This guideline is intended to address clinical questions surrounding the diagnosis of testosterone deficiency syndrome (TDS) and the appropriate use of testosterone therapy in the management of these patients. The document places a high priority on the identification and treatment of symptomatic men, and the improvement of patient outcomes.

### Signs and Symptoms Associated with TDS

<table>
<thead>
<tr>
<th>Category</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexual</td>
<td>Decreased libido; erectile dysfunction; decreased frequency of morning erections; decreased performance</td>
</tr>
<tr>
<td>Somatic</td>
<td>Increased visceral body fat/obesity; decreased lean muscle mass; decreased strength; fatigue/loss of energy; decreased physical activity/vitality; anemia; flushes; loss of facial, axillary and pubic hair/slow beard growth; decline in general feeling of well-being</td>
</tr>
<tr>
<td>Psychological</td>
<td>Depression/depressed mood; mood changes; irritability; inability to concentrate; insomnia/sleep disturbances</td>
</tr>
</tbody>
</table>

### Diagnostic Algorithm

**Clinical Suspicion of TDS**

- Type II diabetes
- Insulin resistance
- Metabolic syndrome
- HIV-associated weight loss
- Treatment with opioids, glucocorticoids or ketoconazole
- Chronic alcohol abuse or heroin use
- Liver disease
- Hemochromatosis
- Osteoporosis
- End-stage renal disease
- COPD
- Obstructive sleep apnea
- Infertility
- Frailty
- Hyperprolactinemia
- Sellar region mass, disease, radiation or trauma
- Testicular cancer treatment

**Measure T in AM**

- Between 7am and 11am, or within 3 hours of waking

**Low T**

**Borderline Low or Low Normal T**

(Repeat for confirmation)

**Comprehensive Laboratory Evaluation**

- FSH
- LH
- Prolactin
- SHBG
- cFT or cBAT
- TSH
- Ferritin (or percent iron saturation)
- CBC
- PSA

**Consider referral to TDS expert if strong clinical manifestations and low normal T**

**1° Hypogonadism (Testicular)**

- Low T + Low LH/FSH

**2° Hypogonadism (Pituitary/Hypothalamic)**

- Low T + Normal LH/FSH

**Consider treatment of referral to TDS expert**
Key Points

- Diagnosis of testosterone deficiency syndrome requires the presence of the clinical manifestations of testosterone deficiency, together with documented serum testosterone levels below the local laboratory ranges.
- Treatment is recommended for men with testosterone deficiency syndrome; the choice of treatment is made based on product availability, safety, efficacy, tolerability, cost and the absence of contraindications.
- Testosterone therapy is appropriate in men with testosterone deficiency syndrome and with stable cardiovascular disease or at risk of cardiovascular disease.
- Hypogonadal men with a history of prostate cancer may be candidates for testosterone therapy; these patients require referral to a specialist, as treatment involves close monitoring by a physician with expertise in the risks and benefits of therapy.
- Regular monitoring for clinical and biochemical response, and for adverse effects to testosterone therapy is mandatory, particularly during the first year of treatment.