

## Supplementary material 1. Detailed APA protocol

### A. Structure of the APA program

The program will be applied as part of routine care at the rehabilitation center. It consists of 3 sessions of APA per week for 12 weeks. Each session will consist of 2 x 60-minute APA sessions. The entire program was designed to meet the recommendations for PA after stroke[21]. Each session will include 45 minutes of actual work and 15 minutes devoted to set-up measures. It will be supervised by an APA instructor providing participants with feedback and adapting the exercises to the limitations of each one. At the beginning of each week, a group meeting will be held to take an inventory of each participant's PA for the week. The goal is to encourage the group to increase their walking time outside of the program. Participants will be encouraged to increase their walking time by approximately 25% per week. If the participant's weekly goal was met, the participant will be encouraged to increase activity by 25% of the weekly average time until 1 hour of walking per day is achieved, and then the goal will be to consistently achieve 1 hour of walking per day. If participants did not meet their weekly goal, the goal remained the same.

The activities practiced in this program will be yoga, Pilates, outdoor walking, zumba, Molkky® and aquagym. The plan for each session was designed in advance based on the Consensus on Exercise Reporting Template[22] criteria. The same plan was used throughout the sessions with a view to helping the individuals to learn the gestures:

- The main aim of the Adapted yoga session is to stretch all four limbs and the trunk. It consists of 8 poses, each of which targets a specific muscle or muscle group and is held for 3 minutes. The focus is on the body's sense of stretch and working without pain.
- The main aim of the Adapted Pilates session is to improve muscle strength. It consists of 12 movements performed in series of 10 repetitions, the last 3 of which depend on how tired the muscles feel.
- The main aim of the outdoor walking session is to improve walking ability. The course alternates between flat ground (asphalt), uneven ground (potholes, puddles, gravel, grass) and a 20% incline/slope. The session includes 5 minutes of acceleration to maximum walking speed on level ground, subdivided into 10 x 30 seconds with a 5-minute interval between each acceleration. During the 5-minute intervals between each acceleration, a spontaneous speed walk is performed. The APA instructor can change the walking speed, pause times and acceleration times.
- The main aim of the Adapted Zumba session is to work on endurance in a fun way with a series of choreographed, rhythmic movements set to music.
- A session devoted to a throwing game, Molkky®, is intended to improve balance, coordination and cognition via a fun throwing activity. The activity is carried out outdoors on sandy ground in teams of 2. This activity promotes sociability and creates cohesion within the group of subjects.
- The Aquagym session is designed to improve muscle strength, balance and walking under reduced gravity conditions. The session consists of abdominal exercises (3 sets of 10 repetitions), quadriceps exercises (3 sets of 10 repetitions), balancing exercises on one foot (5 minutes per leg) and walking exercises (15 minutes).

### B. APA home-based self-management program

The main aim of the outdoor walking exercise booklet is to optimize walking skills. The session includes 5 minutes of acceleration to maximum walking speed on level ground,

subdivided into 10 x 30 seconds with a 5-minute interval between each acceleration. A face-to-face consultation with an APA instructor is scheduled on the first day of the program, and during weeks 3, 6 and 9 of the self-management program. These visits provide subjects with motivational follow-up, as well as meeting the technical memory constraints of the Stepwatch™ device, which can be used to make continuous recordings during approximately 3 weeks. On the first day, an APA session is scheduled to teach yoga exercises tailored to the state of the participants. The 6-week visit also includes an APA session, with additional materials included to enrich the program with the adapted Pilates booklet. Visits at weeks 3 and 9 will include a motivational interview with an APA instructor based on the subject's written report on the exercises performed.