Let $X$ be a general degree $d$ hypersurface in $n$-dimensional projective space, and consider the spaces of rational curves on $X$. Following work of Harris, Roth, Starr, Beheshti and Kumar, we prove that the space of degree $e$ rational curves on $X$ is irreducible and we compute its dimension for $n > d + 1$. This resolves all but the $n = d + 1$ case of a conjecture of Coskun, Harris and Starr. This is joint work with David Yang.