

Evaluator's guide



Tempa


PHYSIPRO

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Les Équipements adaptés Physipro Inc. is proud to partner with Dr. Johanne Desrosiers and the Research Center on Aging.

The Tempa evaluation kit contains:

- 1 Carrying case containing the Tempa test material
- 1 Evaluator's guide
- 1 Administration manuel
- 10 Score sheets

Recommendations : The TEMPA test tasks should be performed according to the instructions in the Administration Manual, within the capabilities of the patient and analyzed by a health care professional.

Composition : The TEMPA carrying case and storage box are made with white ABS.

Maintenance : Physipro Inc. recommends that the items used during the patient assessment be cleaned or disinfected after each assessment.

The following items can be cleaned with a clean cloth and a disinfectant or with pre-moistened disinfectant wipes: the carrying case, the storage box, the ballpoint pen, the outside of the pill container and coffee pot, the coins, the safety pin, the bolt, the button, the keys and the nail.

The following items can be cleaned with dish soap: the water jar, the coffee spoon, the cup, the water glass and the small glass container with lid.

The scarf can be cleaned with a mild detergent in cold water and dried on low heat.

Storage: The Tempa carrying case and its contents should be stored in a clean and ventilated place, away from humidity and strong temperature variations (+10°C /+30°C).

Life span : The estimated life span of the TEMPA carrying case and storage box is ten (10) years.

Warranty: The TEMPA carrying case and storage box manufactured by Physipro Inc. are covered by a one (1) year limited warranty against manufacturing defects.

This warranty does not apply in the event of improper use, negligence or if the products have not been maintained or stored in accordance with the manufacturer's recommendations.

For more information on the TEMPA evaluation kit, or any other product you may need, please contact the Physipro team, it will be our pleasure to answer your questions.

The TEMPA evaluation test was designed by Dr. Johanne Desrosiers, a gerontologist.

The TEMPA is an assessment tool created to measure upper limb performance and function. It was developed to assist occupational therapists in assessing the capabilities and limitations of upper limb function in persons aged sixty (60) years and older. However, the TEMPA is not exclusively used for people in this age group. In fact, a portion of individuals with disabilities are under the age of 60.

The TEMPA includes nine tasks (5 bilateral and 4 unilateral) which are related to daily activities. They are carried out in a very precise order. The requirements of the tasks vary: some are easy, others more difficult. The tasks are related to arms and hand movements executed during daily activities.

Considering the importance of upper level extremities for personal autonomy, it is of utmost importance to intervene when faced with problems at this level. The first intervention is to accurately evaluate the strengths and weaknesses so that in a second step, a treatment and readaptation program can be applied.

Contrary to other functional hand tests:

1. The TEMPA includes tasks that involve the whole superior limb, and not just the hand (as with the Smith and Jebsen tests in which the shoulders are hardly involved).
2. The tasks of the TEMPA are measured according to three criteria: the speed of execution, the person's autonomy while performing the task and the task analysis. The majority of tests do not consider the speed in which a task is carried out. Evidently, speed is a good criterion to consider but does not show the quality of movements and the patient's difficulties.

Speed of execution

Using a stopwatch, each task is timed by the occupational therapist from the moment the patient starts the test to the moment he finishes it.

Function rating

This measurement criterion is related to the degree of personal autonomy demonstrated to complete the task. Does he do the task alone? With minimal help? With significant help? Is he completely dependent? Does he have difficulties? Each task is rated 0,1,2 or 3 according to performance.

Task analysis

This criterion helps the occupational therapist to identify and quantify the difficulties experienced by a person to accomplish a task. Is it a problem of prehension strength, co-ordination, etc...?

Normative reference value tables

Normative reference values enable comparison of the performance of a person of a specific age to that of a healthy population of the same age group and helps clinicians identify if loss of upper limb function is due to a normal or pathological aging.

The normative reference values were developed after studies were conducted with people over the age of 45. The results are broken down by age group (45-49, 50-54, 55-59, 60-69, 70-79 and over 80) and gender. Two studies were conducted, one for persons between 45 and 59 years of age and another for persons 60 years and older.

The 45 to 59 age group study was conducted with 152 participants, 77 women and 75 men, evenly divided into three age groups (45-49, 50-54, and 55-59). These individuals were not selected randomly, but efforts were made to recruit people from different social, cultural and economic backgrounds. Each individual was asked to perform the nine unilateral and bilateral TEMPA tasks first at normal speed (the individual's usual speed) and then at the fastest possible speed.

The 60 and older age group study was conducted with 360 elderly participants, who were randomly selected from the population. It should be noted that unlike the 45 to 59 age group study, participants were instructed to accomplish the task as quickly as possible and only the fast speed was evaluated.

Validity and fidelity studies of the TEMPA evaluation test method were conducted with 133 older adults with upper extremity disabilities.

