

## 1.15. FLUÈNCIA VERBAL

### Conversió de Puntuació Directa a Percentile Range

Age-adjusted NEURONORMA scores (NSS<sub>A</sub>) for age 50–56

Scaled Score	Percentile Range	Semantic	Phonological			
			Initial Letter			
			Animals	P	M	R
2	<1	0–10	0–4	0–1	0–1	
3	1	—	5–6	—	—	
4	2	11–12	7	2–4	—	
5	3–5	13	8	5	2–4	
6	6–10	14	—	6	5	
7	11–18	15	9–10	7–8	6–7	
8	19–28	16–17	11–12	9	8	
9	29–40	18–19	13	10–11	9–10	
10	41–59	20–21	14–17	12–13	11–13	
11	60–71	22–23	18	14	14–15	
12	72–81	24–26	19–20	15–16	16–17	
13	82–89	27–29	21–22	17	18	
14	90–94	30–31	23	18–20	19–22	
15	95–97	32	24–27	21–22	23	
16	98	—	28–29	23–24	24–25	
17	99	33	30	—	26–28	
18	>99	≥34	≥31	≥25	≥29	

Age-adjusted NEURONORMA scores (NSS<sub>A</sub>) for age 57–59

Scaled Score	Percentile Range	Semantic	Phonological			
			Initial Letter			
			Animals	P	M	R
2	<1	0–7	0–3	0–1	0–1	
3	1	—	4	—	—	
4	2	8–10	—	2–3	—	
5	3–5	11–12	5–7	4	2–4	
6	6–10	13–14	8	5	5	
7	11–18	15	9–10	6–7	6	
8	19–28	16–17	11–12	8–9	7–8	
9	29–40	18	13	10	9–10	
10	41–59	19–21	14–16	11–12	11–13	
11	60–71	22–23	17–19	13–14	14–15	
12	72–81	24–26	20	15	16–17	
13	82–89	27–29	21	16–17	18	
14	90–94	30–32	22–23	18–20	19–21	
15	95–97	—	24–25	21–22	22–23	
16	98	33	26	23	—	
17	99	34	27–28	24	24	
18	>99	≥35	≥29	≥25	≥25	

Age-adjusted NEURONORMA scores (NSS<sub>A</sub>) for age 60–62

Scaled Score	Percentile Range	Semantic	Phonological		
			Initial Letter		
		Animals	P	M	R
2	<1	0–7	0–3	0–1	0–1
3	1	—	4	2–3	—
4	2	8–10	5	—	2–4
5	3–5	11	6	4	—
6	6–10	12–13	7–8	5	5
7	11–18	14	9	6	6
8	19–28	15–16	10	7–8	7
9	29–40	17–18	11–12	9	8–9
10	41–59	19–20	13–14	10–11	10–13
11	60–71	21–23	15–17	12–14	14
12	72–81	24–26	18–19	15	15–17
13	82–89	27–29	20–21	16	18
14	90–94	30–32	22	17–18	19–20
15	95–97	—	23	19–20	21–22
16	98	33	—	21–22	23
17	99	34	24	23–24	24
18	>99	≥35	≥25	≥25	≥25

Age-adjusted NEURONORMA scores (NSS<sub>A</sub>) for age 63–65

Scaled Score	Percentile Range	Semantic	Phonological		
			Initial Letter		
		Animals	P	M	R
2	<1	0–7	0–4	0–3	0–2
3	1	8–10	5	—	—
4	2	—	—	4	3
5	3–5	11	6	5	—
6	6–10	12	7	—	4
7	11–18	13–14	8–9	6	5–6
8	19–28	15–16	10	7–8	7
9	29–40	17	11–12	9	8
10	41–59	18–20	13–15	10–12	9–11
11	60–71	21–22	16–17	13–14	12–14
12	72–81	23–24	18–19	15	15–16
13	82–89	25–26	20–21	16–17	17–18
14	90–94	27–30	—	18–19	19–21
15	95–97	—	22	20	22
16	98	31–33	23	—	23
17	99	34	24	21–22	24
18	>99	≥35	≥25	≥23	≥25

Age-adjusted NEURONORMA scores (NSS<sub>A</sub>) for age 66–68

Scaled Score	Percentile Range	Semantic	Phonological		
			Initial Letter		
		Animals	P	M	R
2	<1	0–7	0–3	0–3	0
3	1	8	—	—	—
4	2	—	4	—	—
5	3–5	9–11	5	4	1–3
6	6–10	12	6	5	4
7	11–18	13	7	6	5
8	19–28	14–15	8–9	7–8	6–7
9	29–40	16	10–11	9	8
10	41–59	17–19	12–14	10–12	9–11
11	60–71	20–21	15–16	13–14	12–14
12	72–81	22–23	17	15	15
13	82–89	24	18–19	16–17	16
14	90–94	25–27	20	18–19	17–18
15	95–97	28–29	21–22	20–21	19–21
16	98	—	23	—	—
17	99	30–33	24–25	22	22
18	>99	≥34	≥26	≥23	≥23

