# What Is Cryo Technology?

JAY Fluid with Cryo Technology is a patent-pending, revolutionary wheelchair cushion material that actively cools a patient's seated skin surface for up to 8 hours* while evenly distributing pressure, reducing shear, and lowering the risk of moisture. With traditional cushions on the market today, seated skin surface temperatures can rise to 37°C (98.6°F), leading to an increased risk in skin breakdown. Lowering the skin's temperature as little as 1°C (1.8°F) can reduce the risk of skin breakdown significantly. Cryo Technology was engineered to mildly cool the skin within a therapeutic temperature range of 28°C - 35°C (82.4°F - 95°F), effectively lowering the risk of skin breakdown. The cooler skin surface temperature has the added benefit of reducing the likelihood of moisture associated with localized perspiration.


**Pressure Injuries Affect Majority ofWheelchair Users**

Each year, up to 120,000 spinal cord injury (SCI) patients who use a wheelchair in the United States are diagnosed with a pressure injury1. In fact, pressure injuries are so prevalent in the complex rehab technology space that approximately 95% of SCI patients will develop a pressure injury over their lifetime1. JAY Clinical Seating's top priority is to mitigate risk factors attributable to seating that leads to these debilitating and costly injuries.

**What Causes Pressure Injuries?**

Research has shown that while a multitude of factors increase the risk of a pressure injury, four risk factors have been identified that are directly correlated to wheelchair seating: pressure, shear, temperature, and moisture. Historically, seating products have focused on reducing the risk of pressure and shear on the seating surface. Increasingly, researchers are finding that temperature plays a significant role in skin breakdown. Charles Lachenbruch found that "modest skin cooling (eg, 5°C) might provide the same protective effect as use of a high-end support surface."

## Providing one of the highest degrees of skin protection on the market

JAY Fluid with Cryo Technology addresses all four risks associated with pressure injuries.

| Pressure | Shear | Temperature | Moisture |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| JAY Fluid with Cryo Technology evenly distributes pressure across the seating surface. | 4-way stretch Lycra® cover reduces shear forces between the cushion cover and JAY Fluid with Cryo Technology insert. | JAY Fluid with Cryo Technology lowers the seated skin temperature into the therapeutic temperature range for up to eight hours. | Cooler skin temperatures reduce the likelihood of perspiration on the seated surface. |

# How Cryo Fluid Works


## Heat leaves skin surface, cooling the skin

JAY Fluid with Cryo Technology features millions of microbeads filled with paraffin wax which melts at a set temperature. Because skin temperature is warmer than the ambient temperature of the Cryo Fluid, heat from the skin is actively transferred into the fluid. This results in a lowering of the seated skin temperature within therapeutic range.


## A long-lasting effect

In addition to millions of microbeads, JAY Fluid with Cryo Technology also utilizes graphite due to its high capacity to effectively disperse heat throughout the fluid. This heat dispersion continues to pull heat from the skin until all microbeads have melted, resulting in a therapeutic cooling effect which can last up to eight hours*. The Cryo Fluid microbeads will naturally re-solidify after the fluid returns to ambient temperature.

* Internal testing data at 77°F. Results may vary.