Normative values of execution speed for TEMPA task (in seconds) are presented in the following tables by age group and gender.

Table 1: Normative values of execution speed for TEMPA tasks (in seconds), normal speed, by women and men, aged 45 to 59 years 6

Table 2: Normative values of execution speed for TEMPA tasks (in seconds), fast speed, by men, aged 45 to 59 years, by age group 7

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For further information or explanation, you can contact Johanne Desrosiers at the following email address: johanne.desrosiers@usherbrooke.ca

Table 1: Normative values of execution speed for TEMPA tasks (in seconds), normal speed, by women and men, aged 45 to 59 years

Note : The results are presented by gender but without regard to age groups since no differences were found at this level.

TASKS	Women (n=77)	Men (n=75)
1. Pick up and move a jar : • Right hand • Left hand	1,8 (0,5) ¹ 1,8 (0,4)	1,8 (0,5) 1,9 (0,4)
2. Open a jar and remove a spoonful of coffee	8,7 (1,9)	9,4 (1,6)
3. Pick up a pitcher and pour water into a glass • Right hand • Left hand	8,4 (1,5) 8,4 (1,3)	8,5 (1,4) 8,8 (1,6)
4. Unlock a lock and open a pill container	10,3 (2,4)	11,2 (2,4)
5. Write on an envelope and stick a stamp on it	10,1 (2,0)	11,8 (2,9)
6. Tie a scarf around one's neck	6,5 (1,8)	7,5 (1,8)
7. Shuffle and deal playing cards	14,5 (2,5)	15,2 (2,7)
8. Handle coins • Right hand • Left hand	7,0 (1,2) 7,3 (1,4)	7,5 (1,3) 7,6 (1,4)
9. Pick up and move small objects • Right hand • Left hand	6,9 (1,6) 6,7 (1,3)	8,3 (1,9) 7,9 (1,6)

¹. Mean (SD)

Desrosiers, J. (2002). Unpublished data: do not broadcast (for TEMPA users only)

Table 2: Normative values of execution speed for TEMPA tasks (in seconds), fast speed, by men, aged 45 to 59 years

TASKS	Age group				
	45-49 years (n = 25)	55-59 years (n = 25)	45-54 years (n = 50)	50-59 years (n = 50)	40-59 years (n = 75)
1. Pick up and move a jar : • Right hand • Left hand	0,9 (0,2) ¹ 1,0 (0,2)	- -	- -	1,2 (0,3) 1,2 (0,3)	- -
2. Open a jar and remove a spoonful of coffee	-	-	-	-	6,9 (1,4)
3. Pick up a pitcher and pour water into a glass • Right hand • Left hand	6,4 (0,8) 6,5 (0,8)	- -	- -	6,5 (1,0) 6,8 (1,2)	- -
4. Unlock a lock and open a pill container	-	-	-	-	8,7 (2,0)
5. Write on an envelope and stick a stamp on it	-	10,2 (2,7)	9,1 (1,9)	-	-
6. Tie a scarf around one's neck	-	-	-	-	5,6 (1,4)
7. Shuffle and deal playing cards	-	-	-	-	12,1 (2,2)
8. Handle coins • Right hand • Left hand	- -	6,6 (1,1) -	6,2 (1,1) -	- -	- 6,4 (1,1)
9. Pick up and move small objects • Right hand • Left hand	- -	- 7,0 (1,6)	- 6,2 (1,1)	-	6,7 (1,8) -

¹: Mean (SD)

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Table 3: Normative values of execution speed for TEMPA tasks (in seconds), fast speed, by women, aged 45 to 59 years

TASKS	Age group		
	45-54 years (n = 51)	55-59 years (n = 26)	45-59 years (n = 77)
1. Pick up and move a jar : • Right hand • Left hand	- -	- -	1,2 (0,3) ¹ 1,2 (0,3)
2. Open a jar and remove a spoonful of coffee	-	-	6,6 (1,5)
3. Pick up a pitcher and pour water into a glass • Right hand • Left hand	- -	- -	6,6 (1,0) 6,8 (1,0)
4. Unlock a lock and open a pill container	-	-	8,2 (1,5)
5. Write on an envelope and stick a stamp on it	8,2 (2,0)	8,8 (1,9)	-
6. Tie a scarf around one's neck	-	-	4,9 (1,2)
7. Shuffle and deal playing cards	11,0 (1,8)	11,9 (1,8)	-
8. Handle coins • Right hand • Left hand	5,8 (0,9) -	6,3 (1,2) -	- 6,2 (1,0)
9. Pick up and move small objects • Right hand • Left hand	5,4 (0,8) -	6,4 (1,9) -	- 5,8 (1,0)

¹. Mean (SD)

