

## Appendix H: Allergic Reactions to Insulin

TYPE	
<b>Local</b>	<ul style="list-style-type: none"> <li>■ Occurs in 2-3% of clients</li> <li>■ Develops within the first 2 weeks of therapy</li> <li>■ Approximately 90% of people with local allergy have spontaneous resolution within 2 months while on the same therapy. An additional 5% will improve within 6-12 months</li> <li>■ May be associated with lipoatrophy if injection sites are not rotated</li> </ul>
Isolated wheal & flare	<ul style="list-style-type: none"> <li>■ Develops within 30 minutes</li> </ul>
Biphasic	<ul style="list-style-type: none"> <li>■ Resolves within an hour</li> <li>■ The late phase of a biphasic reaction is painful and erythematous. This peaks in 4-6 hours and lasts for 24 hours.</li> </ul>
Arthus reactions	<ul style="list-style-type: none"> <li>■ Are uncommon</li> <li>■ They are localized small-vessel injuries with neutrophilic infiltrates</li> <li>■ Develops over 4-6 hours and peaks in 12 hours</li> </ul>
Delayed (tuberculinlike)	<ul style="list-style-type: none"> <li>■ A nodule or “deep hive” develops in 8-12 hours and peaks in 24 hours</li> </ul>
	<p><b>Treatment</b></p> <ul style="list-style-type: none"> <li>■ Oral or topical antihistamines</li> <li>■ Switch insulin brand or type</li> </ul>
<b>Systemic</b>	<ul style="list-style-type: none"> <li>■ Very rare, but are more common in people with histories of atopy and/or intermittent insulin therapy</li> </ul>
Urticaria to anaphylaxis	<ul style="list-style-type: none"> <li>■ Anti-insulin IgG and IgE levels are significantly elevated</li> <li>■ Occurs immediately</li> </ul>
	<p><b>Treatment</b></p> <ul style="list-style-type: none"> <li>■ Anaphylaxis protocol</li> <li>■ Insulin desensitization program</li> </ul>
<b>Insulin–antibody mediated</b>	<ul style="list-style-type: none"> <li>■ Extremely rare</li> </ul>
<b>Insulin Resistance</b>	<ul style="list-style-type: none"> <li>■ Insulin molecule induces immunologic complications</li> <li>■ Use of beef-containing insulins before the initiation resistance is usually always noted</li> <li>■ Presence of these antibodies may increase insulin dose or alter insulin absorption</li> </ul>
	<p><b>Treatment</b></p> <ul style="list-style-type: none"> <li>■ Use of steroid therapy</li> <li>■ Use of U-500 insulin</li> </ul>