Shriners Hospitals for Children – Twin Cities focuses on treating children with orthopaedic and neuromuscular conditions and specializes in plastic and reconstructive surgery. As a consulting physician and surgeon, Joseph Skow, M.D., cares for children with congenital and acquired soft-tissue defects. The majority of patients who are treated by Dr. Skow come to Shriners Hospitals for Children – Twin Cities for ongoing care of their congenital conditions or for tissue reconstruction and scar revision after a burn injury.

One of the most common treatments for a burn injury after the patient is stabilized includes the use of tissue expanders to help with skin transfer procedures. The process of tissue expansion stretches the skin and tissue, preparing the area for the final reconstructive procedures. The skin has an incredible ability to stretch and expand, making tissue expansion a viable option for patients with burns.

During the first surgical stage, a silicone expander with a tiny tube and an injection port are placed under the healthy skin. The patient returns two weeks later for a post-op visit. At this point, the expander is filled with sterile normal saline to stretch the healthy skin. Each injection provides about 10 percent of the total expander capacity.

The second stage of the process includes removing the burned or scarred skin. The tissue expander is then removed, and the expanded skin is rearranged over the burned area.
The expanded skin may be re-expanded at a later time depending on the extent of the burns and the surrounding healthy tissue.

Although the use of tissue expansion in burn reconstruction has improved over the last 35 years, there are still some complications. They may include infection, tissue expander failure and pain. However, the procedure still offers patients at Shriners Hospitals for Children – Twin Cities the best hope for an exceptional outcome.