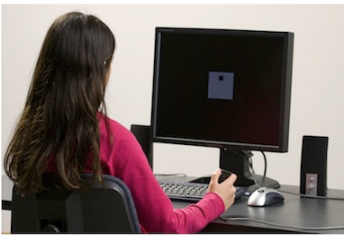# The Test Of Variables of Attention (T.O.V.A.®)

The **Test of Variables of Attention (T.O.V.A.)** is an FDA-cleared, state-of-the-art continuous performance test that provides healthcare professionals with objective measurements of attention and inhibitory control. The T.O.V.A. aids in the assessment of, and evaluation of treatment for, attention deficits, including attention-deficit/hyperactivity disorder (ADHD). T.O.V.A. results are available for children and adults (ages 4 - 80+) and should only be interpreted by qualified professionals.

The T.O.V.A. continuously measures performance during a 10.8-minute task or a 21.6-minute task, depending on age. It records speed, accuracy, and consistency of responses to a series of squares (in the visual T.O.V.A. test) or tones (in the auditory T.O.V.A. test) that are presented in two-second intervals. These measurements (accurate to ±1 ms) are then compared by age and gender to a normative sample (a sample of people without attention problems). This comparison determines whether the test results are "within normal limits" or not. The T.O.V.A. also compares results to a group of people independently diagnosed with ADHD. The T.O.V.A. report is based on these two comparisons, as well as performance, session, and response validity measures.

If you have questions about this report, please contact the person who provided it to you. For more information about attention and the T.O.V.A., please visit our website at https://www.tovatest.com/. To contact us please email info@tovatest.com or call 800.PAY.ATTN (562.594.7700).

ID: **2**   **17y Female Medication Response Example Subject** (Jan 1, 2001)   **Visual T.O.V.A.** (v9.0-89 sn30000)
Female - 17y 0m 0d   Jan 1, 2018 at 9:00 AM

Session, Response, and Performance Validity

This session meets session, response and performance validity criteria.

T.O.V.A. Interpretation

The results of this T.O.V.A. are not within normal limits, and may be suggestive of a possible attention deficit, including ADHD. Please see the Interpretation Notes page for additional information.
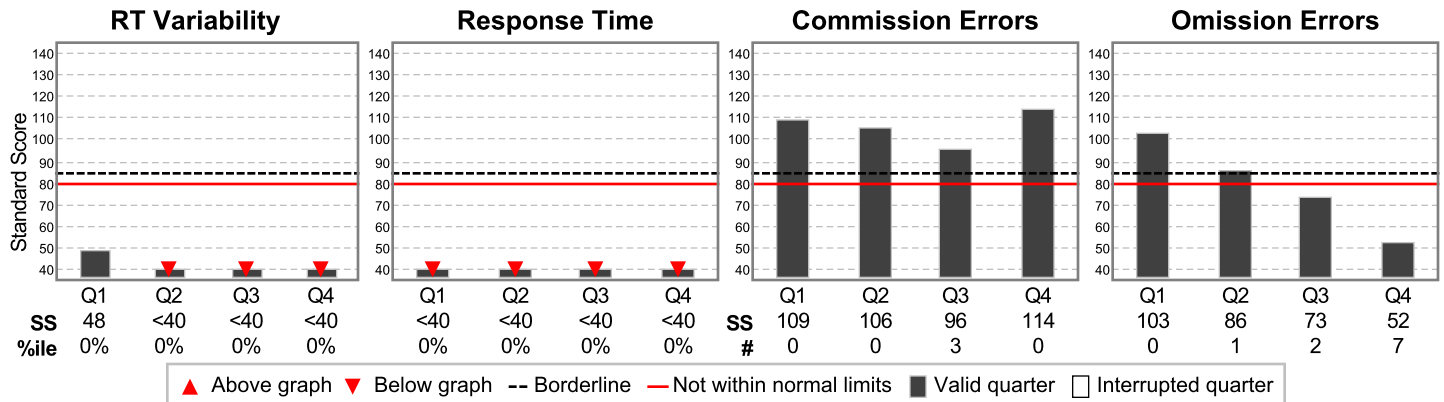
Treatment

No treatments entered.

Comparison to the Normative Sample

These scores compare this subject's performance to the performance of individuals of the same gender and age in the T.O.V.A. Normative Sample, a study of individuals who did not have attention problems.

Results are reported as standard scores (average standard = 100; standard deviation = 15). Standard scores above 85 are considered to be in the normal range, scores between 80 and 85 are considered borderline, and scores below 80 are considered not within normal limits. Scores less than 70 are considered significantly below normal range. Standard scores less than 40 are more than 4 standard deviations from normal, and are denoted as "<40".

	RT Variability				Response Time				Commission Errors				Omission Errors			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
SS	48	<40	<40	<40	<40	<40	<40	<40	109	106	96	114	103	86	73	52
%ile / #	0%	0%	0%	0%	0%	0%	0%	0%	0	0	3	0	0	1	2	7

▲ Above graph ▼ Below graph -- Borderline — Not within normal limits ■ Valid quarter ☐ Interrupted quarter

Quarters, Halves and the Total are independently calculated and are not averages. Any Quarter, Half or Total that is Borderline or Not Within Normal Limits causes the Interpretation to be Borderline or Not Within Normal Limits. See the Interpretation Notes page for more information on these variables and on the subject's performance.

