

Skin – The Body's Biggest Organ System

By Janet Zeller

This huge organ has unique characteristics that we all appreciate – primarily because it keeps our insides – inside. We give it care to keep it smooth and healthy. When we itch, we scratch it; when we've been sitting too long in one position our brains automatically tell us to move to keep the blood flowing under our skin. That is so long as a person has skin sensation in tact.

When a person loses skin sensation, which commonly occurs with a spinal cord injury, the brain connection doesn't function in the same way within the areas of the body affected by paralysis. Those automatic messages to move, etc. that assist in skin care no longer make it through and so skin care concerns and consciousness need to increase.

With paralysis, muscles shrink from lack of function and the resulting atrophy means there is less cushioning between the bones and the skin. When paralyzed parts of the body are pressed against a hard surface the skin presses against the bone and the blood's circulation is cut off. Without that blood the skin cells begin to die. It takes only a matter of minutes for permanent skin damage to occur. The resulting skin break down, called pressure sores or decubitus ulcers, can take weeks or months to heal – and while healing, the person cannot put any pressure on that area. Surgery (skin grafts) may also be necessary. So, the person may have to spend weeks or months on bed rest recuperating – a definite life changing event.

Prevention is the key to skin care. In paddling, prevention measures include keeping skin dry, avoiding any points of abrasion and ensuring that appropriate cushioning is always placed at potential pressure points. Primarily in paddling, the concern focuses on seating – where the pressure of the body's weight forces its bones into its skin against the hard surface of the boat's seat, the pool's deck, or other hard surface. It is essential to ensure that appropriate layers and densities of non-water absorbing (closed cell) foam are always between the person's bottom and the hard surface.

Also, a person who has paralysis in their lower limbs needs to shift their weight often enough to ensure their blood keeps flowing under their skin. So you may notice the person leaning from side to side or, if they are able, they may press down on the sides of their wheelchair enough to raise their bottom ever so slightly up from the seat of their wheelchair, in either case they are taking the pressure off long enough to get the blood flowing. This process is called a "pressure release". In a boat the paddler may be able to lean forward enough to gain that release of pressure, if not there are other techniques. In a tandem, the paddler can let their partner know so their partner can steady the boat. In a solo boat, the paddler may need to raft up with another boat to gain the stability needed to lift slightly from the boat seat while pressing down on the cockpit rim or the gunwales.

Working together you and the paddler can figure out the best ways to ensure a great paddle with no negative skin impacts.