

'Quick wee' technique to quickly acquire urine samples from infants

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Credit: Murdoch Childrens Research Institute

Getting a urine sample from a very young child may be as simple as gently rubbing their stomach with cold, wet gauze, an Australian study has shown.

'Quick-Wee,' a method developed by Dr Jonathan Kaufman and his team from the Murdoch Children's Research Institute, was developed to help clinicians collect urine samples from very young patients (0-1 years) quickly, gently, and with minimal equipment.

Quick-Wee involves gently rubbing the lower abdomen with a piece of

gauze soaked in cold liquid. The action stimulates cutaneous voiding reflexes (nerves on the skin which, when stimulated, trigger urination), and the clinician or parent is ready to catch the urine [sample](#).

The results of Dr Kaufman's study show Quick-Wee is three times more effective than current methods used to collect urine samples from these patients. The study was published in the *BMJ*.

Clinicians often need to collect urine samples to diagnose or exclude [urinary tract infections](#) (UTI), a common and serious cause of fever in [young children](#).

However, collecting samples from very young patients can be time consuming. The standard 'clean catch' method (where clinicians wait for children to urinate and try to catch the sample) can take up to one hour, and carries a greater risk of contamination.

"The elusive urine sample has been described by some clinicians as 'liquid gold' for these reasons," Dr Kaufman says.



Credit: Murdoch Childrens Research Institute

"A delay or difficulty in collecting [urine samples](#) can lead to misdiagnosis or missed diagnosis of UTIs."

Some clinicians will use a needle and catheter to collect urine. While this can be faster, it's invasive, and requires specific expertise to perform. It can also be painful, which is distressing for the child and their parents.

The idea for Quick-Wee came to Dr Kaufman while working in an

emergency department.

"I'd observed that young children would occasionally urinate when a doctor cleaned their lower abdomen with cold, wet gauze before a procedure," Dr Kaufman says.

"Knowing this action could trigger urination, I thought we could try it in an emergency setting when a urine sample was needed."

To investigate, Dr Kaufman and his team recruited 354 patients who needed a [urine](#) sample for clinical reasons, to take part in a [randomised controlled trial](#). Half were treated using Quick-Wee, and half were treated using clean catch. Thirty-one percent of patients treated with Quick-Wee urinated within five minutes, compared to around 11 percent treated with clean catch. Parents and [clinicians](#) were also more satisfied with Quick-Wee, in terms of ease and efficiency.

"The results from the trial suggest Quick-Wee is a feasible way to speed up [urine collection](#), and a reasonable alternative to invasive methods for some children," Dr Kaufman says.

In addition to reducing wait times in emergency, Dr Kaufman hopes that Quick-Wee will prevent complications from UTI illness, and reduce missed or misdiagnosis of UTI.

More information: Jonathan Kaufman et al. Faster clean catch urine collection (Quick-Wee method) from infants: randomised controlled trial, *BMJ* (2017). [DOI: 10.1136/bmj.j1341](https://doi.org/10.1136/bmj.j1341)

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