Abstract: Droplet formation from a passive vibrating nozzle driven by a pulsed pressure wave is numerical simulated. The nozzle is an orifice in a thin walled plate which is allowed to vibrate due to the pressure loading on the plate. The analysis couples the fluid flow from the nozzle and the resultant droplet formation with the nozzle vibration calculated using large deflection theory. A one-dimensional fluid flow model is used where droplet formation is driven by a short step change in applied pressure. The problem is made nondimensional based on the capillary parameters of time, velocity and pressure. The nozzle material properties are varied to alter the vibration characteristics of the orifice plate used to form the nozzle. It is determined that the vibration of the nozzle only weakly affects the droplet break-off time and size, but greatly affects the droplet velocity. The resultant filament after drop break-off is also significantly affected by the nozzle vibration, resulting in variations in satellite droplet formation. Higher vibration amplitudes, which correspond to more flexible plates, result in larger total satellite volume.