

**Society for Endocrinology position statement on the
management of adults with endocrine disorders during hot
weather and heatwaves**

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23 **Introduction**

24 The purpose of this position statement is to provide practical advice for healthcare
25 professionals and patients on the management of common endocrine disorders during
26 periods of hot weather. Recommendations provide a pragmatic framework
27 predominantly based on physiological principles and expert consensus, acknowledging
28 the limited clinical evidence available to underpin clinical practice in this area. This
29 guidance is intended for use alongside disease-specific management plans and national
30 or international guidelines, not as a replacement for specialist clinical judgement.

31 **General Principles**

- 32 • Body temperature regulation in hot weather relies predominantly on increased
33 sweating (leading to hypotonic fluid and sodium losses), cutaneous vasodilation, and
34 behavioural changes¹.
- 35 • Patients with certain endocrine disorders may be more vulnerable to hot weather due
36 to susceptibility to salt and/or water depletion (primary adrenal insufficiency, arginine
37 vasopressin (AVP) deficiency or resistance, primary hyperparathyroidism) or
38 impaired body temperature regulation (hyperthyroidism). Those with a deficient
39 sense of thirst (adipsia) are particularly vulnerable.
- 40 • The physiological impact of heat depends not only on absolute ambient temperature,
41 but also on factors such as humidity, duration of exposure, direct sunlight, physical
42 activity, acclimatisation, and individual vulnerability¹. Therefore, no single ambient
43 temperature threshold can reliably define risk. In general, susceptible patients are

likely to be at greater risk during prolonged heat exposure, particularly when this results in substantially increased sweating, and during periods covered by official heat-health alerts.

- Where thirst sensation is intact, increasing oral fluid intake guided by thirst to maintain hydration is important, unless fluid restriction is specifically indicated.
- In most cases, heat alone does not require endocrine medication dose changes, although intercurrent illness or heat-related illness may warrant adjustment.
- At-risk patients should avoid prolonged exposure to extreme heat where possible, particularly those with primary adrenal insufficiency or impaired thirst mechanisms.
- Patients should be vigilant for symptoms suggestive of dehydration, volume depletion or heat-related illness, including: dizziness (particularly on standing), marked fatigue or weakness, a high body temperature, muscle cramps or headaches. They should seek medical advice if symptoms are severe, persistent or worsening. Confusion, recurrent vomiting, reduced responsiveness, fainting episodes or seizures should prompt urgent medical assessment.
- Patients receiving glucocorticoid replacement should follow standard sick-day rules when clinically unwell².
- Patients should carry emergency medical identification where appropriate (e.g. Steroid Emergency Card).

Condition-specific Recommendations

Condition	Hot weather advice	Medication adjustment
Primary adrenal insufficiency (Addison's disease)	- Advise patients to maintain hydration by increasing oral fluid intake according to thirst.	-Hydrocortisone: Routine dose adjustment is not recommended.

	- Patients should consider increasing dietary salt intake or using electrolyte-containing oral rehydration solutions during periods of increased sweating.	Patients should apply sick-day rules as usual if clinically unwell². -Fludrocortisone: Consider a temporary increase (e.g., by 50–100 micrograms/day), particularly if increased sweating, prolonged outdoor activities, or if symptomatic (e.g., light-headedness, salt craving)^{2,3}. Caution should be exercised in patients with hypertension or heart failure. An increase in fludrocortisone should not be used as a substitute for prompt fluid and salt replacement in patients with acute dehydration or volume depletion.
Secondary/tertiary adrenal insufficiency	- Advise patients to maintain hydration by increasing oral fluid intake according to thirst.	-Hydrocortisone: Routine dose adjustment is not recommended. Patients should apply sick-day rules as usual if clinically unwell. -Fludrocortisone is not required.

AVP deficiency/resistance (diabetes insipidus)	-Advise patients to maintain hydration by increasing oral fluid intake according to thirst. -In patients with absent or impaired thirst (adipsia), regular fluid prescription may need adjusting with close monitoring of body weight and/or serum sodium levels⁴. Any adjustment should be individualised and agreed with the patient's Endocrinology team. Thirst should not be used to guide fluid intake. - Patients and their relatives/carers should be advised to contact their Endocrinology team if they notice significant or unexpected changes in body weight or urine output, which may reflect an underlying change in fluid balance.	- Routine desmopressin/diuretic dose adjustment is not recommended.
Syndrome of inappropriate antidiuresis (SIAD)	- There is a risk that the existing fluid restriction regime might lead to dehydration in hot weather. Patients should be advised to contact their GP or hospital team if symptoms of dehydration.	Avoid routine relaxation of fluid restriction; individualise according to clinical assessment and serum sodium.
Hyperparathyroidism	- Advise patients to maintain hydration by increasing oral fluid intake according to thirst. Some patients may be at increased risk of dehydration and worsening hypercalcaemia.	-Routine medication dose adjustment (e.g. cinacalcet) is not recommended.

Hyperthyroidism	-Patients with poorly controlled hyperthyroidism may be more sensitive to hot weather because of increased thermogenesis and sweating⁵. - Advise patients to maintain hydration by increasing oral fluid intake according to thirst. - Avoid prolonged heat exposure. -Seek medical advice if dizziness, worsening palpitations, fainting episodes, or confusion.	Routine medication dose adjustment is not recommended; ensure thyrotoxicosis is well-controlled.
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Key Messages

- Heat alone is not an indication to change regular medication doses in most cases.
- Encourage early recognition of dehydration and heat-related illness.
- Patients with adrenal insufficiency should understand sick-day rules and emergency injection use. In primary adrenal insufficiency, increased sweating may require increased salt intake and/or temporary adjustment of the fludrocortisone dose.
- Patients with AVP deficiency or resistance (diabetes insipidus) and intact thirst sensation should drink to thirst and seek urgent assessment if they are unable to maintain oral intake.
- Patients with adipsia (lack of thirst sensation) are particularly vulnerable to the effects of heat and careful fluid balance management is crucial in hot weather. Changes to medication or usual fluid prescription should be individualised in liaison with the patient's

Endocrinology team. More frequent biochemical monitoring, guided by weight changes and clinical symptoms, may be required.

Further information for patients

General guidance on how to stay safe during hot weather is available from the NHS (<https://www.nhs.uk/conditions/heat-exhaustion-heatstroke/>) and the UK Health Security Agency (<https://www.gov.uk/government/publications/beat-the-heat-hot-weather-advice/beat-the-heat-staying-safe-in-hot-weather>). Useful information specific to patients with pituitary disease is available from the Pituitary Foundation (<https://www.pituitary.org.uk/information/heatwave-guidance-for-people-with-pituitary-conditions/>).

References

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