



TEMPA

evaluation kit



PHYSIPRO
Seating and mobility solutions



TEMPA Reference values for people aged between 45 and 59 years.

The TEMPA (Test Evaluant la Performance des Membres supérieurs des Personnes âgées) is a performance-evaluating test. It was developed to help occupational therapists to evaluate efficiently the adaptive capacities and functional limitations of the upper limbs for a population aged 60 and over.

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 many 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 analysis of the task. 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 in 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 rate difficulty experience by the person. Is it a problem of prehension strength, co-ordination, etc...?

3. The reliability and validity of the test was not extensively studied. The TEMPA has undergone reliability and validity studies on 133 elderly people incapacitated at the level of the upper limbs.

The test results obtained are strongly related to a functional autonomy measurement system (SMAF). Furthermore, the speeds of execution norms for normative reference values were developed with help from 360 elderly people aged 60 and over. They were chosen at random from the Sherbrooke population in this age range. The norms will be available shortly, presented as tables and figures.

These norms will help occupational therapists better differentiate between losses due to the normal ageing process and those related to pathologies.

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**Table 1. Execution time, under normal speed, of the TEMPA tasks (in seconds)
(45 to 59 years)**

TASKS	Women (n=77)	Men (n=75)
1. Pick up and move a jar :		
• Right hand	1,8 (0,5) ¹	1,8 (0,5)
• Left hand	1,8 (0,4)	1,9 (0,4)
2. Open a jar and take a spoonful of coffee	8,7 (1,9)	9,4 (1,6)
3. Pick up a pitcher of water and pour water into a glass		
• Right hand	8,4 (1,5)	8,5 (1,4)
• Left hand	8,4 (1,3)	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 on a stamp	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	7,0 (1,2)	7,5 (1,3)
• Left hand	7,3 (1,4)	7,6 (1,4)
9. Pick up and move small objects		
• Right hand	6,9 (1,6)	8,3 (1,9)
• Left hand	6,7 (1,3)	7,9 (1,6)

¹. Mean (SD)

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 Unpublished data: do not broadcast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

Table 2. Execution time, under normal speed, of the TEMPA tasks by men (in seconds) (45 to 59 years)

TASKS	Age group				
	45-49 (n = 25)	55-59 (n = 25)	45-54 (n = 50)	50-59 (n = 50)	40-59 (n = 75)
1. Pick up and move a jar :					
• Right hand	0,9 (0,2) ¹	-	-	1,2 (0,3)	-
• Left hand	1,0 (0,2)	-	-	1,2 (0,3)	-
2. Open a jar and take a spoonful of coffee	-	-	-	-	6,9 (1,4)
3. Pick up a pitcher of water and pour water into a glass					
• Right hand	6,4 (0,8)	-	-	6,5 (1,0)	-
• Left hand	6,5 (0,8)	-	-	6,8 (1,2)	-
4. Unlock a lock and open a pill container	-	-	-	-	8,7 (2,0)
5. Write on an envelope and stick on a stamp	-	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	-	6,6 (1,1)	6,2 (1,1)	-	-
• Left hand	-	-	-	-	6,4 (1,1)
9. Pick up and move small objects					
• Right hand	-	-	-	-	6,7 (1,8)
• Left hand	-	7,0 (1,6)	6,2 (1,1)		-

¹. Mean (SD)

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Table 3. Execution time, under normal speed, of the TEMPA tasks by women (in seconds) (45 to 59 years)

TASKS	Age group		
	45-54 (n = 51)	55-59 (n = 26)	45-59 (n = 77)
1. Pick up and move a jar :			
• Right hand	-	-	1,2 (0,3) ¹
• Left hand	-	-	1,2 (0,3)
2. Open a jar and take a spoonful of coffee	-	-	6,6 (1,5)
3. Pick up a pitcher of water and pour water into a glass	-	-	6,6 (1,0)
• Right hand	-	-	6,8 (1,0)
• Left hand	-	-	6,8 (1,0)
4. Unlock a lock and open a pill container	-	-	8,2 (1,5)
5. Write on an envelope and stick on a stamp	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	5,8 (0,9)	6,3 (1,2)	-
• Left hand	-	-	6,2 (1,0)
9. Pick up and move small objects			
• Right hand	5,4 (0,8)	6,4 (1,9)	-
• Left hand	-	-	5,8 (1,0)

¹. Mean (SD)

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