



**Maternity Education Program**

# **Maternal Anaphylaxis**

## **Participant Resource Kit**

## Maternity Education Program (MEP)

The resources developed for MEP are designed for use in any Queensland Health facility that care for patients/women who are pregnant/birthing or postnatal. Each resource can be modified by the facilitator and scaled to the needs of the learner as well as the environment in which the education is being delivered, from tertiary to rural and remote facilities.



Developed by Sue Hampton, Midwifery Educator – Clinical Skills Development Service (CSDS) MNHHS, Dr Belinda Lowe, Obstetrician & Gynaecologist – Gold Coast University Hospital

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### Maternal Anaphylaxis – Participant Resource Kit

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An electronic version of this document is available via [csds.qld.edu.au/mep](http://csds.qld.edu.au/mep).

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## **Who is this resource kit for?**

This resource kit provides healthcare workers with knowledge and skills on assessing and managing an anaphylaxis event in a pregnant patient.

### **Target audience**

Midwifery and medical staff providing maternity care

### **Duration**

45 mins, including simulation and debrief (15 mins for set up not included)

### **Group size**

Suited to small groups (6 – 8)

### **Learning objectives**

By the end of the session the learner should be able to:

- Prepare resources to manage a maternal antenatal anaphylaxis.
- Provide appropriate information and support to the pregnant person during and after an anaphylaxis event.
- Recognise and respond to a clinically deteriorating patient.
- Provide an ongoing plan of care.

### **Supporting documents**

1. 2D pictures
2. Maternal anaphylaxis simulation



# Emergency Management

**Maternal anaphylaxis** is defined as a serious, generalized or systemic, allergic or hypersensitivity reaction that can be life-threatening or fatal. Anaphylaxis is a rare event during pregnancy. The management of anaphylaxis in a pregnant person is the same as that of a non-pregnant patient. The signs and symptoms of anaphylaxis include:

- respiratory problems (e.g., wheeze, dyspnoea)
- gastrointestinal issues (e.g., vomiting, abdominal pain)
- skin and mucosal involvement (e.g., urticaria, itchy rash, swelling of lips)
- cardiovascular and central nervous systems (e.g., reduced blood pressure, feeling faint, headache)

Potential pregnancy-related signs and symptoms of anaphylaxis are:

- lower back pain
- fetal distress
- uterine cramps
- preterm labour
- vulval or vaginal itching

Anaphylaxis can also trigger maternal hypotension and hypoxemia which are potentially life-threatening to both the pregnant person and the fetus. Maternal hypoxemia can lead to intrapartum fetal asphyxia and maternal hypotension and

vasoconstriction can result in decreased uterine blood flow.

Risks to the fetus include, hypoxic-ischemic encephalopathy, severe central nervous system damage, and intra-uterine fetal death.