	Quarter				Half		Total
	1	2	3	4	1	2	
RT Variability	48	<40	<40	<40	<40	<40	<40
Response Time	<40	<40	<40	<40	<40	<40	<40
Commission Errors	109	106	96	114	111	107	109
Omission Errors	103	86	73	52	89	47	46
	Infrequent		Frequent				

Key: Borderline , Not within normal limits , Invalid

ID: **2**   **17y Female Medication Response Example Subject** (Jan 1, 2001)   **Visual T.O.V.A.** (v9.0-89 sn30000)
Female - 17y 0m 0d   Jan 1, 2018 at 9:00 AM

Session comments

17-year-old female, baseline session (no medication).

Session, Response, and Performance Validity

Performance Validity

No Performance Validity rules have been flagged.

Performance Validity is flagged to alert clinicians when there is unusually poor performance on the T.O.V.A. Higher numbers of flags indicate increasingly unusual patterns of performance. Only a clinician can determine if the test performance is due to: (1) ADHD, (2) attention deficits from other conditions such as traumatic brain injury, substance use disorders, sleep disorders, (3) medication effects, (4) poor effort, (5) malingering, or (6) other causes. Clinicians are encouraged to consider the entire clinical picture and seek additional information if needed to determine the cause of performance validity flags. Special caution should be taken when the possibility of secondary gain exists. Performance Validity is only applicable to ages 17 or older.

Rule	Results	Flagged
Total omission errors greater than 30	10	0
Half 1 commission errors (CE) greater than 10	0	0
Half 2 response time (RT) skew greater than +150 ms	-192 ms	0
Half 2 CE RT minus RT greater than +75 ms	N/A: < 7 CEs	0
Total rules flagged:		0

Notes on the Comparison to the Normative Sample

Variability is a precise measure of variations in correct response times, and measures the consistency of response times. **Variability was not within normal limits in Quarters 1, 2, 3, and 4, Half 1 and 2, and Total.**

Response Time is the average speed of correct responses to targets, and is a measure of information processing speed. **Response Time was not within normal limits in Quarters 1, 2, 3, and 4, Half 1 and 2, and Total.**

Commission Errors occur when the subject incorrectly responds to a nontarget, and are a measure of inhibitory control. **Commission Errors were within normal limits.**

Omission Errors occur when the subject does not respond to a target, and are a measure of sustained attention. **Omission Errors were not within normal limits in Quarters 3 and 4, Half 2, and Total.**

Other Notes

Consider administering an Auditory T.O.V.A. to this subject for a more comprehensive assessment of attention. This is important because an individual can have markedly different results on one test versus the other.

Treatment

No treatments entered.

Attention Comparison Score

The Attention Comparison Score (ACS) is a subset of T.O.V.A. variables used to compare the subject's performance to a sample of individuals independently diagnosed with ADHD. Scores below 0 suggest a performance more similar to that of individuals with ADHD.

Note that the ACS does not include important variables from the Comparison to the Normative Sample. In order to understand the overall test results, the ACS should always be used with the Comparison to the Normative Sample, found on the Summary page. In particular, when the ACS is above zero and the Comparison to the Normative Sample is not within normal limits, the results should be considered not within normal limits.

The ACS is calculated by summing the following Z scores:

Response Time (Half 1)	-8.87
D Prime (Half 2)	-1.32
Variability (Total)	-9.70
Calibration constant	1.80
Attention Comparison Score	-18.08

