

Supplementary Material

Spiritual Fitness: A New Dimension in Alzheimer's Disease Prevention

Here are the four steps to practice Kirtan Kriya (KK):

Posture: The practitioner can sit comfortably in a chair with their feet flat on the floor or in easy pose on the floor. The essence of the posture is to be comfortable while sitting with the spine straight with only the natural curvature.

Breath: The person simply breathes naturally as the meditation unfolds.

Eyes: Eyes are closed.

The Sounds: KK uses the sounds called a mantra, which means a tool for the mind that changes its wavelength. There are many mantras and KK utilizes the five primal sounds: Saa, Taa, Naa, Maa. Yogis believe that sounds such as used in KK activate the 36th, 38th, and 39th meridian point of the hypothalamus. The tune to which these sounds are sung is the first four notes of the familiar children's song, "Mary had a Little Lamb." That is, the notes are "Mar-y had a." See Supplementary Figure 1. The jaw should remain relaxed as you sing.

The Finger Movement: Fingers and hand movements, called mudras by Yogis, are known as "The Secret Science." Mudras work by activating various meridian points and simultaneously stimulate anatomical areas of the brain significant for memory. With the hands on the knees, the thumb is touched to each of the other four fingers in sequence. Both hands perform the same movements simultaneously. Supplementary Figure 1 illustrates.

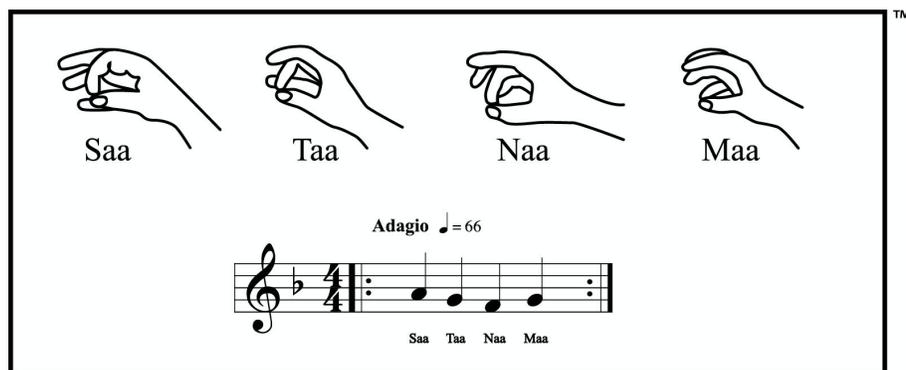
On *Saa*, touch the index fingers of each hand to the thumbs.

On *Taa*, touch the middle fingers to the thumbs.

On *Naa*, touch the ring fingers to the thumbs.

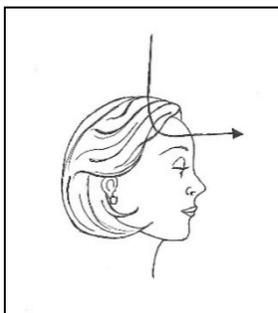
On *Maa*, touch the little fingers to the thumbs.

The sequence is always forward: thumb to index finger, middle finger, ring finger, and pinky; never backwards.



Supplementary Figure 1. How to Practice Kirtan Kriya

The Visualization: The sound is visualized coming down from the top of the head, and out the middle of the forehead in the center, lined up with the nose like a capital letter “L”. One may think of this action as sweeping through like a broom. See Supplementary Figure 2.



Supplementary Figure 2: L Form of Concentration

The Sequence: The sounds *Saa Taa Naa Maa* are utilized while also performing the movements with the fingers of both hands. At the same time, the sound is visualized flowing in through the top of the head and out the middle of the forehead in an L shape. When outside thoughts intrude, simply return your focus to the sounds and visualization.

1. For two minutes, sing out loud.
2. For the next two minutes, sing in a stage whisper.
3. For the next four minutes, say the sound silently to yourself.
4. Then whisper the sound for two minutes
5. Complete the sequence by singing out loud for the last two minutes.

Following this prescription is said to have a beneficial effect on the conscious (when singing out loud), subconscious (when singing in a whisper), and unconscious (repeating the sounds silently) mind. This will complete the 12-minute meditation. A digital clock, timer, or watch can be used to time the exercise, rather than an alarm.

6. To come out of the exercise, inhale very deeply through the nose, stretch your hands above your head, and then bring them down slowly in a sweeping motion as you exhale through the nose. Take a couple of deep nasal breaths before opening your eyes and resuming activity.

The best time to do KK is first thing in the morning. In this way, you will set yourself to begin your day with a clear mind. A number of recorded options of KK are found at <http://www.alzheimersprevention.org>, then click on the store tab.