

TOP 5 Low-value practices and interventions

The **Endocrine Society of Australia (ESA)** has reviewed the evidence and consulted with its expert members to develop the following recommendations to support best patient care and reduce the use of unnecessary or ineffective practices within a given clinical context.

1 Don't routinely order a thyroid ultrasound in patients with abnormal thyroid function tests if there is no palpable abnormality of the thyroid gland

2 Don't prescribe testosterone therapy unless there is evidence of proven testosterone deficiency

3 Do not measure insulin concentration in the fasting state or during an oral glucose tolerance test to assess insulin sensitivity

4 Avoid multiple daily glucose self-monitoring in adults with stable type 2 diabetes on agents that do not cause hypoglycaemia

5 Don't order a total or free T3 level when assessing thyroxine dose in hypothyroid patients

EVOLVE is a physician-led initiative to ensure the highest quality patient care through the identification and reduction of low-value practices and interventions.

EVOLVE is patient-centred and evidence-based, with rigorous and transparent processes. Its focus is to stimulate clinical conversations – between colleagues, across specialties, and with patients – to ensure the care that's delivered is the best for each patient.

EVOLVE is part of a worldwide movement to analyse medical practices and reduce unnecessary interventions. It is an initiative in partnership between the RACP and the Specialty Societies, Divisions, Faculties and Chapters.

1 Don't routinely order a thyroid ultrasound in patients with abnormal thyroid function tests if there is no palpable abnormality of the thyroid gland

Thyroid ultrasound is used to identify and characterize thyroid nodules, and is not part of the routine evaluation of abnormal thyroid function tests (over- or underactive thyroid function) unless the patient also has a palpably large goitre or a nodular thyroid. Incidentally discovered thyroid nodules on ultrasound are common. Overzealous use of ultrasound will frequently identify nodules, which are unrelated to the abnormal thyroid function, and may divert the clinical evaluation to assess the nodules, rather than the thyroid dysfunction, which may lead to further unnecessary investigation, unwarranted patient anxiety and increased costs. Imaging may be needed in thyrotoxic patients; when needed, a radionuclide thyroid scan, not an ultrasound, is used to assess the aetiology of the thyrotoxicosis and the possibility of focal autonomy in a thyroid nodule or nodules.

2 Don't prescribe testosterone therapy unless there is evidence of proven testosterone deficiency

Many of the symptoms attributed to male hypogonadism are commonly seen in normal male aging or in the presence of comorbid conditions. Testosterone therapy has the potential for serious side effects and represents a significant expense. It is therefore important to confirm the clinical suspicion of hypogonadism with biochemical testing. Current guidelines recommend the use of a total testosterone level obtained in the morning. A low level should be confirmed on a different day, again measuring the total testosterone. In some situations, for example conditions in which sex hormone-binding globulin concentrations are altered, a calculated free or bioavailable testosterone may be of additional value.

3 Do not measure insulin concentration in the fasting state or during an oral glucose tolerance test to assess insulin sensitivity

Measurement of insulin either in the fasting state or during an oral glucose tolerance test is not a clinically useful method to estimate insulin sensitivity. The hyperinsulinemic-euglycemic (HIEG) clamp is the gold standard for assessing insulin sensitivity as it is possible to assess tissue specific sensitivity and can be used in all types of populations. This feature is important because a method of standardisation must be developed to control for various factors prior to any methods for measurement.

4 Avoid multiple daily glucose self-monitoring in adults with stable type 2 diabetes on agents that do not cause hypoglycaemia

Once target control is achieved and the results of self-monitoring become quite predictable, there is little gained from repeated confirmation.

The exceptions to this include: acute illness; when new medications are added; when weight fluctuates significantly; when A1c targets drift off course; and in individuals who need monitoring to maintain targets.

Self-monitoring is beneficial as long as one is learning and adjusting therapy based on the result of the monitoring.

5 Don't order a total or free T3 level when assessing thyroxine dose in hypothyroid patients

T4 is converted into T3 at the cellular level in virtually all organs. Intracellular T3 levels regulate pituitary secretion and blood levels of thyroid-stimulating hormone (TSH), as well as the effects of thyroid hormone in multiple organs; a normal TSH indicates an adequate T4 dose. Conversion of T4 to T3 at the cellular level may not be reflected in the T3 level in the blood. Compared to patients with intact thyroid glands, patients taking T4 may have higher blood T4 and lower blood T3 levels. Thus the blood level of total or free T3 may be misleading (low normal or slightly low); in most patients a normal TSH indicates a correct dose of T4.

How this list was developed...

The Medical Affairs sub-committee of the Endocrine Society of Australia (ESA) collaborated with the Royal Australasian College of Physicians (RACP) to compile a list of 44 possible low-value interventions using desktop research.

The list was examined and refined down to 8 interventions: 6 interventions were deemed sufficiently common or important to warrant consideration, and two additional practices were identified by the committee.

A review of the evidence for these 8 was completed and circulated to the broader membership for feedback via an on-line survey. Based on the results of the survey, which attracted 146 respondents, a top 5 was identified and approved by the Society's Executive Committee.

Endocrine Society of Australia – Top 5 recommendations

EVIDENCE SUPPORTING RECOMMENDATION 1

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EVIDENCE SUPPORTING RECOMMENDATION 3

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EVIDENCE SUPPORTING RECOMMENDATION 4

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EVIDENCE SUPPORTING RECOMMENDATION 5

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DISCLAIMER: All reasonable care has been taken during the process of developing these recommendations. The health information content provided in this documents has been developed by the members of the Endocrine Society of Australia. The health information presented is based on current medical knowledge and practice as at the date of publication.