-18.08

-10	ADHD Sample	0	Normative Sample	10

TOVA

Tabulated Data

ID: **2**   **17y Female Medication Response Example Subject** (Jan 1, 2001)   **Visual T.O.V.A.** (v9.0-89 sn30000)
Female - 17y 0m 0d   Jan 1, 2018 at 9:00 AM
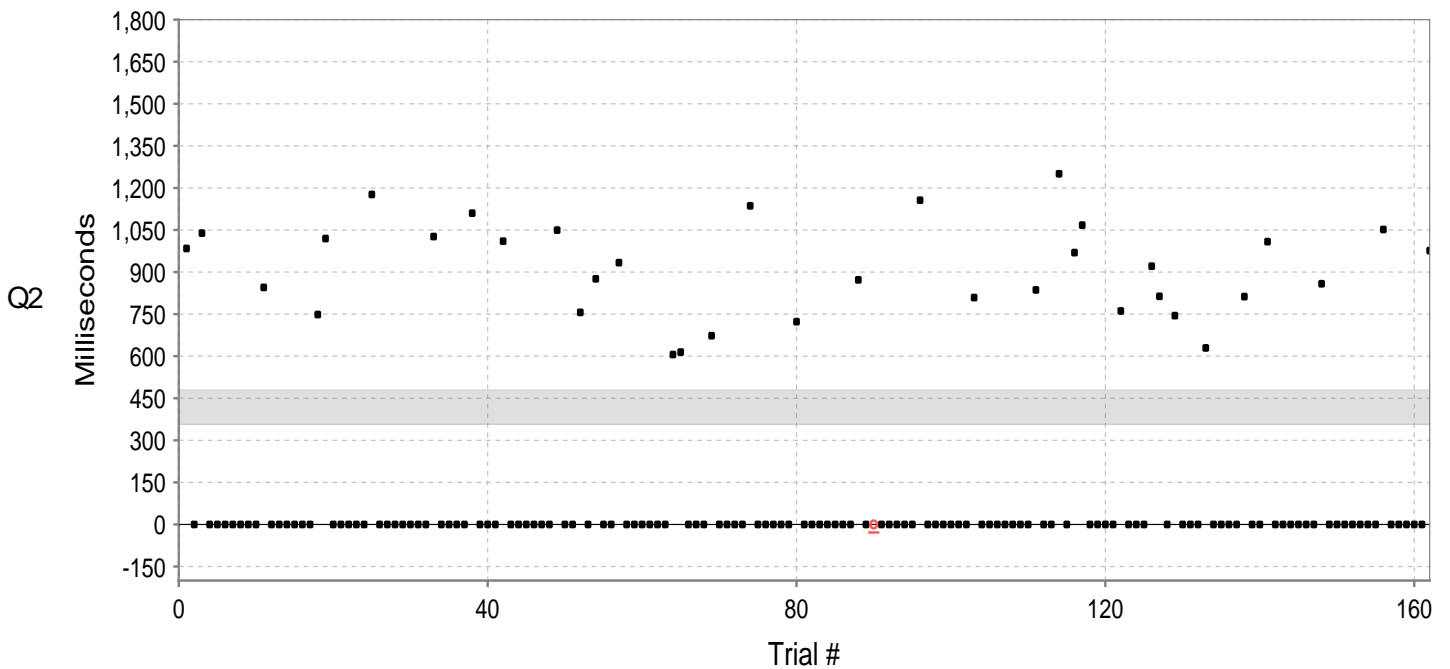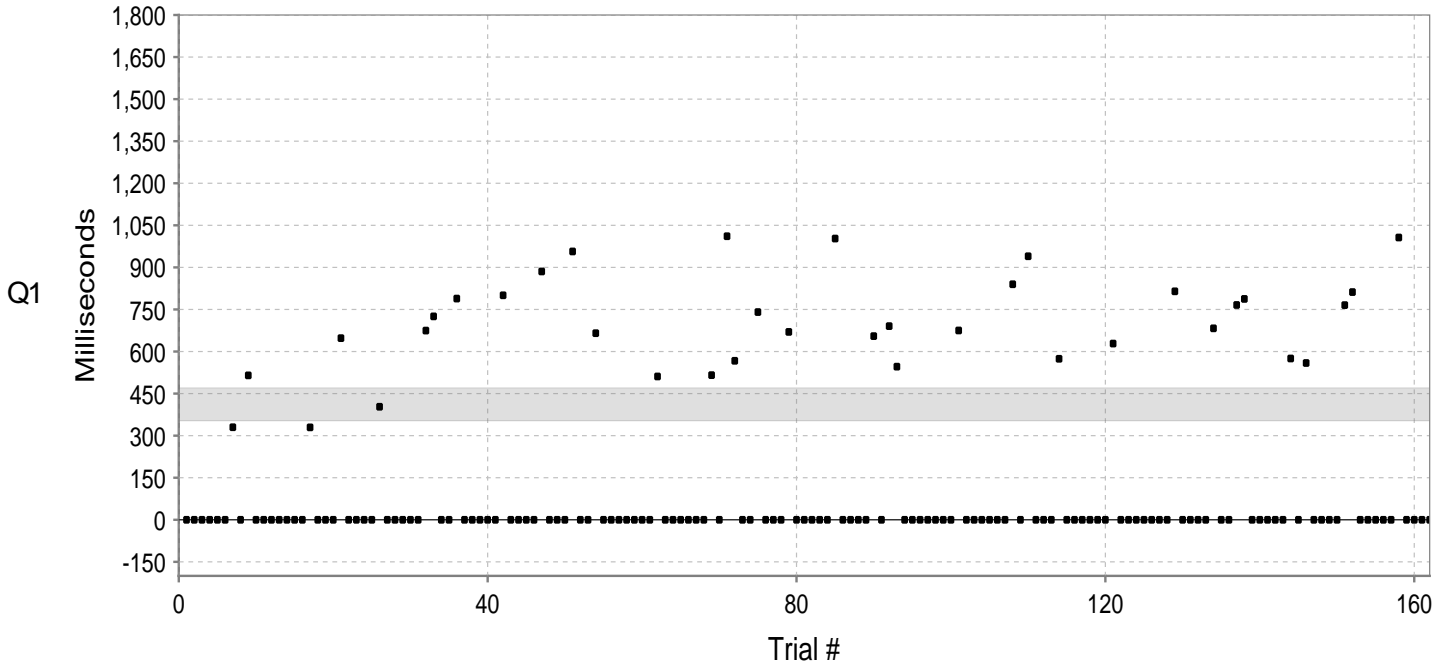
This page contains tabulated raw data and documents T.O.V.A. session parameters.

		Quarter				Half		Total
		1	**2**	**3**	**4**	**1**	**2**	
RT Variability	ms	174	167	250	257	201	290	284
Response Time	ms	696	910	849	1131	802	987	945
Post-commission responses	#	0	0	3	0	0	3	3
Response Time	ms	0	0	629	0	0	629	629
Variability	ms	0	0	129	0	0	129	129
Commission Errors	#	0/126	0/126	3/36	0/36	0/252	3/72	3/324
Percentage	%	0	0	8.3	0	0	4.2	0.9
Response Time	ms	0	0	465	0	0	465	465
Omission Errors	#	0/36	1/36	2/126	7/126	1/72	9/252	10/324
Percentage	%	0	2.8	1.6	5.6	1.4	3.6	3.1
D Prime		8.53	6.18	3.53	5.86	6.47	3.53	4.22
Standard Score		113	76	75	104	93	80	77
Beta		1	1425.08	0.26	2503.57	791.35	0.88	2.8
Anticipatory	%	0	0	0	0.6	0	0.3	0.2
To Nontargets	#	0	0	0	1	0	1	1
To Targets	#	0	0	0	0	0	0	0
Multiple Responses	#	0	0	0	0	0	0	0
Total Correct	#	162/162	161/162	157/162	154/162	323/324	311/324	634/648
Percentage	%	100	99.4	96.9	95.1	99.7	96	97.8
Skew	ms	-96	164	-82	-40	-11	-192	7
User Interrupts	#	0	0	0	0	0	0	0
Hardware errors	#	0	0	0	0	0	0	0
		Infrequent		Frequent				

