

When heavier weight is applied to running shoes while walking, the primary breakdown occurs in the midsole cushioning, specifically the foam. This is because walking, while less intense than running, still puts significant pressure on the shoe, causing the foam to compress and lose its ability to absorb shock effectively. Additionally, the heel counter can lose stiffness, and the outsole rubber can wear down faster.

Here is a more detailed breakdown:

- **Midsole Foam Compression:**

_. The midsole foam, made of materials like EVA or PEBA, is designed to cushion impact. Walking, even with a less intense gait, causes this foam to compress and compact over time, leading to a loss of cushioning and potentially increasing the risk of injury.

- **Heel Counter Breakdown:**

_. The heel counter, a rigid structure within the shoe's heel, provides support and stability. Repeated walking, especially with added weight, can cause the heel counter to lose its stiffness, leading to less support and potential discomfort.

- **Outsole Wear:**

_. The outsole rubber, which provides traction, can wear down more quickly with increased weight and more frequent use. This is especially true if the walking surface is abrasive.

- **Increased Risk of Injury:**

_. As the cushioning breaks down, the shoe's ability to protect the foot and joints from impact decreases. This can lead to increased strain on the feet, ankles, knees, and hips, potentially resulting in injuries like plantar fasciitis or shin splints.

- **Weight:**

_. Heavier individuals will experience faster breakdown due to increased pressure on the shoe.

- **Walking Frequency and Intensity:**

_. Daily walkers or those who walk longer distances will see more rapid wear than occasional walkers.

Walking on hard surfaces like concrete will accelerate outsole wear compared to softer surfaces like grass.