Abstract. Motivated by Almgren’s work on the isoperimetric inequality, we prove a sharp inequality relating the length and maximum curvature of a closed curve in a complete, simply connected manifold of sectional curvature at most $-1$. Moreover, if equality holds, then the norm of the geodesic curvature is constant and the torsion vanishes. The proof involves an application of the maximum principle to a function defined on pairs of points.