

Report on efforts supported by our physical therapists for nursing care prevention projects in Chichibu City

Medical Co-op SAITAMA Cooperative
Chichibu cooperative hospital
Kazunari Oota Ryuji Shibasaki

Background and purpose

In 2016, Chichibu City, Saitama Prefecture started a preventive care project for the elderly. At our hospital, physical therapists (hereinafter referred to as PTs) serve as advisors for the health exercise program "Chichibu Potekuma-kun" and support activities to popularize "health exercise". This time, our hospital's PT will report on the content and results of health prevention activities conducted outside the hospital.

Method

1. City staff will introduce the activity to the local community (neighborhood association, etc.). The city recruit participants to serve as advisors who will play a central role in the activities.
2. The city will hold a "nursing care prevention supporter training course." The PT becomes the instructor and provides guidance on the content of the exercises and how to manage the group.
3. Those who complete the program will become "nursing care prevention supporters" and will form a resident-led gymnastics group and begin health exercises once a week in areas where preparations have been made.
4. For the first three months, a PT will visit regularly to support physical fitness measurements and provide advice to participants. Physical fitness measurements (eyes-open one-leg standing test, 30-second chair stand-up test, Timed up and go test (hereinafter referred to as TUG)) will be conducted twice, once at the start of the activity and again 3 months later.



<Scenes from the activities>



<How to use weights>



- Place one 200g iron rod inside the band.
- The load amount is adjusted by the number of iron rod.
- Record each exercise on a "weight adjustment sheet" and adjust the weight to the appropriate amount for each exercise.

number of iron rod	< Weight adjustment sheet >												
Date	7/8	/	/	/	/	/	/	/	/	/	/	/	/
Exercise No.1	1	○											
Exercise No.2	1	○											
Exercise No.3	2	△											
Exercise No.4	2	*											
Exercise No.5	2	*											
Exercise No.6	2	*											

○ : Add one from next week
△ : Same amount of weight next week
× : One less from next week

<Warm-up/sorting exercises>



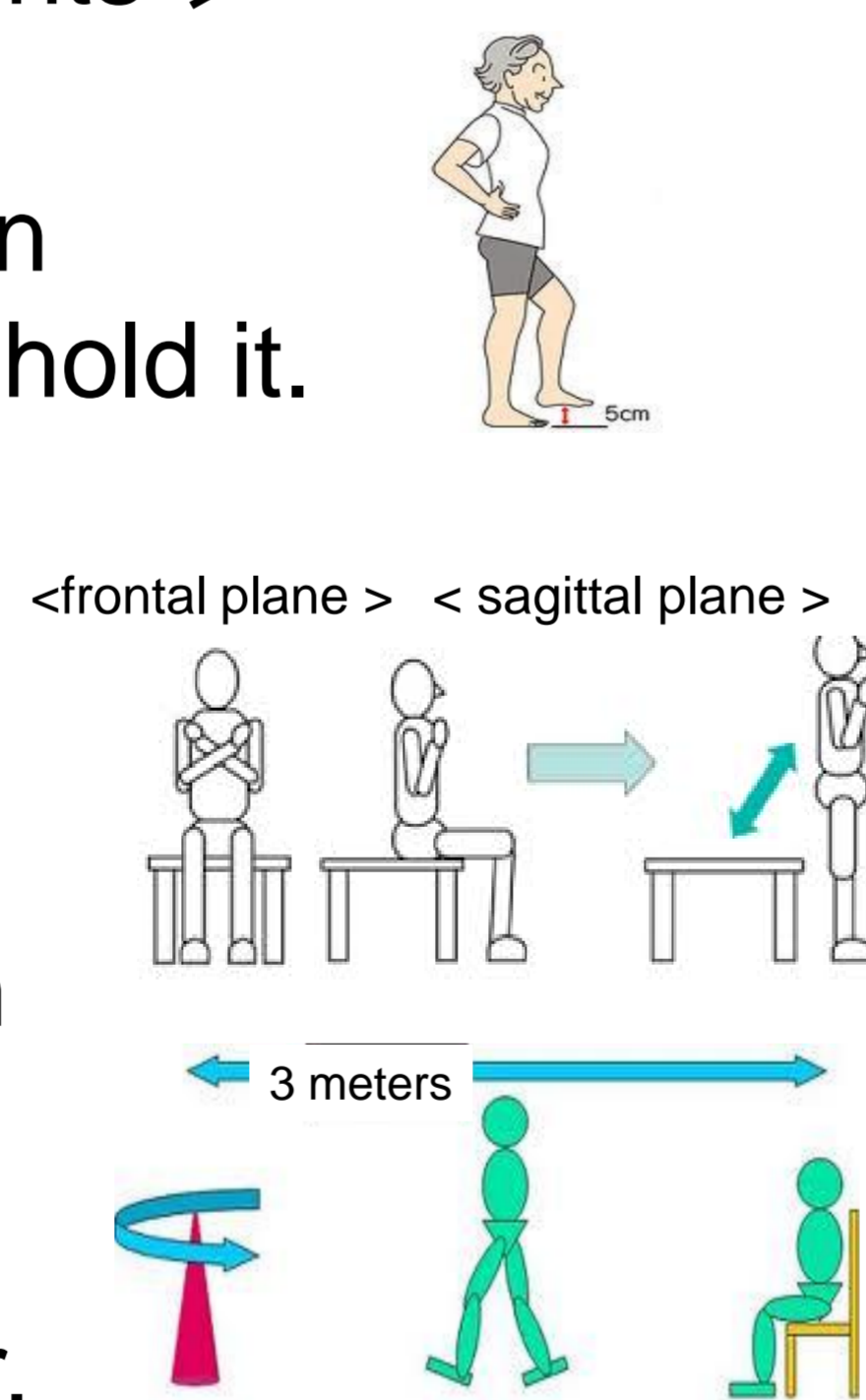
- Stretching exercises to maintain flexibility.
- Move slowly for 8 seconds, then pause and stretch your muscles for the next 8 seconds:

