



FULL BODY IN-BED GYM: A SYNERGISTIC, WELL-TOLERATED, LOW-IMPACT STRATEGY FOR HEALTHY AND ACTIVE AGING

Maria Chiara Maccarone^{1,2}, Ugo Carraro^{2,3,4}

¹Department of Neuroscience, Physical Medicine and Rehabilitation Unit, University of Padova; ²A&C M-C Foundation for Translational Myology, Padua; ³Department of Biomedical Sciences, University of Padova, Padua, Italy; ⁴School of Physical Medicine and Rehabilitation, Department of Neuroscience, University of Padova, Italy.

In recent years, rehabilitation has increasingly integrated prehabilitation as well as secondary and tertiary prevention strategies, with the aim of promoting healthy and active aging. Evidence-based, non-pharmacological, and personalized interventions targeting the main determinants of longevity have therefore gained increasing attention, including physical exercise, nutrition, and strategies to promote sleep quality. Among these approaches, Full Body In-Bed Gym represents an innovative exercise protocol designed for adults aged over 65 years. It consists of aerobic and muscle-strengthening exercises that can be entirely performed in bed, engaging all body districts. This global, low-impact, and adaptable exercise modality is particularly suitable for frail individuals, older adults, and subjects with limited exercise tolerance, ensuring therapeutic continuity beyond the rehabilitative phase and supporting preventive care (1). When combined with tailored nutritional strategies (2), specifically, time-restricted eating (TRE) that involves restricting daily food intake to a defined time window, this approach promotes metabolic regulation through its effects on inflammatory pathways, autophagy, and circadian biology (3,4,5). This integrated approach may promote synergistic effects on body composition, muscle function, and metabolic muscle function, and metabolic health (2). In our cohort, 24 elderly subjects participated in the Full Body In-Bed Gym program over

two months, with optional continuation (1). The exercise routine included simple movements targeting the upper limbs, lower limbs, trunk, and respiratory muscles, lasting 15-30 minutes per session, three to five times per week. TRE involves restricting daily food intake to a defined time window, promoting metabolic regulation through its effects on inflammatory pathways, autophagy, and circadian biology (3,4,5). In one case, a participant, U.C., undertook a combined intervention consisting of semi-fasting through time-restricted eating (TRE) paired with the Full Body In-Bed Gym program. Being Italian and adhering to a Mediterranean diet, he adopted a specific dietary approach known as Italian name: "3-NO" ("3-withouts", in English) that means "WITHOUT BREAD, WITHOUT WINE", "WITHOUT DINNER" (6). With such a strict, yet affordable dietary approach (combined with a total body workout in bed), in just two weeks he lost 2-3 kilos and reduced his waistline, achieving his main goal (6). This integrated approach may contribute to the prevention and management of sarcopenia, improvement of quality of life, and reduction of perceived pain in older adults, as previously demonstrated (1,2). Moreover, the exercise protocol appears to be well tolerated, favoring long-term adherence and continuity of physical activity among elderly individuals (1,2). Therefore, the Full Body In-Bed Gym protocol represents a promising option for promoting healthy aging, potentially reducing the disability-related burden associated with aging.

Keywords: Full-Body In-Bed Gym in older adults, quality of life, sarcopenia.



March 3rd to 6th Euganean Thermae and Padua, Italy

PADUA DAYS ON MUSCLE AND MOBILITY MEDICINE 2026

ABSTRACT N. 017

COMPETE AGAINST YOURSELF TO CONTROL BODY WEIGHT AND REJUVENATE MUSCLES



Figure 1. After following the Italian "3-NO" diet for two weeks, U. C. reduced his waistline (his main goal, as described in reference 6).