

Injection site reactions

Injection site reactions are the most common adverse events following immunisation. These include pain, itching, swelling or redness around the site of injection. These reactions are usually mild and last for 1–2 days.

Rarely, injection site reactions can be quite large and may extend from joint to joint (e.g. shoulder to elbow) or may cross a joint. These reactions may occur after administration of any vaccine but are more common after booster doses of diphtheria, tetanus and pertussis (DTPa/dTpa). The inflammatory changes develop over a few hours following vaccination, peak at 24 to 48 hours and resolve completely within a week. Decreased range of limb movement is uncommon, and the individual is systemically well. Symptomatic relief may include analgesia and cool compress. Moving the limb will encourage lymphatic drainage and prevent joint stiffness. Avoid putting the arm in a sling.

Large local reactions can be confused with bacterial cellulitis and antibiotics may be unnecessarily prescribed. Cellulitis post vaccination is extremely uncommon as bacteria are rarely introduced into tissues, especially with the use of single-dose vials and single-use injections. Large local reactions do not require antibiotics.



Figure: Injection site reactions

Large injection site reaction versus cellulitis post vaccination

Large injection site reaction	Cellulitis
Tenderness for the first few hours after vaccination which subsides as erythema increases in size.	Tenderness increases as erythema increases. Once the erythema enlarges to extend joint to joint the limb is exquisitely tender.
Not associated with systemic toxicity. May have a mild fever in the first 24 hours which settles.	Usually accompanied with high-grade or persistent fever, malaise, lethargy
Regional lymphadenopathy may occur and is usually non tender.	May be associated with lymphangitis (tracking of erythema along the lymph vessel) or tender or non-tender regional lymphadenopathy
Decreased range of limb movement is uncommon.	Decreased range of limb movement is common.

Recommendation for future vaccinations

Booster doses of the same vaccine may cause a similar reaction. There is no increased risk of anaphylaxis or systemic issues and therefore it is still recommended that children and adults should continue with the scheduled vaccines for protection against vaccine-preventable diseases. People should be advised of the potential for a repeat injection site reaction and how to manage it.

Details on the reporting of adverse events following immunisation and specialist immunisation clinics in each state and territory can be found at <http://www.ncirs.org.au/health-professionals/specialist-immunisation-services> and by contacting your local public health unit.

For any further advice contact:

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