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<b>Title</b>	Sepsis and adrenal insufficiency: a potentially lethal combination
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# Sepsis and adrenal insufficiency: a potentially lethal combination

TO THE EDITOR: The Coroners Court of Victoria made several recommendations in 2020 after a 38-year-old man died alone at home.<sup>1</sup> The cause of death was determined to be sepsis in the setting of an adrenal crisis.

The key coronial recommendations<sup>1</sup> were to emphasise to the general medical community the non-specific nature of symptoms of impending adrenal crisis (eg, fatigue, nausea, loss of appetite, vomiting),<sup>2</sup> to record the diagnosis of adrenal insufficiency prominently as an alert in medical records,<sup>3</sup> and to encourage endocrinologists to provide sick day or steroid stress dosing letters to patients, general practitioners, and family members and carers.

The Endocrine Society of Australia (ESA) endorses these recommendations. A standard patient letter has been developed and is now available on the ESA's Hormones Australia website.<sup>4</sup> We strongly support medical record alerts for the diagnosis of cortisol deficiency due to Addison disease or hypopituitarism.

It is crucial for doctors to have a high index of suspicion for the possibility of impending adrenal crisis in a patient with known adrenal insufficiency. The clinical syndrome evolves from acute adrenal insufficiency with symptoms of malaise, nausea and lethargy — all of which are non-specific and may be considered part of another pathological process — to adrenal crisis, which is associated with hypotension initially manifest by postural blood pressure falls greater than 20 mmHg.<sup>2,3</sup>

Prevention involves advice on stress dosing:<sup>1</sup> triple glucocorticoid dosing for 3 days (ie, the 3 × 3 rule),<sup>2</sup> parenteral hydrocortisone at home (SOLU-CORTEF Act-O-Vial, Pfizer) when unable to take tablets,<sup>3</sup> and the availability of personal alerts (eg, a MedicAlert bracelet [MedicAlert Foundation], a steroid card) when the person is delirious or very unwell (Box).

The incidence of adrenal crises is increasing in Australia.<sup>3</sup> Missed cases or failure to treat them because of overestimation of the risks of glucocorticoid therapy are unfortunately too common.

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## Practical steps to reduce the risk of adrenal crisis

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Ensure that others are aware of the diagnosis of established adrenal insufficiency

- Prominent medical alert in GP and hospital medical records
- Patient carries either a steroid card, which lists diagnosis and glucocorticoid therapy, or uses a MedicAlert bracelet (MedicAlert Foundation)
- A sick day or steroid stress dosing letter should be provided by the endocrinologist to the patient with adrenal insufficiency, with a copy to their GP
- Encourage the patient with adrenal insufficiency to provide copies of the letter to their next of kin, close relatives or carer

Have a high index of suspicion for an impending adrenal crisis

- Beware of non-specific symptoms of nausea, vomiting or lethargy in a patient with established adrenal insufficiency

Prevent an adrenal crisis in patients with established adrenal insufficiency

- When unwell, follow the 3 × 3 rule (ie, three times the usual glucocorticoid dose for 3 days) and seek urgent medical attention if not improving

Promptly treat an impending adrenal crisis

- The patient and/or carer should be trained to administer 100 mg SOLU-CORTEF Act-O-Vial (Pfizer) intramuscularly\* if vomiting occurs or the patient is unable to swallow tablets

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GP = general practitioner. \* Some authorities recommend the off-label use of a subcutaneous injection as this is easier for patient and/or carer to administer.