The effect of curvature and torsion on the flow in a helical pipe of circular cross-section is studied numerically by the spectral method. The calculations are carried out for $0 \leq \delta \leq 0.6$, $0 \leq \beta_0 \leq 1.4$ and $500 \leq Dn \leq 2000$, where $\delta$ is the non-dimensional curvature, $\beta_0$ the ratio of torsion to square root of curvature, and $Dn$ the Dean number. The results obtained indicate large effects of torsion on the flow: The conventional two-vortex secondary flow is distorted to become almost one single recirculating cell when $\beta_0 \gtrsim 0.8$. The flux through the pipe at the given Dean number and curvature first decreases from that of the toroidally curved pipe as $\beta_0$ increases from zero, reaches a minimum at $\beta_0 \approx 0.8$, and then increases to values larger than that of the toroidally curved pipe. The minimum value decreases as $\delta$ increases.