Session parameters

Format:	1 (standard)
ISI:	2000 ms
Stimulus On Time:	200 ms
Stimulus Off Time:	300 ms
Anticipatory Cutoff	150 ms

Session information

Tester:	
Import Filename:	example-subjects.tova (2 / 7)
Import Date:	Sep 21, 2023 11:23:43 AM
Errors/Warnings:	

Hardware information

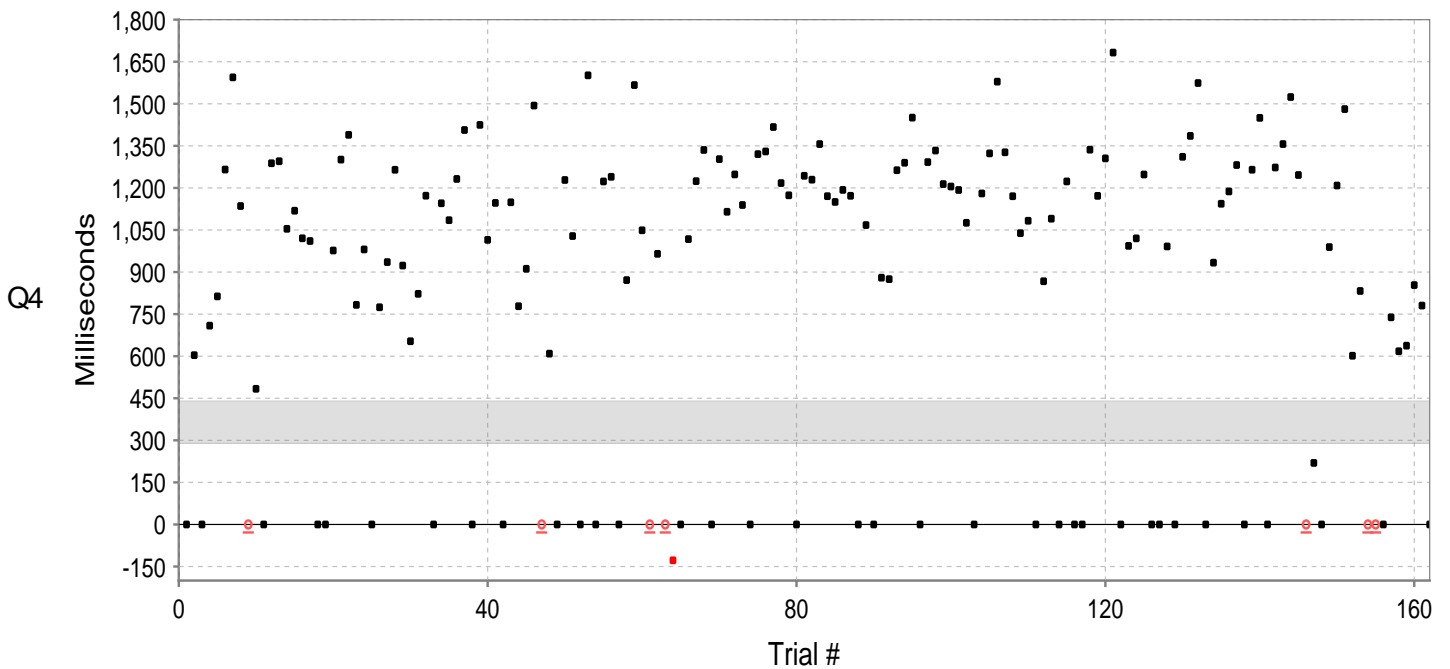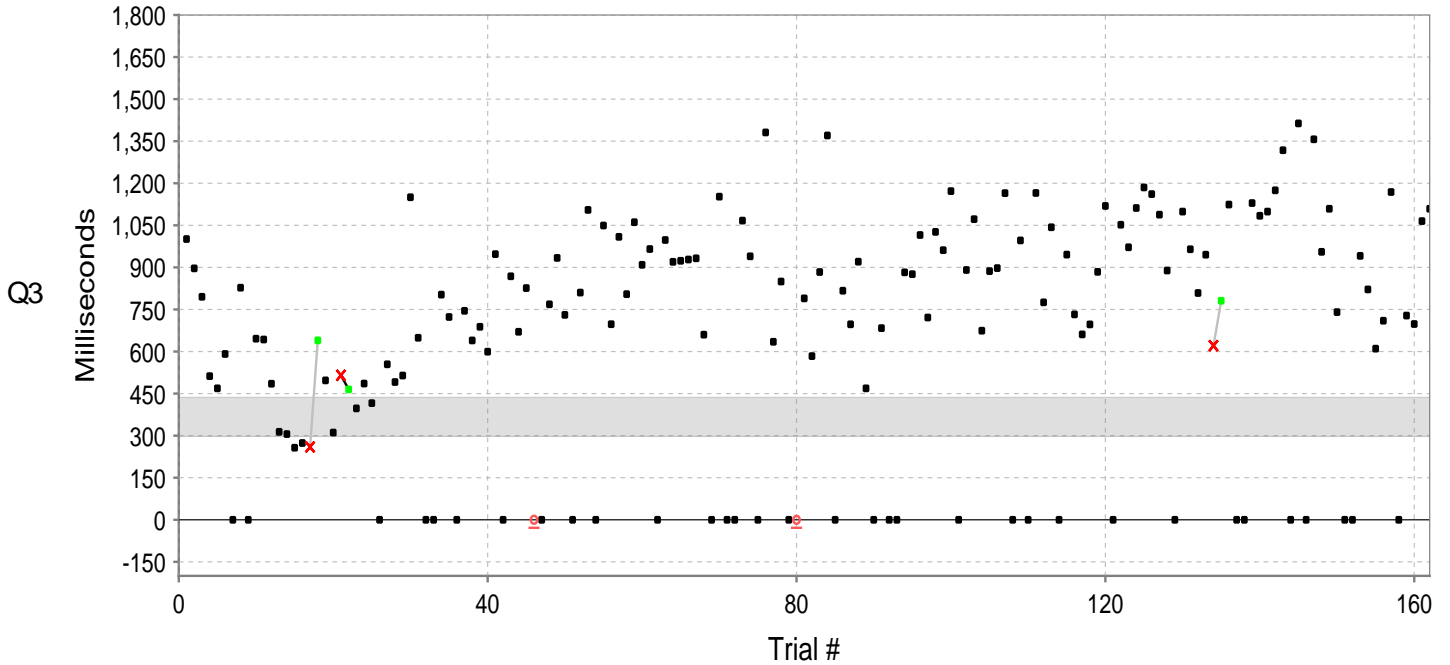|	
Session mode:	PTE
USB device:	HW 5, BD 0, FW 1.1-219-gd36f0e2
Microswitch:	HW 3, BD 0, FW 9
Monitor calibration:	29000, 29000, 29000, 30000, 29000