Age-adjusted NEURONORMA scores (NSS<sub>A</sub>) for age 69–7

Scaled Score	Percentile Range	Semantic	Phonological		
			Initial Letter		
		Animals	P	M	R
2	<1	0–7	0–3	0–2	0
3	1	8	4	—	—
4	2	—	—	3	—
5	3–5	9–10	5	—	—
6	6–10	11	6	4	1–3
7	11–18	12–13	7	5–6	4–5
8	19–28	14	8–9	7	6
9	29–40	15–16	10	8–9	7–8
10	41–59	17–18	11–13	10–11	9–11
11	60–71	19–21	14–16	12–14	12–13
12	72–81	22–23	17	15	14–15
13	82–89	24	18–19	16–17	16
14	90–94	25–26	20–21	18	17–18
15	95–97	27–29	22–23	19–20	19–21
16	98	30	24	21	—
17	99	31–33	25	22	22
18	>99	≥34	≥26	≥23	≥23

Age-adjusted NEURONORMA scores (NSS<sub>A</sub>) for age 72–74

Scaled Score	Percentile Range	Semantic	Phonological			
			Initial Letter			
		Animals	P	M	R	
2	<1	0–6	0–3	0–2	0	
3	1	7	4	—	—	
4	2	8	—	3	—	
5	3–5	9–10	5	—	—	
6	6–10	11	6	4	1–3	
7	11–18	12–13	7	5	4–5	
8	19–28	14	8–9	6–7	6	
9	29–40	15–16	10	8	7–8	
10	41–59	17–18	11–13	9–10	9–10	
11	60–71	19–20	14–16	11–12	11–12	
12	72–81	21–23	17	13–15	13–15	
13	82–89	24	18–19	16–17	—	
14	90–94	25–26	20–21	—	16	
15	95–97	27–28	22–23	18–20	17–19	
16	98	29	24	—	—	
17	99	30	25	21	22	
18	>99	≥31	≥26	≥22	≥23	

Age-adjusted NEURONORMA scores (NSS<sub>A</sub>) for age 75–77

Scaled Score	Percentile Range	Semantic	Phonological			
			Initial Letter			
		Animals	P	M	R	
2	<1	0–6	0–2	0–2	0	
3	1	—	3	—	—	
4	2	7	—	3	—	
5	3–5	8–9	4	—	1–2	
6	6–10	10	5–6	4	3	
7	11–18	11–12	7	—	4	
8	19–28	13	—	5–6	5	
9	29–40	14–15	8–9	7	6–7	
10	41–59	16–18	10–12	8–9	8–10	
11	60–71	19	13	10–11	11–12	
12	72–81	20–21	14–16	12–13	13–14	
13	82–89	22–24	17–18	14–16	15	
14	90–94	25–26	19	17	—	
15	95–97	27	20	18–19	16	
16	98	28	21	20	17	
17	99	29	22–23	—	18–19	
18	>99	≥30	≥24	≥21	≥20	



Age-adjusted NEURONORMA scores (NSS<sub>A</sub>) for age 78–80

Scaled Score	Percentile Range	Semantic	Phonological		
			Initial Letter		
		Animals	P	M	R
2	<1	0–6	0–3	0–2	0
3	1	—	4	3	—
4	2	—	—	—	—
5	3–5	7–8	—	—	2
6	6–10	9–11	5–6	4	3
7	11–18	—	—	5	4
8	19–28	12–13	7	—	5–6
9	29–40	14	8	6	7
10	41–59	15–17	9–10	7–8	8–9
11	60–71	18	11–13	9–10	10–11
12	72–81	19–20	14	11	12
13	82–89	21	15–18	12–14	13
14	90–94	22–25	19	—	14–15
15	95–97	26–27	20	15–17	16
16	98	—	—	18	17
17	99	—	—	—	—
18	>99	≥28	≥21	≥19	≥18

