: first as severe rhinitis (runny nose) followed by a sense of smell, nasal polyps and chronic sinusitis. Asthma typically develops over the next few years.
- AIA is not an allergy to these medications, but reactions can be clinically significant and even life-threatening if severe airway narrowing occurs.

Developed in consultation with Associate Professor Frank Thien, respiratory physician and allergist, and Dr Jenny Glown, pharmacist.

Disclaimer: Although all care has been taken, this resource is not intended to be a substitute for individual medical advice/treatment. The National Asthma Council Australia expressly disclaims all responsibility (including for negligence) for any loss, damage or personal injury resulting from reliance on the information contained herein.
Pain relievers and asthma: quick reference guide
Questions to ask every person requesting pain reliever medication

Is this medication for you?
- **YES**
- **NO**
  - Find out who the medication is for.
  - Is this medication for a child or breastfeeding/pregnant woman, or is it a S3 request?
    - **YES**
      - REFER TO PHARMACIST
    - **NO**
      - Ask questions about patient not purchaser

Do you have any health problems such as asthma, diabetes, high blood pressure, heart or kidney problems?
- **YES**, asthma
- **YES**, other
- **NO**

Is the medication requested low-dose aspirin for cardiovascular protection?
- **YES**, repeat
- **NO**
  - **YES**, first time

Have you ever had rhinitis or asthma symptoms 1-3 hours after taking aspirin or any other† pain reliever medications? Symptoms include runny or blocked nose, itchy throat, wheezing or chest tightness
- **NO / don’t know**
- **YES**
  - REFER TO PHARMACIST

Have you ever had asthma symptoms after taking paracetamol?
- **NO**
- **YES**
  - Refer patient to doctor to obtain alternative analgesia
  - Recommend paracetamol but advise against high doses (>1000mg). Recommend patient discuss with doctor

Do you have:
- Nasal polyps?
- Long-term or recurring rhinitis?
- Skin rashes due to allergies?
- Severe asthma?
- **YES**, any
  - REFER TO PHARMACIST
- **NO**
  - SUPPLY AS USUAL

Intolerance is unlikely. Aspirin or NSAIDs can be used with very low risk of an asthma reaction

NSAIDs: Nonsteroidal anti-inflammatory drugs.
*Provided that no other contraindications or precautions apply.
†Check with the Pharmacist which NSAIDs are sold over the counter in your pharmacy so that you recognise them.