Considered Israel's greatest Paralympian, Keren Leibovitch won four gold medals, two silver medals and a bronze medal in Paralympic swimming competitions in 2000 and 2004. Leibovitch was also the winner of three World Championships and five European Championship gold medals.

Leibovitch began swimming when she was two but was paralyzed from the waist down when she was eighteen while training to be an IDF officer. During a training drill, she was carrying a heavy load which caused her back to nearly break. Although she had trained professionally before her injury, she did not begin to compete until after her injury. While swimming as part of her rehabilitation, Leibovitch was spotted by a coach who encouraged her to begin training competitively.

In a 2005 interview, Leibovitch said her inspiration came from her single mother and grandmother, stating, "My mom brought us up on her own; my parents were divorced when I was six. My grandmother helped her, but my dad wasn't involved. Twenty-five years ago it wasn't that casual for a woman to bring up her children by herself. She taught me to fend for yourself and speak up for what you want and be able to get your way."

A mother of four, Leibovitch was inducted into the International Jewish Sports Hall of Fame in 2008.