

Effects of Flotation REST and Visual Imagery on Athletic Performance: Tennis

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Flotation Restricted Environmental Stimulation (REST) has produced promising preliminary results in sports performance enhancement (Hutchison, 1984; Lee & Hewitt, 1987; Stanley, Mahoney, & Reppert, 1987; Suedfeld & Bruno, 1990; Wagaman & Barabasz, 1990). The technique involves floating on a dense magnesium sulfate solution in a sound-attenuated, light-free tank. Unfortunately, the studies to date are limited. Only three studies presented data beyond anecdotal or case study reports (Lee & Hewitt, 1987; Suedfeld & Bruno, 1990; Wagaman & Barabasz, 1990).

Lee and Hewitt (1987) examined the use of the flotation tank for the improvement of gymnastic performance and the reduction of physical symptoms. Female gymnasts of novice and intermediate skill were randomly assigned to one of three treatment conditions: REST and visualization, non-REST and visualization, or control. In each condition subjects were exposed to audio-taped messages which included initial relaxation, visualization of routines, and "wake-up." Subjects floated for 40 minutes once a week for six weeks. Subjects in

the REST condition performed significantly better than subjects in the non-REST visualization only and control conditions.

The two other studies of flotation REST and athletic performance (Suedfeld & Bruno, 1990; Wagaman & Barabasz, 1990) examined effects of flotation REST on basketball performance. Suedfeld and Bruno (1990) examined the use of visual imagery combined with flotation REST, an "Alpha Chair," and a normal room and chair, on the free-throw performance of occasional or nonbasketball players. Free throw (foul shot) accuracy improved by 50% the day after a one-hour flotation REST session with guided imagery. The two non-REST imagery only groups showed no improvement. It was suggested that REST may induce an optimal arousal state for the task and/or it may enable subjects to return to such a level 24 hours after treatment. Also suggested was the notion that imagery may be more vivid or accurate in a REST environment, or that REST may make the imagery more accessible later. A synergistic interaction between imagery and optimal arousal was hypothesized to explain the results. Unfortunately, the study employed only a single REST session. The specificity of REST effects are in doubt since a single flotation session could be expected to be perceived as more novel than the control condition. Furthermore, the results produced by nonexpert occasional recreational players tell us nothing about the potency of the effects of REST on well trained, high ability, dedicated athletes.

During the 1988-89 season, Wagaman and Barabasz (1990) examined the effects of REST on the basketball performance of players of high ability from two large Northwestern university intercollegiate varsity basketball teams. Subjects were randomly assigned to treatment groups, including REST (six flotation sessions) with visual imagery and relaxation with visual imagery (six sessions). Subjects were tested on performance and self-report measures before and after treatments. Analyses showed that the two groups were equivalent at the pretest but differed after treatments on basic athletic performance measures. Wagaman and Barabasz's (1990) results were viewed as consistent with the concurrent findings of Suedfeld and Bruno (1990). The study also suggested that two REST sessions per week were the most effective for performance enhancement.