

# The Benefit of Sun Salutations on Traumatic Brain Injury: A Case Study

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K. is a 32-year-old woman who suffered a fall at work over four years ago. At the initial intake, she presented with left-sided hemiparesis, wearing a patch over her left eye and walking with a cane. K. is extremely sensitive to objects or people in proximity to her left side, as well as touch on the left side. She also has aphasia. The frontal lobe's many functions include organizing, sequencing, judgment, and motor planning. Because it relies on information from the rest of the brain to operate, a person with a traumatic brain injury (TBI) often shows signs of poor frontal lobe function, regardless of the location of the injury. For example, K. often finds it difficult to perform actions such as putting on her jacket, which require a complex sequence of movements that most adults have implicitly memorized in a well-established motor plan.

K. has attended 35 sessions over a ten-month period. Sun salutations are one of the primary components of her sessions. As a long sequence of coordinated movements, the sun salutation taxes the frontal lobe, making it both difficult and rewarding for K. She has learned three very different sun salutations—each introduced as she gained competence with the previous. K. had some familiarity with a modified Ashtanga Sun Salutation A at the first session, so this was the first variation utilized. In session #11, the Sivananda Classical Sun Salutation was introduced, and finally in session #21, K. began to learn a more complex variation of the Ashtanga Sun Salutation B. When initially introduced, each new sun salutation was very demanding for K., both physically and in terms of memory and motor planning. But, as each became more familiar, she reported a feeling of respite while performing these long motor sequences, and often requests them at various times during the session when she is feeling cognitively overloaded. Effects of the sun salutations related to TBI symptoms are robust and evident. They include increased awareness, strength and motor planning as related to the hemiparesis, increased interhemispheric integration as evidenced by increased ability to coordinate movements on the right and left side of the body, and increased ability to tolerate vestibular stimulation. Many Yoga therapists may initially judge sun salutations as being too challenging for this population. This case study, however, indicates that they should be strongly considered for their many benefits.