The representation theory of real symmetric spaces was developed by Harish Chandra, Delorme, Schlichtkrul, van den Ban and many others. A natural next step is to consider the $p$-adic symmetric $k$-varieties. These homogeneous spaces have the form $X := \mathcal{H}_k/\mathcal{G}_k$, where $\mathcal{G}$ is a reductive algebraic group defined over $k$, its subgroup $\mathcal{H}$ is the fixed point group of an involution $\sigma$ of $\mathcal{G}$ defined over $k$ and $k$ is a finite extension of $\mathbb{Q}_p$ for some $p$. In this talk we discuss recent progress on the representation theory related to these spaces. (Received September 19, 2007)