**11** A helium atom of mass $m$ collides normally with a wall. The atom arrives at the wall with speed $v$ and then rebounds along its original path. Assume that the collision is perfectly elastic.

What is the change in the momentum of the atom during its collision?

**A**   zero                 **B**   $0.5\,mv$                **C**   $mv$                 **D**   $2mv$