

# **Title: Gaps in syphilis knowledge among Australians: findings from a nationally representative survey**

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## **Background:**

In 2025, syphilis was declared a communicable disease incident of national significance in Australia. Despite targeted prevention efforts, syphilis knowledge in the general population has not been assessed. Population-level knowledge influences risk perception and testing behaviour. Misconceptions may delay diagnosis, sustain transmission, and contribute to preventable outcomes such as congenital syphilis.

## **Methods:**

The Third Australian Study of Health and Relationships (ASHR3) was a nationally representative survey of Australians aged 16–69 years conducted in 2023–2024 using telephone interviews and an online probability panel. Syphilis knowledge was assessed using an 11-item true/false questionnaire; participants answering >80% correctly were classified as having good knowledge. Analyses were stratified by sociodemographics, weighted prevalence estimates and prevalence rate ratios (PRRs) reported with 95% confidence intervals.

## **Results:**

12,833 participants completed ASHR3 (men 48.6%, women 50.0%, non-binary 1.4%; weighted), of whom 7,025 (54.74%) completed the syphilis knowledge assessment. 66.3% (95% CI: 64.7–67.8) demonstrated good knowledge. Gaps in epidemiology and symptom recognition: 61.3% correctly identified that syphilis rates aren't decreasing (95% CI: 59.7–62.9), 61.9% that most cases don't occur among women (95% CI: 60.3–63.6), and 69.1% recognised skin rash as a typical symptom (95% CI:

67.6–70.6). Knowledge of transmission and serious consequences was high (>80–90%). Good knowledge was lower among younger participants (16–19 years: PRR 0.74, 95% CI: 0.55–0.99; 20–29 years: PRR 0.90, 95% CI: 0.81–0.99, those born in non-English-speaking countries or speaking a language other than English at home (PRRs 0.86 [95% CI: 0.80–0.93] and 0.80 [95% CI: 0.72–0.89]). Knowledge was higher among those with post-secondary and school-based sex education. No significant differences observed across region, sexual identity, Aboriginal and/or Torres Strait Islander status, and disability.

**Conclusion:**

Syphilis knowledge was generally high; gaps remain among younger and culturally diverse populations. Tailored, culturally responsive sex education may strengthen syphilis prevention efforts.

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