<Gymnastics with weights>



< physical fitness measurements >

- eyes-open one-leg standing test
Lift one leg 5 to 10 cm with both hands on your hips and measure the time you can hold it.
→ Evaluation of balance function
- 30-second chair stand-up test
Measure how many times you can stand up from a seated position in 30 seconds.
→ Evaluate the overall muscle strength of the lower limbs.
- Timed up and go test
The time it takes to stand up from a chair, walk to a target 3m away, and then return was measured.
→ Assessment of fall risk when moving



Results

The average values of 226 people who took two physical fitness measurements were compared. The one-leg standing test with eyes open improved from 31.8 seconds to 40.8 seconds for the right leg and from 32.5 seconds to 38.4 seconds for the left leg. In addition, the 30-second chair stand-up test went from 19.5 times to 21.4 times, and the TUG went from 7.1 seconds to 6.7 seconds, showing improvements in all tests. A T-test determined that there was a significant difference between standing on one leg on the left leg and standing on a chair for 30 seconds.

	<T-test results>			
	One-leg standing (R)	One-leg standing (L)	Chair stand-up	TUG
t	4.849252524	3.175486788	0.4059498	-6.33142365
P(T<=t) one side	1.16205E-06	0.000853615	0.000390971	6.60077E-10
P(T<=t) both sides	2.32411E-06	0.001707229	0.000781941	1.32015E-09

Conclusion

Although most of the subjects lived independently, significant changes were observed in the function of their non-dominant leg and in standing movements using it. We believe that by incorporating exercise habits and socializing once a week, we were able to maintain and improve physical function.

Relevance to HPH

In medical rehabilitation, PTs often target patients suffering from stroke or intractable neurological diseases. It was suggested that a population approach can also contribute to improving the health of local people.

Relationship with the main theme of the conference

Chichibu City has the largest area in the prefecture, is surrounded by mountains, and has inconvenient access to medical institutions. As the population continues to age, activities are starting to take place within the living areas of many people, and we would like to support people in depopulated areas to provide opportunities to improve their health.