

## The Why, Who, What, and How of Immunotherapy: A Practical Guide for GPs:

**Why:** Immunotherapy (desensitization) is the only currently available “cure” for allergy. Most people receiving appropriate immunotherapy can expect significant improvements in their symptoms, with reduced need for medication. Large studies have shown an approximately 20% improvement at 1 year and 40% improvement at 3 years, with benefit evident as early as 1 month after commencing treatment. This benefit usually persists for a number of years after treatment is ceased

**Who:** Immunotherapy is indicated in moderate-to-severe allergic rhinoconjunctivitis, when the allergen is unavoidable and symptoms are not well controlled by medical management. Other indications are allergic asthma and immunotherapy may also be of benefit in some patients with severe eczema. Immunotherapy is not indicated for food allergy.

**Age:** > 5 years old, except Actair and Ascarizax tablets >12 years old

**What and How:** Overview of subcutaneous immunotherapy vs sublingual/oral immunotherapy:

	SCIT (subcutaneous immunotherapy)	SLIT/OIT (sublingual/oral immunotherapy)
	Injections	Drops or tablets
Allergens	<ul style="list-style-type: none"> <li>• <b>Customisable</b></li> <li>• Most commonly <b>house dust mite</b> and <b>grass pollen</b> (Bahia, Bermuda, Johnson and Ryegrass)</li> <li>• Less commonly animal dander</li> <li>• Others, including tree pollens and molds</li> <li>• Except for Clustek Max, allergens will be diluted if mixed which may reduce efficacy</li> </ul>	<ul style="list-style-type: none"> <li>• Drops: customizable, as for SCIT</li> <li>• Tablets: mixed HDM or mixed temperate grasses including Ryegrass</li> </ul>
Up-dosing	From 1 week, up to 13 weeks (depending on product and protocol)	<ul style="list-style-type: none"> <li>• Drops: no up dosing, up to 11 days</li> <li>• Tablets: no up dosing, up to 3 days (depending on product)</li> </ul>
Course and Duration	<b>Monthly</b> injections for 3 years	<ul style="list-style-type: none"> <li>• <b>Daily</b> tablets for 3 years (note: Oralair used for 6 months only of each year)</li> </ul>
Ordering	Via specialist, expect 8-10 week delay	<ul style="list-style-type: none"> <li>• Drops: via specialist, 8-10 weeks delay</li> <li>• Tablets: available from specialist or on private script</li> </ul>
Efficacy	+++ (similar efficacy to sublingual tablets)	Drops: ++ Tablets: +++
Safety	++ <ul style="list-style-type: none"> <li>• Risk of systemic reaction: 0.1-0.2% during conventional up dosing protocols</li> <li>• Up to 14% reported systemic reactions are late (&gt;30 mins)</li> <li>• Risk of death: 1 in every 2.5 million injections (but may be less than this)</li> </ul>	+++ <ul style="list-style-type: none"> <li>• Local reactions very common (oromucosal &gt; gastrointestinal)</li> <li>• Much lower incidence severe reactions cf SCIT (11 cases non-fatal anaphylaxis out of 1 x10<sup>9</sup> doses) no fatalities reported</li> </ul>
Available products with <b>approximate</b> costs for <b>3 years treatment</b> (note that this may not include delivery costs)	<ul style="list-style-type: none"> <li>• Alustal# (N/A until April 2019)</li> <li>• Alutek# \$1914</li> <li>• Alxoid* \$1985</li> <li>• Clustek* \$1925</li> <li>• Clustek Max* \$2618</li> </ul>	<b>Drops:</b> <ul style="list-style-type: none"> <li>• Staloral# cost varies depending on conc &amp; dose; \$1000 - \$2000</li> <li>• Oraltek# \$2607</li> </ul> <b>Tablets:</b> <ul style="list-style-type: none"> <li>• Actair#(Mixed HDM) \$2724 (<b>with</b> health fund rebate)</li> <li>• Oralair#(Mixed temperate grasses including Ryegrass) \$1770 (<b>with</b> health fund rebate)</li> <li>• Ascarizax# \$3600 (<b>not</b> including health fund rebate of up to 50%)</li> </ul>
Storage	<ul style="list-style-type: none"> <li>• Store in vaccine fridge</li> <li>• Should not be frozen or heated →reorder</li> <li>• Shelf-life may be reduced if keep at room temperature (ie 20-22°C) →finish bottle</li> </ul>	At room temperature (25°C)
Missed doses	<b>Suggest contact prescribing specialist.</b> As a general rule, this is what I do: <b>In the up-dosing phase</b> <ul style="list-style-type: none"> <li>• 1 week late: →repeat previous dose</li> <li>• 2 weeks late →reduce dose by 1 week</li> <li>• 3 weeks late → contact specialist</li> </ul> <b>During maintenance Rx</b> <ul style="list-style-type: none"> <li>• 1 month late → reduce by 25%</li> <li>• 2 months late → reduce by 50%</li> <li>• 3 months late → contact specialist</li> </ul>	<ul style="list-style-type: none"> <li>• Drops: can be omitted for up to 7 days without problem</li> <li>• Tablets: can be omitted for up to 7 days without problem.</li> <li>• After 7 days, may require re-up dosing</li> </ul>

#Native allergen

\* Allergoids: polymerized allergen (reduced allergenicity with retained immunogenicity → similar efficacy with reduced risk of reactions)

### Useful links:

- ASCIA Guide to Allergen Immunotherapy:  
[https://www.allergy.org.au/images/pcc/ASCIA\\_PCC\\_Allergen\\_immunotherapy\\_2016.pdf](https://www.allergy.org.au/images/pcc/ASCIA_PCC_Allergen_immunotherapy_2016.pdf)
- ASCIA Guidelines for Subcutaneous Immunotherapy:  
[https://www.allergy.org.au/images/stories/pospapers/ASCIA\\_SCIT\\_Treatment\\_Plan\\_June2013.pdf](https://www.allergy.org.au/images/stories/pospapers/ASCIA_SCIT_Treatment_Plan_June2013.pdf)