JAY®

JAY FLUID

WITH CRYO™ TECHNOLOGY

Pressure injuries affect the majority of users

Each year, up to 120,000 patients with a Spinal Cord Injury (SCI) in the US are diagnosed with a pressure injury.[1] In fact, pressure injuries are so prevalent in the complex rehab technology space that approximately 95% of patients with an SCI will develop a pressure injury over their lifetime.[1] 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 pressure injury, there are four key risk factors 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.[2,3,4,5,6] Charles Lachenbruch found that, "…modest skin cooling (eg, 5°C) might provide the same protective effect as use of a high-end support surface."[3]

JAY Fluid® with Cryo™ Technology provides one of the highest degrees of skin protection on the market.

JAY® CRYO FLUID

Introducing JAY Fluid with 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 raise to 37°C (98.6°F), leading to an increased risk in skin breakdown.[2,3,4,5,6] Lowering the skin's temperature as little as 1°C (1.8°F) can reduce the risk of skin breakdown significantly.[6] 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.[2,3,6] The cooler skin surface temperature has the added benefit of reducing the likelihood of moisture associated with localized perspiration.

It's time for a cushion that addresses all 4 risks at once

1. **Pressure** – JAY Fluid with Cryo Technology evenly distributes pressure across the seating surface and the segmented bladder prevents fluid migration during recline.

2. **Shear** – 4-way stretch Lycra® cover reduces shear forces between the cushion cover and JAY Fluid with Cryo Technology insert.

3. **Temperature** – JAY Fluid with Cryo Technology lowers the seated skin temperature into the therapeutic temperature range for up to 8 hours.

4. **Moisture** – Cooler skin temperatures reduce the likelihood of perspiration on the seated surface.