Age-adjusted NEURONORMA scores (NSS<sub>A</sub>) for age 81–90

Scaled Score	Percentile Range	Semantic	Phonological		
			Initial Letter		
		Animals	P	M	R
2	<1	0–7	0–3	0–2	0
3	1	—	—	—	—
4	2	8	4	3	—
5	3–5	9	5	4	2
6	6–10	10–12	6	—	3
7	11–18	—	—	—	—
8	19–28	12–13	7	5	4–6
9	29–40	14	8	6	7
10	41–59	15–16	9	7–8	8–9
11	60–71	17–18	10–12	9–10	10
12	72–81	—	13–14	11	11
13	82–89	19	15	12	12–13
14	90–94	20	17–18	13	—
15	95–97	—	—	14	—
16	98	21–22	—	15–16	14
17	99	—	—	—	—
18	>99	≥23	≥19	≥17	≥15

## Conversió de Puntuació Escalar (Scaled Score) a Puntuació estandaritzada - NSSA- ajustant per anys d'escolaritat

Table 15. **Animals.** Education adjustment applying the following formula:  $NSS_{A\&E} = NSS_A - (\beta \times (Education_{(years)} - 12))$ , where  $\beta = 0.20588$

NSS <sub>A</sub>	Education (years)																				
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2	4	4	4	3	3	3	3	3	2	2	2	2	2	1	1	1	1	0	0	0	0
3	5	5	5	4	4	4	4	4	3	3	3	3	3	2	2	2	2	1	1	1	1
4	6	6	6	5	5	5	5	5	4	4	4	4	4	3	3	3	3	2	2	2	2
5	7	7	7	6	6	6	6	6	5	5	5	5	5	4	4	4	4	3	3	3	3
6	8	8	8	7	7	7	7	7	6	6	6	6	6	5	5	5	5	4	4	4	4
7	9	9	9	8	8	8	8	8	7	7	7	7	7	6	6	6	6	5	5	5	5
8	10	10	10	9	9	9	9	9	8	8	8	8	8	7	7	7	7	6	6	6	6
9	11	11	11	10	10	10	10	10	9	9	9	9	9	8	8	8	8	7	7	7	7
10	12	12	12	11	11	11	11	11	10	10	10	10	10	9	9	9	9	8	8	8	8
11	13	13	13	12	12	12	12	12	11	11	11	11	11	10	10	10	10	9	9	9	9
12	14	14	14	13	13	13	13	13	12	12	12	12	12	11	11	11	11	10	10	10	10
13	15	15	15	14	14	14	14	14	13	13	13	13	13	12	12	12	12	11	11	11	11
14	16	16	16	15	15	15	15	15	14	14	14	14	14	13	13	13	13	12	12	12	12
15	17	17	17	16	16	16	16	16	15	15	15	15	15	14	14	14	14	13	13	13	13
16	18	18	18	17	17	17	17	17	16	16	16	16	16	15	15	15	15	14	14	14	14
17	19	19	19	18	18	18	18	18	17	17	17	17	17	16	16	16	16	15	15	15	15
18	20	20	20	19	19	19	19	19	18	18	18	18	18	17	17	17	17	16	16	16	16

Table 16. **Initial letter P.** Education adjustment applying the following formula:  $NSS_{A\&E} = NSS_A - (\beta \times (Education_{(years)} - 12))$ , where  $\beta = 0.22078$

NSS <sub>A</sub>	Education (years)																				
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2	4	4	4	3	3	3	3	3	2	2	2	2	2	1	1	1	1	0	0	0	0
3	5	5	5	4	4	4	4	4	3	3	3	3	3	2	2	2	2	1	1	1	1
4	6	6	6	5	5	5	5	5	4	4	4	4	4	3	3	3	3	2	2	2	2
5	7	7	7	6	6	6	6	6	5	5	5	5	5	4	4	4	4	3	3	3	3
6	8	8	8	7	7	7	7	7	6	6	6	6	6	5	5	5	5	4	4	4	4
7	9	9	9	8	8	8	8	8	7	7	7	7	7	6	6	6	6	5	5	5	5
8	10	10	10	9	9	9	9	9	8	8	8	8	8	7	7	7	7	6	6	6	6
9	11	11	11	10	10	10	10	10	9	9	9	9	9	8	8	8	8	7	7	7	7
10	12	12	12	11	11	11	11	11	10	10	10	10	10	9	9	9	9	8	8	8	8
11	13	13	13	12	12	12	12	12	11	11	11	11	11	10	10	10	10	9	9	9	9
12	14	14	14	13	13	13	13	13	12	12	12	12	12	11	11	11	11	10	10	10	10
13	15	15	15	14	14	14	14	14	13	13	13	13	13	12	12	12	12	11	11	11	11
14	16	16	16	15	15	15	15	15	14	14	14	14	14	13	13	13	13	12	12	12	12
15	17	17	17	16	16	16	16	16	15	15	15	15	15	14	14	14	14	13	13	13	13
16	18	18	18	17	17	17	17	17	16	16	16	16	16	15	15	15	15	14	14	14	14
17	19	19	19	18	18	18	18	18	17	17	17	17	17	16	16	16	16	15	15	15	15
18	20	20	20	19	19	19	19	19	18	18	18	18	18	17	17	17	17	16	16	16	16

