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## Improvement Of Pain And Disability In Elderly Patients With Degenerative Osteoarthritis Of The Knee Treated With Narrow-Band Light Therapy.

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**Objective:** To evaluate the effects of low-power light therapy on pain and disability in elderly patients with degenerative osteoarthritis in the knee.

**Design:** Partially double-blinded, fully randomized trial comparing red, infrared, and placebo light emitters.

**Patients:** Fifty patients with degenerative osteoarthritis of both knees were randomly assigned to three treatment groups: red (15 patients), infrared (18 patients) and placebo (17 patients). Infrared and placebo emitters were double-blinded.

**Interventions:** Self-applied treatment to both sides of the knee for 15 minutes twice a day for 10 days.

**Main Outcome Measures:** Short-Form McGill Pain Questionnaire, Present Pain Intensity, and Visual Analogue Scale for pain and Disability Index Questionnaire for disability were used. We evaluated pain and disability before and on the tenth day of therapy. The period from the end of the treatment until the patient's request to be retreated was summed up 1 year after the trial.

**Results:** Pain and disability before treatment did not show statistically significant differences between the three groups. Pain reduction in the red and infrared groups after the treatment was more than 50% in all scoring methods ( $P < 0.05$ ). There was no significant pain improvement in the placebo group. We observed significant functional improvement in red and infrared treated groups ( $p < 0.05$ ), but not in the placebo group. The period from the end of treatment until the patients required retreatment was longer for red and infrared groups than for the placebo group ( $4.2 \pm 3.0$ ,  $6.1 \pm 3.2$ , and  $0.53 \pm 0.62$  months, for red, infrared, and placebo respectively)

**Conclusions:** Low-power light therapy is effective in relieving pain and disability in degenerative osteoarthritis of the knee. *J Am Geriatr Soc* 40:23-26, 1992. Degenerative osteoarthritis (DOA) is the most common rheumatic disorder of man and causes pain and disability especially in elderly people. 1 Autopsy surveys show that degenerative changes in joints begin as early as the second decade of life. 2 Roentgenographic studies conducted in the United States showed osteoarthritic changes in 4 percent of persons under 24 years of age in 85 percent at 75 to 79 years of age. Symptomatic manifestations of osteoarthritis increase with ageing, reflecting disease changes that begin in early life and progress slowly over a period of many decades. 3-4

Source: *Journal of the American Geriatrics Society*. 1992; 40: 23-26

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