Clinical Practice Guidelines:
Medical/Acute dystonic reaction

<table>
<thead>
<tr>
<th>Policy code</th>
<th>CPP_ME_ADR_0120</th>
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<tbody>
<tr>
<td>Date</td>
<td>January, 2020</td>
</tr>
<tr>
<td>Purpose</td>
<td>To ensure consistent management of patients with acute dystonic reaction.</td>
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<tr>
<td>Scope</td>
<td>Applies to Queensland Ambulance Service (QAS) clinical staff.</td>
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<tr>
<td>Health care setting</td>
<td>Pre-hospital assessment and treatment.</td>
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<tr>
<td>Population</td>
<td>Applies to all ages unless specifically mentioned.</td>
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<tr>
<td>Source of funding</td>
<td>Internal – 100%</td>
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<tr>
<td>Author</td>
<td>Clinical Quality &amp; Patient Safety Unit, QAS</td>
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<td>Review date</td>
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Acute dystonic reactions are an extrapyramidal side-effect due to an imbalance between dopaminergic deficiency and cholinergic excess neurotransmission in the basal ganglia.\(^{[1]}\)

Presentations are caused by numerous medications (Table 1) and although relatively common and distressing, are rarely life-threatening.\(^{[1]}\)

### Table 1:

<table>
<thead>
<tr>
<th>Class</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antipsychotics</td>
<td>haloperidol, droperidol, fluphenazine, clozapine, olanzapine, quetiapine, risperidone</td>
</tr>
<tr>
<td>Antiemetics*</td>
<td>metoclopramide, prochlorperazine</td>
</tr>
<tr>
<td>Antidepressants</td>
<td>SSRIs (eg. fluoxetine)</td>
</tr>
<tr>
<td>Antibiotics</td>
<td>erythromycin</td>
</tr>
<tr>
<td>Anticonvulsants</td>
<td>carbamazepine</td>
</tr>
<tr>
<td>Antihistamines (H2)</td>
<td>ranitidine</td>
</tr>
<tr>
<td>Recreational</td>
<td>cocaine</td>
</tr>
</tbody>
</table>

* most common

Dystonia itself refers to involuntary, sustained, repetitive muscle contractions that may be painful.\(^{[2]}\) Dystonia is different to akathisia (patient feels the need to constantly move), which may also occur with these medications.\(^{[3]}\)

The onset of dystonia varies. It may occur shortly after administration of the drug but usually occurs hours to days later.

### Clinical features

- **Presentations of acute dystonia** \(^{[3,4,5]}\)
  - oculogyric crisis – deviated eye gaze
  - +/- eyelid spasm
  - laryngospasm – stridor, dysphonia, throat pain, dyspnoea – potentially life-threatening
  - torticollis
  - opisthotonus – arms flexed, legs extended, back arched
  - macroglossia – tongue feels enlarged (clinically not) and protrudes from mouth
  - buccolingual crisis – may have trismus, dysarthria, grimacing
  - tortipelvic crisis – involves hips, pelvis and abdominal wall muscles
  - spasticity of trunk or limbs

- **Other features that may be present**
  - anxiety
  - agitation
  - diaphoresis
  - tachycardia
  - tachypnoea

- **The patient has normal mentation.**
Risk Assessment

- Often an idiosyncratic reaction, but more common in young males, especially if prior history.
- Acute dystonia may mimic a number of other conditions (e.g. seizures, meningitis, hyperventilation).

Additional information

- If there is no improvement with Benztropine (benzatropine), it is unlikely to be an acute dystonic reaction.\(^1\)\(^-\)\(^3\)

Consider:

- Oxygen
- Benztropine (benzatropine)
- Assist ventilation
- IV fluids

Note: Clinicians are only to perform procedures for which they have received specific training and authorisation by the QAS.

Life-threatening laryngospasm?

- Y
  - Consider:
    - Benztropine (benzatropine)
    - IV fluids
  - Transport to hospital
  - Pre-notify as appropriate

- N