

## Studien zu Yoga bei Demenzen

Indian J Physiol Pharmacol. 2008 Apr-Jun;52(2):197-200. Joshi M, Teiles S.

### **Immediate effects of right and left nostril breathing on verbal and spatial scores.**

The immediate effect of two yoga breathing techniques was assessed on verbal and spatial memory tasks, considered hemisphere-specific. Forty-five participants (24 males; age range 20 to 45 years (mean age 27.1 v. 8.1 years) were randomly allocated to three groups (n = 15 each) and were assessed immediately before and after 45 minutes of three breathing practices i.e., right nostril yoga breathing, left nostril yoga breathing, or breath awareness as a control intervention. Spatial memory scores increased after left nostril yoga breathing compared to before (by 16 percent,  $P = 0.03$ , paired t-test). Hence, breathing through the left nostril increased performance in a spatial cognitive task, corresponding to the cerebral hemisphere contra lateral to the patent nostril.

Percept Mot Skills. 2007 Jun; 1 04(3 Pt 2): 1289-96. Teiles S, Raghuraj P, Maharana S, Nagendra HR.

### **Immediate effect of three yoga breathing techniques on performance on a lettercancellation task.**

The three yoga breathing practices (right, left, and alternate nostril breathing) were selected because unilateral forced nostril breathing stimulates the contralateral hemisphere. There were 20 male volunteers whose ages ranged from 20 to 45 years (M age=28.4 yr., SO=5.7). All subjects were assessed before and after four sessions, i.e., right nostril yoga breathing, left nostril yoga breathing, alternate nostril yoga breathing, and breath awareness as a control. The letter-cancellation task scores were significantly improved, i.e., there were fewer errors following right and alternate nostril yoga breathing (Wilcoxon paired signedranks test). The improved performance may be related to the enhancement of contralateral hemisphere function found with selective nostril breathing.

Int J Neurosci. 1993 Nov;73(1-2):61-8. Jella SA, Shannahoff-Khalsa OS.

### **The effects of unilateral forced nostril breathing on cognitive performance.**

This study describes the effects of 30 minutes of unilateral forced nostril breathing on cognitive performance in 51 right-handed undergraduate psychology students (25 males and 26 females). Spatial task performance was significantly enhanced during left nostril breathing in both males and females,  $p = .028$ . Verbal task performance was greater during right nostril breathing, but not significantly  $p = .14$ . These results are discussed in comparison to other cognitive and physiological studies using unilateral forced nostril breathing. This yogic breathing technique may have useful application in treating psychophysiological disorders with hemispheric imbalances and disorders with autonomie abnormalities.

Int Psychogeriatr. 2011 Oct;23(8):1222-30. Epub 2011 Mar 9. Fan JT, ehen KM.

### **Using silver yoga exercises to promote physical and mental health of elders with dementia in long-term care facilities.**

A convenience sample of 68 residents in long-term care facilities in southern Taiwan, aged 60 years and above with mild to moderate dementia, was selected. An experimental group of 33 elders participated in a 12-week yoga training program of three 55-minute sessions a week; a control group of 35 elders maintained their usual daily activities. The yoga-trained participants had better physical and mental health than those who did not participate, including lowered blood pressure, reduced respiration rate, strengthened cardiopulmonary fitness, enhanced body flexibility, improved muscle strength and endurance, improved balance, and increased joints motion (all  $p$  values  $< 0.05$ ). In addition, the depression state ( $p < 0.001$ ) and problem behaviors ( $p < 0.001$ ) of these demented elders were significantly reduced. Yoga exercise has positive benefits for both the physical and mental health of elders with dementia living in long-term care facilities. It is recommended that yoga be included as one of the routine activities in these long-term care facilities.

J Ment Defic Res. 1989 Oct;33 ( Pt 5):415-21. Uma K, Nagendra HR, Nagarathna R, Vaidehi S, Seethalakshmi R.

**The integrated approach of yoga: a therapeutic tool for mentally retarded children: a one-year controlled study.**

Ninety children with mental retardation of mild, moderate and severe degree were selected from four special schools in Bangalore, India. Forty-five children underwent yogic training for one academic year (5 h in every week) with an integrated set of yogic practices, including breathing exercises and pranayama, sithilikarana vyayama (loosening exercises) , suryanamaskar, yogasanas and meditation. They were compared before and after yogic training with a control group of 45 mentally retarded children matched for chronological age, sex, IQ, socio-economic status and socio environmental background who were not exposed to yoga training but continued their usual school routine during that period. There was highly significant improvement in the IQ and social adaptation parameters in the yoga group as compared to the control group. This study shows the efficacy of yoga as an effective therapeutic tool in the management of mentally retarded children.