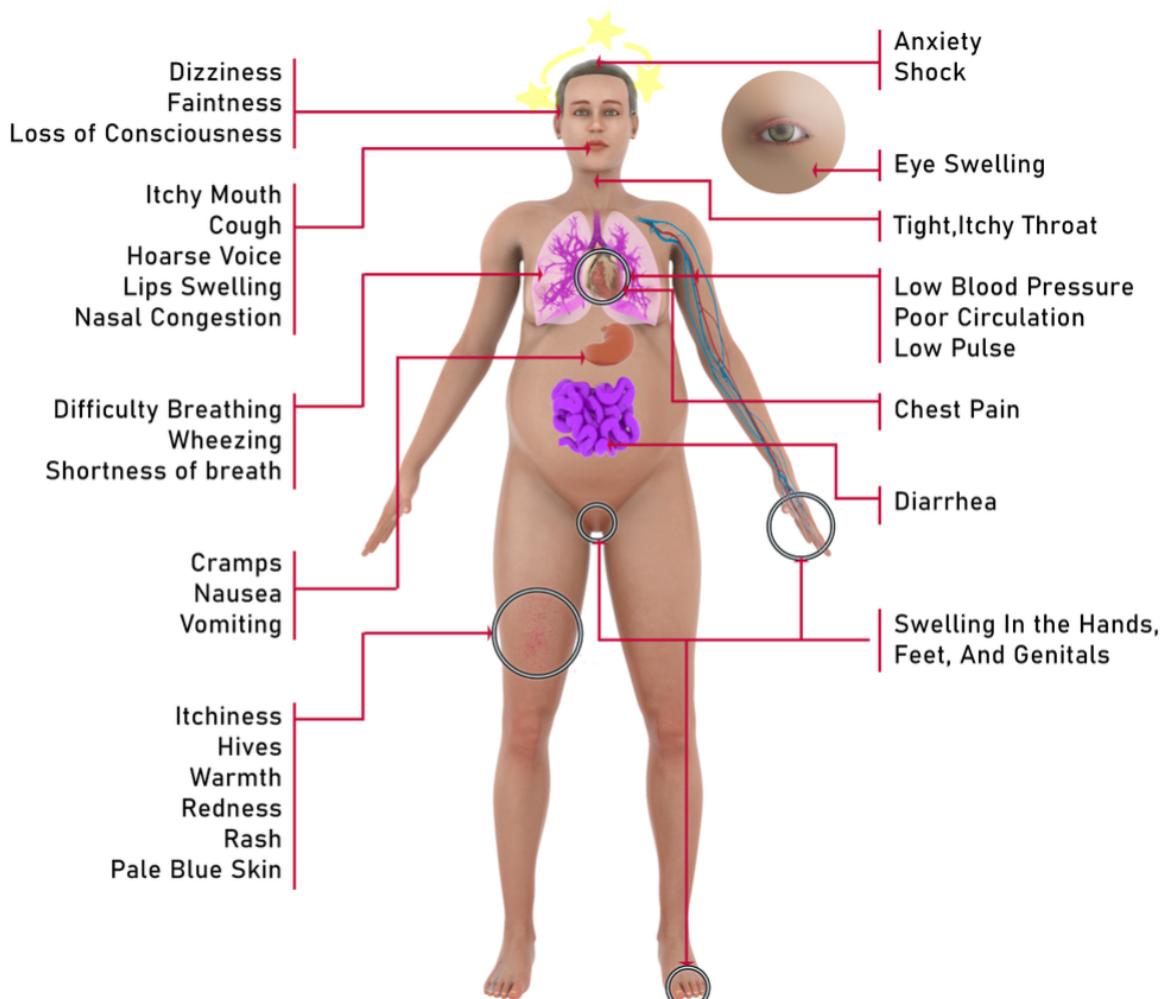
Initial treatment is basic resuscitation, maternal airway, breathing, and circulation (ABC), removal of the causative agents and administration of medication and fluid resuscitation treatment. A caesarean section may be required to avoid fetal hypoxemia and prevent severe fetal damage. In cases of anaphylaxis during pregnancy both the pregnant person and the fetus must be treated. The patient must be seen by a specialist team comprising of obstetrics, neonatology and anaesthetics, for medical and surgical obstetric management, such as fetal monitoring, maternal treatment of threatened preterm labour and possible delivery.

Treatment and management need to be rapid to prevent further anaphylactic reaction and possible fetal brain injury. Drugs such as adrenaline (epinephrine), antihistamines, glucocorticoids and vasopressors can be used safely without major side-effects in pregnancy<sup>1</sup>. The prompt administration of adrenaline (epinephrine) is the cornerstone of anaphylaxis management in both pregnant and non-pregnant population<sup>2</sup>.

