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Lakeland Grant, 1409 W. Green St., Urbana, IL 61802, and **Christopher Leininger***, 1409 W. Green St., Urbana, IL. *Systoles and Dehn Surgery for 3-manifolds*.

Given a closed hyperbolic 3-manifold M of volume V , and a link $L \subset M$ such that the complement $M \setminus L$ is hyperbolic, we establish a bound for the systole length of $M \setminus L$ in terms of V . This extends a result of Adams and Reid, who showed that in the case that M is not hyperbolic, there is a universal bound of 7.35534... . As part of the proof, we establish a bound for the systole length of a non-compact finite volume hyperbolic manifold which grows asymptotically like $\frac{4}{3} \log V$. This is joint work with Grant Lakeland. (Received August 14, 2013)