**Figure 2.8** The shaded set is the halfspace determined by $a^T(x - x_0) \leq 0$. The vector $x_1 - x_0$ makes an acute angle with $a$, so $x_1$ is not in the halfspace. The vector $x_2 - x_0$ makes an obtuse angle with $a$, and so is in the halfspace.