Cooling and multiple sclerosis:

Experiences with 185 patients with multiple sclerosis patients during 4weeks of therapy in a neurorehabilitation center

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OBJECTIVE: Approximately 60%-80% of all Multiple Sclerosis (MS) patients are heat sensitive. The aim of this retrospective study was to gain information on the effects of an assistive device, the cooling-suit, on MS-patients.

METHODS: The cooling-suit made by cooline was used during of neurorehabilitation by 185 individuals with diagnosed MS in different stages from Relapsing/Remitting to Chronic/Progressive and an anamnesis with heat sensitivity.Every patient wears a passive cooling garment for 60 minutes 5 times a week as an additional therapy to classical therapeutical methods (physiotherapy; occupational therapy; neuro psychology an medical exercising therapy). The technological background of this passive colling system is the result of the physical principle of evaporation cooling, These garments are colling more intensively at higher temperatures and less intensively at low temperatures

Technology: At high temperatures the body perspires; the perspiration evaporates and through this, a cooling effect is created at the skin surface. The COOLINE material also makes use of this evaporative cooling principle. It is simply and quickly saturated with water and cools the wearer through water evaporation. The cooling vests do not cover the kidney area and are made of a comfortable, functional fibre whose exterior remains dry.

RESULTS: We asked our patient before the cooling therapy and after 4 weeks about their clinical experience.
About: clinical effects (fatique; muscel strength; walking safty; time of the clinical effects; side effects)
Fatique: improvement: 76 %
muscel strength 82 %
walking safty 54%.
Clinical effects after cooling 2.3 hours.
10% stopped cooling program the reason was subjective bad felling, but no clear clinical side effects.

CONCLUSION: Cooling is an interesting assistive therapy during a neurorehabilitation program to improve clinical effects of multiple sclerosis without side effects. We know that further investigations are necessary about the long term effects.

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