This page graphically displays the subject's responses. Black squares mark correct responses and correct nonresponses. Red 'X's mark commission errors, red squares mark anticipatory responses, and underlined red circles mark omission errors. The light gray region represents the normative range of responses. Commission errors followed by a correct response are linked by a line: an upward slope (light gray) indicates slowing down following an error (typical), and a downward slope (black) indicates speeding up after making an error (unusual). Red numbers above the zero line indicate the number of missed targets (if three or more in a row), and the red number below the zero line indicates the number of seconds elapsed between correct target responses.

· Correct response	-·- Correct non-response	✗ Commission error	ọ Omission error	▪ Anticipatory response
▪ Post-commission error correct response	╱ Slower post-commission RT	╲ Faster post-commission RT		
▲△ Off-scale resp./error	▨ Normative range	❙ Interruption	3 10s Response gap (# Targets and Sec)	

ID: 2 **17y Female Medication Response Example Subject** (Jan 1, 2001) **Visual T.O.V.A.** (v9.0-89 sn30000)
Female - 17y 0m 0d Jan 1, 2018 at 9:00 AM

This page graphically displays the subject's responses. Black squares mark correct responses and correct nonresponses. Red 'X's mark commission errors, red squares mark anticipatory responses, and underlined red circles mark omission errors. The light gray region represents the normative range of responses. Commission errors followed by a correct response are linked by a line: an upward slope (light gray) indicates slowing down following an error (typical), and a downward slope (black) indicates speeding up after making an error (unusual). Red numbers above the zero line indicate the number of missed targets (if three or more in a row), and the red number below the zero line indicates the number of seconds elapsed between correct target responses.

■ Correct response	─■─ Correct non-response	✕ Commission error	ᵒ̲ Omission error	■ Anticipatory response
■ Post-commission error correct response	╱ Slower post-commission RT	╲ Faster post-commission RT		
▲△ Off-scale resp./error	▓ Normative range	❘ Interruption	3 10s Response gap (# Targets and Sec)	

ID: 2 **17y Female Medication Response Example Subject** (Jan 1, 2001) **Visual T.O.V.A.** (v9.0-89 sn30000)
Female - 17y 0m 0d Jan 1, 2018 at 9:00 AM

This page shows a trial-by-trial view of T.O.V.A. test data. Each entry in the table indicates the stimulus type (target or nontarget) and the subject's response to that stimulus. Error responses are shown in red, and response times are in milliseconds. A negative response time indicates a response that was made before the stimulus was presented.

1-27	28-54	55-81	82-108	109-135	136-162
N	N	N	N	N	N
N	N	N	N	T 939	T 765
N	N	N	N	N	T 787
N	N	N	T 1002	N	N
N	T 674	N	N	N	N
N	T 725	N	N	T 574	N
T 329	N	N	N	N	N
N	N	T 511	N	N	N
T 514	T 788	N	T 654	N	T 575
N	N	N	N	N	N
N	N	N	T 690	N	T 559
N	N	N	T 546	N	N
N	N	N	N	T 628	N
N	N	N	N	N	N
N	T 800	T 515	N	N	N
N	N	N	N	N	T 765
T 329	N	T 1011	N	N	T 812
N	N	T 567	N	N	N
N	N	N	N	N	N
N	T 885	N	T 675	N	N
T 647	N	T 740	N	T 814	N
N	N	N	N	N	N
N	N	N	N	N	T 1006
N	T 956	N	N	N	N
N	N	T 669	N	N	N
T 403	N	N	N	T 682	N
N	T 665	N	T 839	N	N