**Initial letter M.** Education adjustment applying the following formula:  $NSS_{A\&E} = NSS_A - (\beta \times (Education_{(years)} - 12))$ , where  $\beta = 0.24352$

NSS <sub>A</sub>	Education (years)																				
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2	4	4	4	4	3	3	3	3	2	2	2	2	2	1	1	1	1	0	0	0	0
3	5	5	5	5	4	4	4	4	3	3	3	3	3	2	2	2	2	1	1	1	1
4	6	6	6	6	5	5	5	5	4	4	4	4	4	3	3	3	3	2	2	2	2
5	7	7	7	7	6	6	6	6	5	5	5	5	5	4	4	4	4	3	3	3	3
6	8	8	8	8	7	7	7	7	6	6	6	6	6	5	5	5	5	4	4	4	4
7	9	9	9	9	8	8	8	8	7	7	7	7	7	6	6	6	6	5	5	5	5
8	10	10	10	10	9	9	9	9	8	8	8	8	8	7	7	7	7	6	6	6	6
9	11	11	11	11	10	10	10	10	9	9	9	9	9	8	8	8	8	7	7	7	7
10	12	12	12	12	11	11	11	11	10	10	10	10	10	9	9	9	9	8	8	8	8
11	13	13	13	13	12	12	12	12	11	11	11	11	11	10	10	10	10	9	9	9	9
12	14	14	14	14	13	13	13	13	12	12	12	12	12	11	11	11	11	10	10	10	10
13	15	15	15	15	14	14	14	14	13	13	13	13	13	12	12	12	12	11	11	11	11
14	16	16	16	16	15	15	15	15	14	14	14	14	14	13	13	13	13	12	12	12	12
15	17	17	17	17	16	16	16	16	15	15	15	15	15	14	14	14	14	13	13	13	13
16	18	18	18	18	17	17	17	17	16	16	16	16	16	15	15	15	15	14	14	14	14
17	19	19	19	19	18	18	18	18	17	17	17	17	17	16	16	16	16	15	15	15	15
18	20	20	20	20	19	19	19	19	18	18	18	18	18	17	17	17	17	16	16	16	16

**Initial letter R.** Education adjustment applying the following formula:  $NSS_{A\&E} = NSS_A - (\beta \times (\text{Education}_{(\text{years})} - 12))$ , where  $\beta = 0.24088$

NSS <sub>A</sub>	Education (years)																				
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2	4	4	4	4	3	3	3	3	2	2	2	2	2	1	1	1	1	0	0	0	0
3	5	5	5	5	4	4	4	4	3	3	3	3	3	2	2	2	2	1	1	1	1
4	6	6	6	6	5	5	5	5	4	4	4	4	4	3	3	3	3	2	2	2	2
5	7	7	7	7	6	6	6	6	5	5	5	5	5	4	4	4	4	3	3	3	3
6	8	8	8	8	7	7	7	7	6	6	6	6	6	5	5	5	5	4	4	4	4
7	9	9	9	9	8	8	8	8	7	7	7	7	7	6	6	6	6	5	5	5	5
8	10	10	10	10	9	9	9	9	8	8	8	8	8	7	7	7	7	6	6	6	6
9	11	11	11	11	10	10	10	10	9	9	9	9	9	8	8	8	8	7	7	7	7
10	12	12	12	12	11	11	11	11	10	10	10	10	10	9	9	9	9	8	8	8	8
11	13	13	13	13	12	12	12	12	11	11	11	11	11	10	10	10	10	9	9	9	9
12	14	14	14	14	13	13	13	13	12	12	12	12	12	11	11	11	11	10	10	10	10
13	15	15	15	15	14	14	14	14	13	13	13	13	13	12	12	12	12	11	11	11	11
14	16	16	16	16	15	15	15	15	14	14	14	14	14	13	13	13	13	12	12	12	12
15	17	17	17	17	16	16	16	16	15	15	15	15	15	14	14	14	14	13	13	13	13
16	18	18	18	18	17	17	17	17	16	16	16	16	16	15	15	15	15	14	14	14	14
17	19	19	19	19	18	18	18	18	17	17	17	17	17	16	16	16	16	15	15	15	15
18	20	20	20	20	19	19	19	19	18	18	18	18	18	17	17	17	17	16	16	16	16