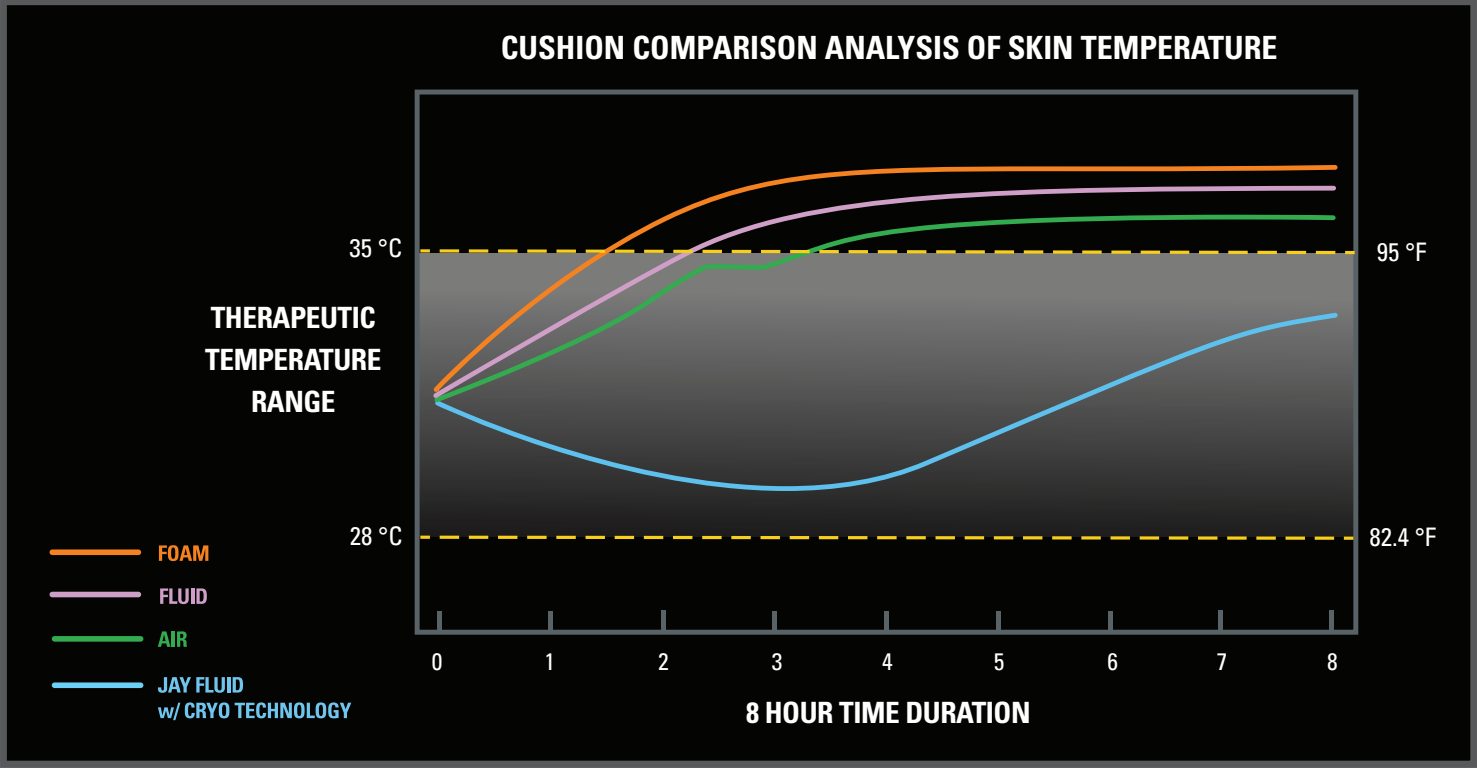
How CryoFluid Works

Heat leaves skin surface, cooling the skin

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

A long lasting effect

In addition to the 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 8 hours*. The CryoFluid microbeads will naturally re-solidify after the fluid returns to ambient temperature.



** Internal testing data at 25°C. Results may vary.*

JAY Fluid with Cryo Technology is available on the JAY Fusion® and JAY® Syncra™ cushions.

JAY Fusion Cushion with Cryo Technology

JAY Syncra Cushion with Cryo Technology

1. Fogelberg, D., Atkins, M., Blanche, E., Carlson, M., & Clark, F. (2009). Decisions and Dilemmas in Everyday Life: Daily Use of Wheelchairs by Individuals with Spinal Cord Injury and the Impact on Pressure Ulcer Risk. *Topics in Spinal Cord Injury Rehabilitation, 15(2), 16–32. doi: 10.1310/sci1502-16*
2. Lachenbruch, C., Tzen, Y. T., Brienza, D., Karg, P.E., & Lachenbruch, P. A. (2015). Relative Contributions of Interface Pressure, Shear Stress, and Temperature on Ischemic-induced, Skin-reactive Hyperemia in Healthy Volunteers: A Repeated Measures Laboratory Study. *Ostomy/Wound Management.* 61(2), 16–25.
3. Lachenbruch, C. (2005). Skin Cooling Surfaces: Estimating the Importance of Limiting Skin Temperature. *Ostomy/Wound Management.* 51(2), 70-79.
4. Ferguson-Pell, M.W. (1990). Seat Cushion Selection. *Journal of Rehabilitation Research and Development,* 1990(2): 49-73.
5. Finestone, H. M., Levine, S. F., Carlson, G. A., Chizinsky, K., & Kett, R. (1991). Erythema and skin temperature following continuous sitting in spinal cord injured individuals. *The Journal of Rehabilitation Research and Development,* 28(4), 27–32. doi: 10.1682/jrrd.1991.10.0027
6. Kokate, J. Y., Leland, K. J., Held, A. M., Hansen, G. L., Kveen, G. L., Johnson, B. A., … Iaizzo, P. A. (1995). Temperature-modulated pressure ulcers: A porcine model. *Archives of Physical Medicine and Rehabilitation,* 76(7), 666–673. doi: 10.1016/s0003-9993(95)80637-7

SUNRISE MEDICAL. MK-129557 Rev. C ©03.2020