163-189	190-216	217-243	244-270	271-297	298-324
T 984	N	N	N	N	N
N	N	N	N	N	N
T 1038	N	T 933	N	T 836	T 812
N	N	N	N	N	N
N	T 1026	N	N	T 1250	T 1008
N	N	N	T 872	N	N
N	N	N	N	T 969	N
N	N	N	O	T 1067	N
N	N	T 605	N	N	N
T 845	T 1109	T 614	N	N	N
N	N	N	N	N	N
N	N	N	N	N	T 858
N	N	N	N	T 761	N
N	T 1010	T 673	T 1156	N	N
N	N	N	N	N	N
T 748	N	N	N	T 920	N
T 1019	N	N	N	T 813	N
N	N	T 1136	N	N	N
N	N	N	N	T 744	T 1051
N	T 1049	N	T 809	N	N
N	N	N	N	N	N
N	N	N	N	N	N
T 1176	T 756	N	N	T 629	N
N	N	T 723	N	N	N
N	T 875	N	N	N	T 976

325-351	352-378	379-405	406-432	433-459	460-486
T 1001	T 491	T 1049	T 583	T 996	T 1124
T 896	T 514	T 697	T 883	N	N
T 795	T 1150	T 1008	T 1370	T 1165	N
T 512	T 649	T 804	N	T 775	T 1129
T 468	N	T 1061	T 816	T 1043	T 1084
T 591	N	T 909	T 697	N	T 1098
N	T 802	T 965	T 920	T 945	T 1174
T 827	T 723	N	T 468	T 732	T 1317
N	N	T 997	N	T 661	N
T 645	T 745	T 919	T 683	T 696	T 1413
T 642	T 639	T 923	N	T 884	N
T 485	T 688	T 928	N	T 1119	T 1356
T 313	T 599	T 932	T 882	N	T 955
T 305	T 947	T 660	T 875	T 1052	T 1109
T 256	N	N	T 1015	T 971	T 740
T 273	T 868	T 1152	T 721	T 1111	N
C 259	T 670	N	T 1026	T 1185	N
T 639	T 826	N	T 961	T 1161	T 941
T 497	O	T 1066	T 1171	T 1088	T 821
T 311	N	T 939	N	T 888	T 610
C 515	T 768	N	T 890	N	T 709
T 464	T 933	T 1381	T 1071	T 1099	T 1168
T 397	T 730	T 634	T 674	T 964	N
T 485	N	T 849	T 886	T 808	T 728
T 415	T 810	N	T 897	T 945	T 698
N	T 1105	O	T 1164	C 620	T 1065
T 554	N	T 789	N	T 781	T 1109

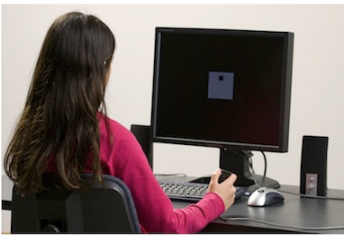| 487-513	514-540	541-567	568-594	595-621	622-648
N	T 1264	T 1223	T 1229	T 1038	T 1187
T 603	T 923	T 1239	T 1356	T 1082	T 1281
N	T 653	N	T 1170	N	N
T 708	T 822	T 871	T 1150	T 867	T 1264
T 813	T 1172	T 1566	T 1192	T 1090	T 1449
T 1265	N	T 1048	T 1171	N	N
T 1594	T 1145	O	N	T 1223	T 1272
T 1135	T 1084	T 965	T 1067	N	T 1356
O	T 1231	O	N	N	T 1524
T 483	T 1406	NA -127	T 879	T 1336	T 1246
N	N	N	T 874	T 1171	O
T 1288	T 1424	T 1017	T 1263	T 1305	T 219
T 1295	T 1014	T 1224	T 1289	T 1682	N
T 1054	T 1146	T 1335	T 1450	N	T 989
T 1118	N	N	N	T 993	T 1208
T 1020	T 1148	T 1302	T 1292	T 1020	T 1481
T 1010	T 778	T 1114	T 1333	T 1247	T 601
N	T 911	T 1248	T 1213	N	T 832
N	T 1493	T 1139	T 1205	N	O
T 976	O	N	T 1192	T 991	O
T 1301	T 609	T 1320	T 1075	N	N
T 1389	N	T 1330	N	T 1310	T 738
T 782	T 1228	T 1417	T 1180	T 1385	T 617
T 980	T 1028	T 1217	T 1323	T 1574	T 637
N	N	T 1173	T 1579	N	T 853
T 774	T 1601	N	T 1327	T 933	T 780
T 935	N	T 1243	T 1170	T 1143	N

T = Correct response to target **O** = Omission error **A** = Anticipatory response

N = Correct nonresponse to nontarget **C** = Commission error **M** = Multiple response

Green = Post-Commission-error correct response **U** = User interrupt **H** = Hardware interrupt

The Test Of Variables of Attention (T.O.V.A.®)

The **Test of Variables of Attention (T.O.V.A.)** is an FDA-cleared, state-of-the-art continuous performance test that provides healthcare professionals with objective measurements of attention and inhibitory control. The T.O.V.A. aids in the assessment of, and evaluation of treatment for, attention deficits, including attention-deficit/hyperactivity disorder (ADHD). T.O.V.A. results are available for children and adults (ages 4 - 80+) and should only be interpreted by qualified professionals.