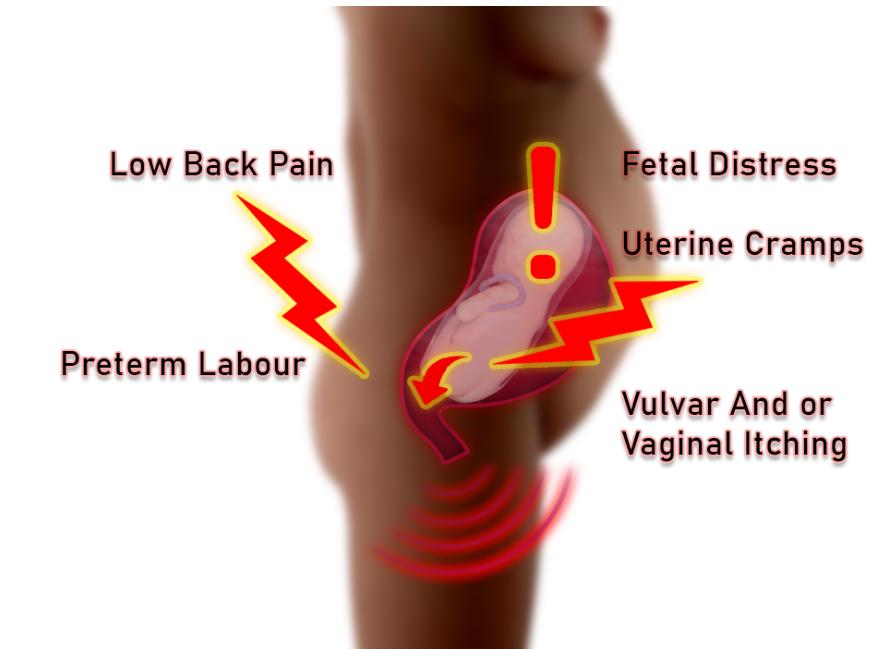


# Emergency Management

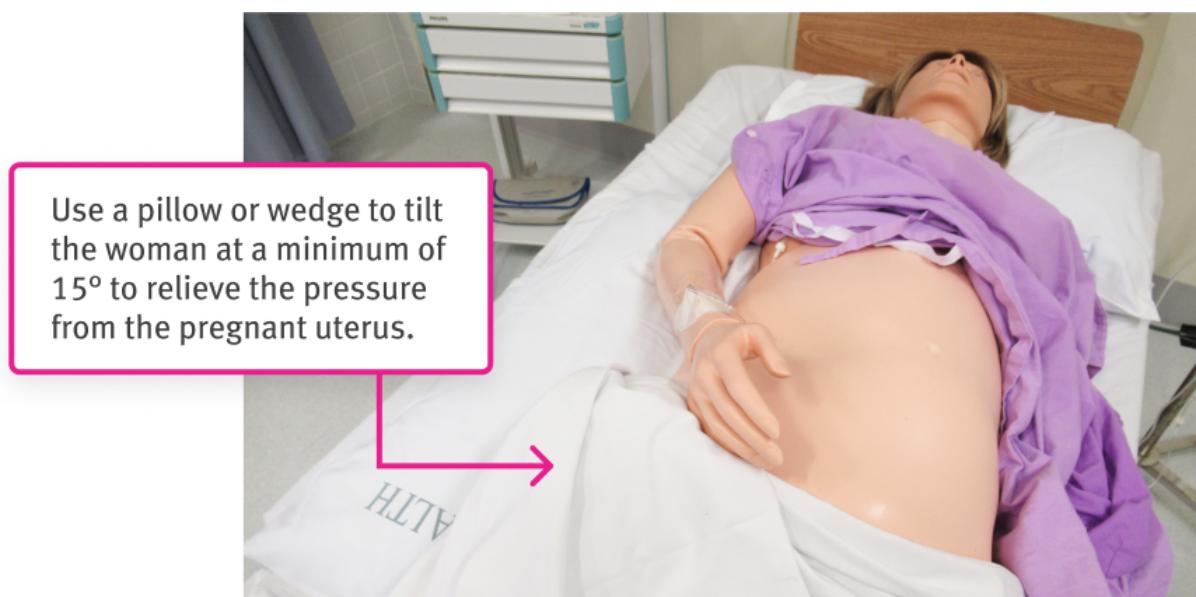
## Maternal anaphylaxis effect on the body