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Table 4: Normative values of execution speed for TEMPA tasks (in seconds), by men, aged 60 years and older, by age group

TASKS	Age group		
	60-69 years	70-79 years	80+ years
1. Pick up and move a jar : • Right hand • Left hand	1,5 (0,4) 0,9-2,8 1,5 (0,4) 0,8-2,9	1,5 (0,3) 0,7-2,2 1,5 (0,3) 0,9-2,3	1,7 (0,4) 1,0-2,7 1,6 (0,4) 1,0-2,6
2. Open a jar and remove a spoonful of coffee	8,4 (1,6) 5,6-14,7	9,2 (1,8) 5,5-12,3	10,8 (3,2) 6,5-21,2
3. Pick up a pitcher and pour water into a glass • Right hand • Left hand	7,4 (1,0) 5,1-10,6 7,6 (1,0) 5,3-10,0	8,0 (1,7) 5,1-11,7 8,0 (1,6) 3,9-11,9	9,0 (1,7) 6-14,2 9,0 (1,9) 6,7-15,8
4. Unlock a lock and open a pill container	9,8 (1,7) 7,0-17,5	11,5 (2,7) 6,5-19,4	13,7 (3,9) 7,9-26,1
5. Write on an envelope and stick a stamp on it	12,3 (2,4) 7,8-18,9	15,5 (4,8) 8,7-32,0	17,4 (5,6) 9,0-33,4
6. Tie a scarf around one's neck	7,8 (2,1) 5,2-13,9	9,2 (2,1) 5, 2-13,9	11,8 (3,9) 5,7-22,0
7. Shuffle and deal playing cards	15,0 (3,1) 10,6-23,5	17,7 (4,0) 10,8-30,3	19,0 (4,7) 11,0-33,8
8. Handle coins • Right hand • Left hand	7,9 (1,3) 5,9-11,1 8,5 (1,6) 6,5-15,9	8,7 (1,8) 5,5-16,3 9,2 (2,0) 5,8-16,2	9,6 (1,9) 6,4-15,6 9,9 (1,9) 6,8-15,7
9. Pick up and move small objects • Right hand • Left hand	8,0 (2,0) 4,5-14,4 8,0 (1,9) 5,3-14,7	8,7 (2,4) 5,1-19,0 8,9 (2,1) 6,0-14,2	9,2 (2,5) 5,7-20,0 9,4 (2,5) 5,7-21,7

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Table 5: Normative values of execution speed for TEMPA tasks (in seconds), by women, aged 60 years and older, by age group

TASKS	Age group		
	60-69 years	70-79 years	80+ years
1. Pick up and move a jar : • Right hand • Left hand	1,5 (0,3) ¹ 0,8-2,3 1,6 (0,3) 0,9-3,0	1,8 (0,4) 1,3-3,2 1,8 (0,5) 1,1-3,2	1,8 (0,5) 1,1-3,2 1,9 (0,5) 1,1-3,5
2. Open a jar and remove a spoonful of coffee	7,8 (1,30) 5-12	9,4 (2,3) 5,9-15,3	10,3 (2,3) 7,1-17,7
3. Pick up a pitcher and pour water into a glass • Right hand • Left hand	7,2 (1,4) 3,3-10 7,2 (1,5) 4,3-10,7	8,9 (1,9) 5,9-15,9 8,7 (1,9) 5,2-16,0	9,3 (2,0) 6,5-14,7 9,5 (3,2) 6,8-17,2
4. Unlock a lock and open a pill container	9,9 (1,9) 6,3-15,4	11,7 (2,8) 6,7-21,4	12,7 (3,2) 7,8-24,0
5. Write on an envelope and stick a stamp on it	11,8 (2,3) 8,0-19,4	14,5 (4,1) 7,2-27,8	16,7 (4,9) 10,4-29,9
6. Tie a scarf around one's neck	7,2 (1,6) 4,6-12,1	8,9 (3,0) 5,1-20,6	10,5 (3,3) 6,3-19,9
7. Shuffle and deal playing cards	14,7 (2,3) 11-23,6	18,1 (4,4) 12,1-32,3	19,1 (4,5) 12,5-30,8
8. Handle coins • Right hand • Left hand	7,1 (1,2) ¹ 4,6-11,9 7,7 (1,3) 5,4-10,5	8,1 (1,6) 5,5-13,5 9,1 (1,9) 5,9-16,7	8,8 (1,8) 5,7-16,6 9,5 (2,1) 6,6-16,4
9. Pick up and move small objects • Right hand • Left hand	6,8 (1,1) 4,5-9,5 6,8 (1,2) 4,7-10,4	7,9 (1,9) 4,9-14,3 8,2 (2,1) 5,1-16,5	8,5 (2,8) 5,5-20,7 9,3 (3,1) 5,5-21,7

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