

# Extracorporeal shock wave lithotripsy best at 90 pulses/min

July 16 2015

---



(HealthDay)—For ureteral stones, extracorporeal shock wave lithotripsy delivered at a shock wave delivery rate of 90 pulses per minute is associated with excellent outcomes, according to a study published in the August issue of *The Journal of Urology*.

Daniel P. Nguyen, M.D., from the University of Bern in Switzerland, and colleagues compared the outcomes of two delivery rates in a [prospective randomized trial](#) involving 254 consecutive patients with solitary ureteral stones. Participants were randomized to receive extracorporeal shock wave lithotripsy at a shock wave delivery rate of 60 and 90 pulses per minute (130 and 124 participants, respectively).

The researchers found that at three months, the stone-free rate was significantly higher in patients who underwent extracorporeal shock wave lithotripsy at a shock wave delivery rate of 90 pulses versus 60

pulses per minute (91 versus 80 percent;  $P = 0.01$ ). The observed difference was due to patients with proximal (100 versus 83 percent;  $P = 0.005$ ) and mid ureteral (96 versus 73 percent, respectively;  $P = 0.03$ ) stones, but not those with distal ureteral stones (81 versus 80 percent;  $P = 0.9$ ). Independent predictors of success included shock wave delivery rate of 90 pulses per minute, proximal stone location, stone density, stone size, and an absent indwelling Double-J stent, on multivariable analysis.

"Optimizing the extracorporeal [shock wave lithotripsy](#) delivery rate can achieve excellent results for ureteral [stones](#)," the authors write.

**More information:** [Abstract](#)  
[Full Text](#)

Copyright © 2015 [HealthDay](#). All rights reserved.

Citation: Extracorporeal shock wave lithotripsy best at 90 pulses/min (2015, July 16) retrieved 26 April 2024 from  
<https://medicalxpress.com/news/2015-07-extracorporeal-lithotripsy-pulsesmin.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--