A wheelchair cushion provides the user a base from which their wheelchair positioning stems from, with comfort, pressure relief and ulcer prevention, shock absorption, and assists with postural alignment to improve user function. A pressure ulcer can develop when prolonged pressure is placed over a bony prominence which leads to skin, muscle, and vessel breakdown. Individuals with sensation deficits, paralysis, and difficulty with skin integrity are at higher risk for the development of pressure ulcers.

**Cushion Types and Considerations**

**Foam**: Foam cushions provide structure and stability and can conform to each user’s body type individually. Foam cushions are easy to transport and lightweight.

**Advantages:**
- Lightweight & generally low maintenance
- Available in a wide variety of sizes, densities, thickness
- Affordable, least expensive

**Disadvantages:**
- Fairly quickly can lose their shape & deform under a load
- May need frequent replacement
  - Visual inspection – Reduced cushion height, wearing of the cover, position of patient in wheelchair (pelvic obliquity), crumbling, or mold may indicate need for replacement.
- Increase in temperature & moisture retention
- Can develop an odor & can’t be washed
- Less apt to distribute pressure compared to air & gel cushions

**Air**: Commonly used to disperse weight to avoid prolonged pressure. The cushion consists of cells or chambers which are inflated with air to fit each individual.

**Advantages:**
- Air can travel between cells which allows the cushion to contour to the user as they move or be locked in certain chambers to provide specific pressure relief to specific areas.
- Provides shock absorption and is lightweight
- Cells are adjustable for each user
- Cells can be shorter or higher

**Disadvantages**
- More expensive but will unload more pressure than foam cushions
- Cells can deflate which will require refilling.
- Cushion must be inflated correctly with manual pump to have pressure relieving effects
- Higher maintenance; requires knowledgeable user.
- Frequently, harder to transfer on/off
- Requires user to have postural stability because it does not provide postural correction/stability. Great for pressure relief, not for positioning.
**Honeycomb**: This type of cushion is formed in matrix pattern similar to honeycomb. Made from thermoplastic, the honeycomb cushion remains lightweight and flexible.  
*Advantages:*  
- Lightweight, flexible, & easy to clean  
- Increases airflow and temperature regulation compared to a foam cushion.  
- Decreased moisture retention  
*Disadvantages:*  
- Increased potential shear force which can cause damage to skin.  
- May not provide adequate pressure relief for many people with spinal cord injury presentations – specific users.

**Gel**: Gel cushions have a gel pocket surrounded by a foam base.  
*Advantages:*  
- Increased comfort with cooling effects  
- Gel is located to alleviate weight from bony prominences  
- May have a contoured base to provide better posture and stability  
- Better for active individuals and will decrease shear forces  
- More expensive, provide better pressure distribution than foam  
*Disadvantages:*  
- Heavy  
- Gel pocket can leak  
- May require gel to be redistributed back under bony prominences  
- May be harder to transfer on/off

**Combination Air/Foam Cushion**:  
*Advantages:*  
- Stability of contoured foam & pressure relief of an air cushion  
- Increased stability for transfers  
- Can be used by patients with current skin breakdown or pressure ulcers  
*Disadvantages:*  
- Not for those with significant pelvic asymmetry (>1 inch)  
- Similar to cushions which are only foam or air

**Patient Resources**  
- Patient Fact Sheets from the Model Systems Knowledge Translation Center:  

**References:**  