The T.O.V.A. continuously measures performance during a 10.8-minute task or a 21.6-minute task, depending on age. It records speed, accuracy, and consistency of responses to a series of squares (in the visual T.O.V.A. test) or tones (in the auditory T.O.V.A. test) that are presented in two-second intervals. These measurements (accurate to ±1 ms) are then compared by age and gender to a normative sample (a sample of people without attention problems). This comparison determines whether the test results are "within normal limits" or not. The T.O.V.A. also compares results to a group of people independently diagnosed with ADHD. The T.O.V.A. report is based on these two comparisons, as well as performance, session, and response validity measures.

If you have questions about this report, please contact the person who provided it to you. For more information about attention and the T.O.V.A., please visit our website at https://www.tovatest.com/. To contact us please email info@tovatest.com or call 800.PAY.ATTN (562.594.7700).

TOVA

ID: **2**   **17y Female Medication Response Example Subject** (Jan 1, 2001)   **Visual T.O.V.A.** (v9.0-89 sn30000)
Female - 17y 0m 0d   Jan 1, 2018 at 10:30 AM

Session, Response, and Performance Validity

This session meets session, response and performance validity criteria.

T.O.V.A. Interpretation

The results of this T.O.V.A. are within normal limits. Please see the Interpretation Notes page for additional information.
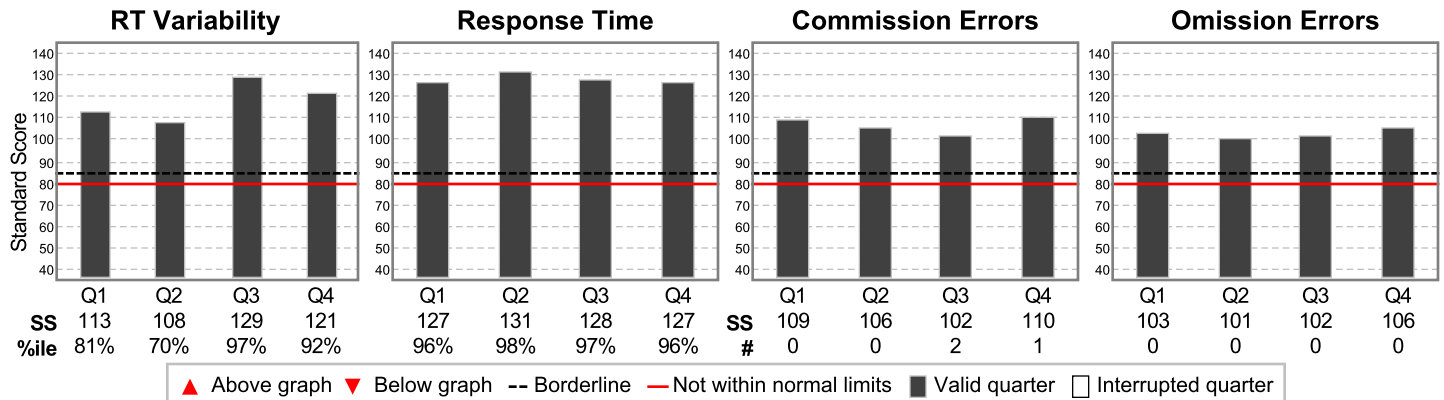
Treatment

36.0mg dose of Methylphenidate taken 1.5 hours before testing.

Comparison to the Normative Sample

These scores compare this subject's performance to the performance of individuals of the same gender and age in the T.O.V.A. Normative Sample, a study of individuals who did not have attention problems.

Results are reported as standard scores (average standard = 100; standard deviation = 15). Standard scores above 85 are considered to be in the normal range, scores between 80 and 85 are considered borderline, and scores below 80 are considered not within normal limits. Scores less than 70 are considered significantly below normal range. Standard scores less than 40 are more than 4 standard deviations from normal, and are denoted as "<40".

	RT Variability				**Response Time**				**Commission Errors**				**Omission Errors**			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
SS	113	108	129	121	127	131	128	127	109	106	102	110	103	101	102	106
%ile / #	81%	70%	97%	92%	96%	98%	97%	96%	0	0	2	1	0	0	0	0

▲ Above graph   ▼ Below graph   -- Borderline   — Not within normal limits   ■ Valid quarter   □ Interrupted quarter

Quarters, Halves and the Total are independently calculated and are not averages. Any Quarter, Half or Total that is Borderline or Not Within Normal Limits causes the Interpretation to be Borderline or Not Within Normal Limits. See the Interpretation Notes page for more information on these variables and on the subject's performance.

	Quarter				**Half**		**Total**
	1	**2**	**3**	**4**	**1**	**2**	
RT Variability	113	108	129	121	113	128	129
Response Time	127	131	128	127	130	129	130
Commission Errors	109	106	102	110	111	107	109
Omission Errors	103	101	102	106	104	106	108
	Infrequent		Frequent				

Key: Borderline ,   Not within normal limits ,   Invalid

T.O.V.A.

Interpretation Notes

ID: **2** **17y Female Medication Response Example Subject** (Jan 1, 2001)   **Visual T.O.V.A.** (v9.0-89 sn30000)
    Female - 17y 0m 0d   Jan 1, 2018 at 10:30 AM

Session comments

17-year-old female, tested 90 minutes after medication dose.

Session, Response, and Performance Validity

Performance Validity

Performance Validity is applicable only to outcomes that are not within normal limits.

