

Appendix H: Allergic Reactions to Insulin

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