Unit Impulse Response: Post-initial Conditions

**Quiz:** Let \( w(t) \) be the solution to \( m\ddot{x} + kx = \delta(t) \) with rest initial conditions. What is \( \dot{w}(0+) \)?

**Choices:**

a) \( \dot{w}(0+) = 0 \)
b) \( \dot{w}(0+) = \omega_m \)
c) \( \dot{w}(0+) = k \)
d) \( \dot{w}(0+) = k/m \)
e) \( \dot{w}(0+) = 1/m \)
f) None of these.

Pick what you think is the correct choice and then look at the answer.