**APPEAL LETTER—COOLING VESTS**

Today’s date

Pharmacy/Medical Director Name

Health Plan/Entity Name

Plan Address

***Re: Client’s name, Insurance ID#, (and claim # if applicable)***

To Whom It May Concern:

This is a request for **(*appeal of your denial, pre-authorization, other)*** for a cooling vest for my patient, **\_\_\_\_(name)\_\_\_**, who lives with **(*type*)** multiple sclerosis. I prescribed this device to relieve ***him/her*** of various symptoms exacerbated by heat, including \_\_\_(***list fatigue, etc. here)*** \_\_\_\_.

The ability of heat to aggravate symptoms in patients with definitive MS is well–established. Cooling studies as early as 1959 have revealed positive symptomatic outcomes for patients with MS.1 Cooling can result in objective clinical improvements in several functional systems of heat-sensitive MS patients, according to a systematic review of controlled trials.2 The effects of cooling reinstate energy in heat-blocked axons, allowing neural activity restoration, enabling remyelination to provide protection for axons from further degeneration; potentially slowing the destructive progression of MS.

In a systematic review of 13 controlled trials testing the ability of cooling garments to improve physical function in people with MS that included a total of 384 people with MS, eight studies demonstrated significant improvements in walking capacity and functional mobility.2 Five of the studies included objective measures of muscular strength with isometric dynamometry or manual muscle strength, all following acute use of a cooling garment. One study using a head-vest cooling garment demonstrated a significant improvement in muscle strength of the legs (hip flexion, knee flexion and extension, and ankle dorsiflexion)3 and another study using a cooling thigh-cuff significantly increased ankle dorsiflexion and knee extension.4

Following the acute use of a phase change cooling vest, one study showed significant improvement in balance by 3-35% compared to the control group and another study demonstrated a significant 18.2% improvement in postural sway with the cooling garment compared to control when the eyes were closed.5,3

Overall, core temperature, skin temperature, thermal sensation and perceptions of fatigue all improved with the use of cooling garments. These benefits were seen in warm as well as temperate weather and with or without exercise being a factor.2

Therefore, after careful consideration of **\_\_\_\_(name)\_\_\_**’s needs, functional capability and symptoms including ***(fill in specific details of relevant symptomatology and personal complaints)***, it is my conclusion that a cooling device would assist in improving **\_\_\_\_(name)\_\_\_**’s overall quality of life as well as functional abilities.

I hope this information is helpful to you and others, and encourage you to think about the beneficial outcome for **\_\_\_\_(name)\_\_\_**by ***(reconsidering/authorizing)* *her/him*** as a recipient of a cooling garment.

I look forward to your prompt response in this pressing matter.

Sincerely,

**John Smith, MD**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1Watson, G. Wesley, Effect of Lowering of Body Temperature on the Symptoms and Signs of Multiple Sclerosis. *NEJM* 1959; **261**: 1253-1259.

2Stevens, J. S., Singh, G., Peterson, B., et.al. The Effect of Cooling Garments to Improve Physical Function in People with Multiple Sclerosis: A systematic review and meta-analysis. *Multiple Sclerosis and Related Disorders* 2023; **78**: 104912.

**3**Beenaker, E.A.C., Oparina, T.I., Hartgring, A., et al. Cooling Garment Treatment in MS: Clinical improvement and decrease in leukocyte NO production. *Neurology* 2001; **57**: 892.

4Meyer-Heim, A., Rothmaier, M., Weder, M., et al. Advanced Lightweight Cooling-garment Technology: Functional improvements in thermosensitive patients with multiple sclerosis*. Multiple Sclerosis* 2007; **13**: 232-237.

5Nilsagård, Y. ∙ Denison, E. ∙ Gunnarsson, L.G. Evaluation of a single session with cooling garment for persons with multiple sclerosis – a randomized trial. *Disability and Rehabilitation: Assistive Technology* 2006; **1**:225-233.

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