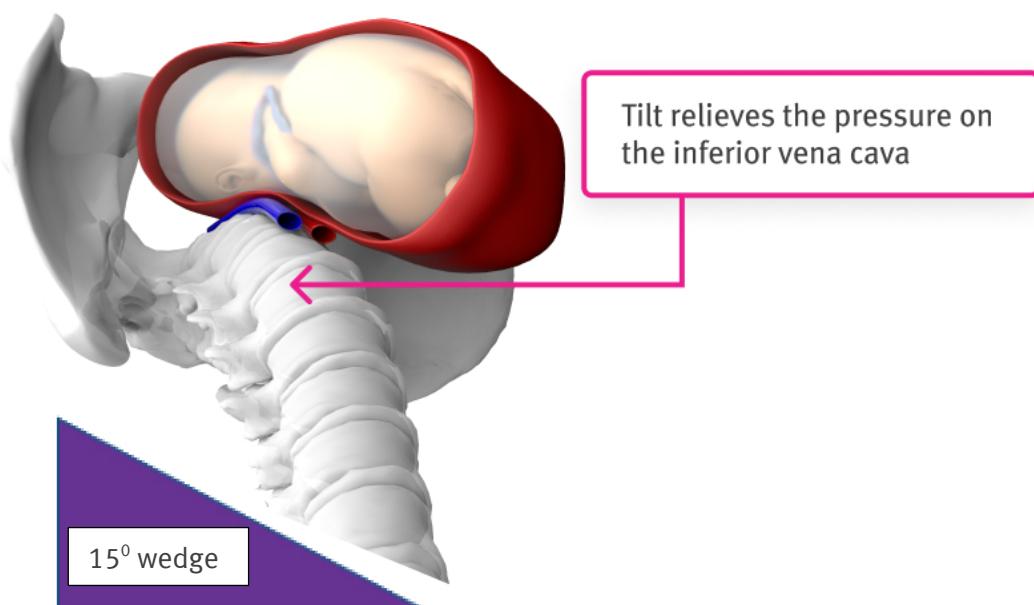
## Potential signs and symptoms of maternal anaphylaxis



## Left lateral 15° tilt

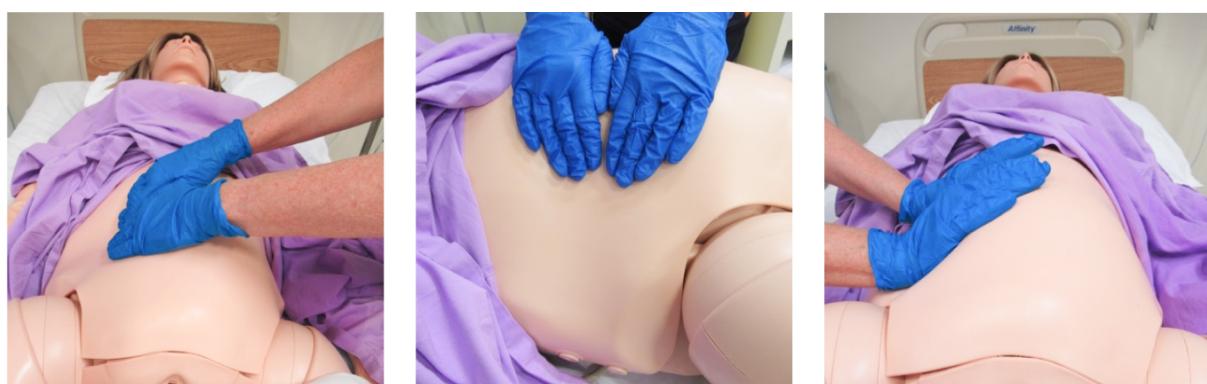


## Internal view of 15° tilt



## Manual uterine displacement

Displace the uterus to the left manually to prevent vena cava compression during maternal resuscitation. The image below is an example.



## References

This resource kit is inspired by the Optimus BONUS project of the Children's Health Queensland's "Simulation Training Optimising Resuscitation for Kids" service. To know more information about STORK and their Optimus project, visit their website at <https://bit.ly/3km1wcZ>.

1. Yasunobu T, Mitsuo N, Masayuki N, Urara N. A case report: Management of maternal anaphylaxis in pregnancy. *Allergy Eur J Allergy Clin Immunol.* 2014;
2. Australian Society of Clinical Immunology and Allergy (ASCIA). Acute management of anaphylaxis guidelines [Internet]. Clinical Practice Guidelines Portal. 2019. Available from:  
[http://www.allergy.org.au/images/stories/pospapers/ASCIA\\_Acute\\_Management\\_of\\_Anaphylaxis\\_Guidelines\\_September\\_2013.pdf](http://www.allergy.org.au/images/stories/pospapers/ASCIA_Acute_Management_of_Anaphylaxis_Guidelines_September_2013.pdf)

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The survey should take no more than 5 minutes to complete. Scan the QR code with your device or visit this link

<https://www.surveymonkey.com/r/Z8Q398N>



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