



## Appendix 10: Guidance for differentiating anaphylaxis from acute stress response for vaccine providers and emergency departments

For immunisers in primary care and vaccine hubs and clinicians in emergency departments

Anaphylaxis can be a life-threatening condition. The mainstay of management is adrenaline. There are no contraindications for the use of intramuscular adrenaline in the setting of anaphylaxis.

There are however a number of conditions that can mimic anaphylaxis, such as vagal reactions, anxiety and vocal cord dysfunction. While it can be difficult to distinguish at times between these three conditions, if you suspect anaphylaxis, follow appropriate guidelines from your workplace and transfer to hospital. If there is uncertainty around diagnosis, treatment of anaphylaxis should not be withheld.

However, if adrenaline is administered, it is important to reassure the person receiving the adrenaline of the possibility of an alternate diagnosis, but that the adrenaline is being given as it is safe to do so. The possible diagnosis of anaphylaxis can be reassessed at later stage.

An adrenaline autoinjector (EpiPen) prescription is not required post discharge following a queried vaccine adverse reaction.

To help confirm the possibility of anaphylaxis, a serum tryptase should be taken within 30 minutes to 2 hours after the onset of symptoms and 24 hours after symptoms have resolved. A serum tryptase assists in a retrospective review of the case, guides diagnosis and assists in reassuring the person regarding future vaccinations.

	ACUTE STRESS RESPONSE			ANAPHYLAXIS
<b>SIGN AND SYMPTOM ONSET (AFTER INJECTION)</b>	<b>Vasovagal reaction</b> Before, few seconds to minutes after injection. May present after 5 mins if the individual stands suddenly	<b>Generalised</b> Before, few seconds to minutes after injection	<b>Vocal cord dysfunction (VCD)</b> A few seconds to minutes after injection and up to 2 hours post administration.	Within 30 mins after injection most start within 15 mins. In rare cases in can be within 60 mins
<b>CLUSTERING*</b>	Can occur	Can Occur	Can Occur	Uncommon
<b>SERUM TRYPTASE</b>	Not elevated	Not elevated	Not elevated	Elevated
<b>SYSTEM</b>				
<b>NEUROLOGICAL AND OTHER SYMPTOMS</b>	Fainting sensation, dizziness, loss of consciousness in some cases or head spinning. Transient loss consciousness with good response to lying flat, with or without tonic-clonic seizure	Fearfulness, sensation of dizziness, light headedness. Tingling around the lips, spasms in the hands, feet	Fearfulness, sensation of dizziness, light headedness. Tingling around the lips, spasms in the hands, feet	Uneasiness, restlessness, agitation, loss of consciousness, little response when supine or lying flat
<b>RESPIRATORY</b>	Normal to deep breaths, can be slow with a few seconds of apnoea in some cases.	Fast and shallow, difficulty getting air in, Stridor and cough. Throat symptoms without objective signs of angioedema can predominate (sensation of lump in throat) Hypoxia does not occur	Difficulty getting air in, Stridor and cough. Throat symptoms without objective signs of angioedema can predominate (sensation of lump in throat) Hypoxia does not usually occur Audible wheeze without auscultation. Symptoms out of proportion to objective measures. Voice often quiet	Respiratory difficulties, coughing, sneezing, wheezing, stridor. In severe cases respiratory arrest. Hypoxia can occur.

*\*Clustering is where one person has symptoms then other people in the service also have symptoms*

<b>CARDIOVASCULAR</b>	↓ heart rate with or without <i>transient</i> ↓ in blood pressure Preserved carotid pulse Transient hypotension can occur	↑ heart rate, normal or ↑ systolic blood pressure Palpitations; Chest pain	↑ heart rate, normal or ↑ systolic blood pressure Palpitations	↑ heart rate, ↓ blood pressure, circulatory arrest
<b>SKIN</b>	Diaphoresis, clammy skin, pallor, sense of warmth over skin.	Tingling around mouth and hands; Flushing over chest and face	Tingling around mouth and hands; Flushing over chest and face	Warm skin progressing to clammy and pallor, pruritus and urticaria, swelling of the face and tongue
<b>GASTROINTESTINAL</b>	Nausea, vomiting, abdominal cramps	Nausea	Rarely	Nausea, vomiting, abdominal pain, diarrhoea (this can be pronounced with incontinence)
<b>TREATMENT</b>	Place client in a recumbent position and elevate legs above head; Ventilate the room well; Place cold, damp cloth on face; Give reassurance	Place cold damp cloth on face; Give reassurance; Offer drink of water	Give Reassurance. Offer drink of water or a warm drink	As per anaphylaxis guidelines
<b>PREVENTION</b>	Do not vaccinate a standing person; Before vaccinating ask if the person tends to faint, if so ask patient to lie down.	Ask person if they are prone to anxiety/stress episodes. If so, ask for measures which assist person; Do not vaccinate standing up	Ask if person has a past history of VCD. If so ask which measures assist in managing condition.	Ask if the person has had anaphylaxis to any vaccine components

NB: At times only one symptom may be present for each of the conditions. i.e. Anaphylaxis may have only hypotension without cutaneous or respiratory symptoms or a vasovagal may just present with loss of consciousness