Performance Validity is flagged to alert clinicians when there is unusually poor performance on the T.O.V.A. Higher numbers of flags indicate increasingly unusual patterns of performance. Only a clinician can determine if the test performance is due to: (1) ADHD, (2) attention deficits from other conditions such as traumatic brain injury, substance use disorders, sleep disorders, (3) medication effects, (4) poor effort, (5) malingering, or (6) other causes. Clinicians are encouraged to consider the entire clinical picture and seek additional information if needed to determine the cause of performance validity flags. Special caution should be taken when the possibility of secondary gain exists. Performance Validity is only applicable to ages 17 or older.

Rule	Results	Flagged
Total omission errors greater than 30	0	0
Half 1 commission errors (CE) greater than 10	0	0
Half 2 response time (RT) skew greater than +150 ms	+9 ms	0
Half 2 CE RT minus RT greater than +75 ms	N/A: < 7 CEs	0
Total rules flagged:		0

Notes on the Comparison to the Normative Sample

Variability is a precise measure of variations in correct response times, and measures the consistency of response times. **Variability was within normal limits.**

Response Time is the average speed of correct responses to targets, and is a measure of information processing speed. **Response Time was within normal limits.**

Commission Errors occur when the subject incorrectly responds to a nontarget, and are a measure of inhibitory control. **Commission Errors were within normal limits.**

Omission Errors occur when the subject does not respond to a target, and are a measure of sustained attention. **Omission Errors were within normal limits.**

The overall test performance is within normal limits. However, the clinician must take into account other factors that may produce a false negative result, including use of medication, caffeine, nicotine, strong motivation, or other possible compensations.

Other Notes

Consider administering an Auditory T.O.V.A. to this subject for a more comprehensive assessment of attention. This is important because an individual can have a within normal limits result on one test, and a not within normal limits result on the other.

Treatment

36.0mg dose of Methylphenidate taken 1.5 hours before testing.

Attention Comparison Score

The Attention Comparison Score (ACS) is a subset of T.O.V.A. variables used to compare the subject's performance to a sample of individuals independently diagnosed with ADHD. Scores below 0 suggest a performance more similar to that of individuals with ADHD.

Note that the ACS does not include important variables from the Comparison to the Normative Sample. In order to understand the overall test results, the ACS should always be used with the Comparison to the Normative Sample, found on the Summary page. In particular, when the ACS is above zero and the Comparison to the Normative Sample is not within normal limits, the results should be considered not within normal limits.

The ACS is calculated by summing the following Z scores:

Response Time (Half 1)	2.00
D Prime (Half 2)	0.25
Variability (Total)	1.90
Calibration constant	1.80
Attention Comparison Score	5.95

5.95

-10	ADHD Sample	0	Normative Sample	10

ID: **2**   **17y Female Medication Response Example Subject** (Jan 1, 2001)   **Visual T.O.V.A.** (v9.0-89 sn30000)
Female - 17y 0m 0d   Jan 1, 2018 at 10:30 AM

This page contains tabulated raw data and documents T.O.V.A. session parameters.

		Quarter 1	Quarter 2	Quarter 3	Quarter 4	Half 1	Half 2	Total
RT Variability	ms	50	54	39	45	52	42	52
Response Time	ms	333	323	269	261	328	265	279
Post-commission responses	#	0	0	2	1	0	3	3
Response Time	ms	0	0	238	224	0	234	234
Variability	ms	0	0	26	0	0	22	22
Commission Errors	#	0/126	0/126	2/36	1/36	0/252	3/72	3/324
Percentage	%	0	0	5.6	2.8	0	4.2	0.9
Response Time	ms	0	0	246	203	0	232	232
Omission Errors	#	0/36	0/36	0/126	0/126	0/72	0/252	0/324
Percentage	%	0	0	0	0	0	0	0
D Prime		8.53	8.53	5.86	6.18	8.53	6	6.62
Standard Score		113	112	98	106	117	104	110
Beta		1	1	0	0	1	0	0
Anticipatory	%	0	0	0	0	0	0	0
To Nontargets	#	0	0	0	0	0	0	0
To Targets	#	0	0	0	0	0	0	0
Multiple Responses	#	0	0	0	0	0	0	0
Total Correct	#	162/162	162/162	160/162	161/162	324/324	321/324	645/648
Percentage	%	100	100	98.8	99.4	100	99.1	99.5
Skew	ms	5	4	10	15	-1	9	24
User Interrupts	#	0	0	0	0	0	0	0
Hardware errors	#	0	0	0	0	0	0	0
		Infrequent		Frequent				

Session parameters

Format:	1 (standard)
ISI:	2000 ms
Stimulus On Time:	200 ms
Stimulus Off Time:	300 ms
Anticipatory Cutoff	150 ms

Session information

Tester:	
Import Filename:	example-subjects.tova (3 / 7)
Import Date:	Sep 21, 2023 11:23:44 AM
Errors/Warnings:	

Hardware information

Session mode:	PTE
USB device:	HW 5, BD 0, FW 1.1-219-gd36f0e2
Microswitch:	HW 3, BD 0, FW 9
Monitor calibration:	29000, 29000, 29000, 30000, 29000

ID: 2   17y Female Medication Response Example Subject (Jan 1, 2001)   **Visual T.O.V.A.** (v9.0-89 sn30000)
Female - 17y 0m 0d   Jan 1, 2018 at 10:30 AM

This page graphically displays the subject's responses. Black squares mark correct responses and correct nonresponses. Red 'X's mark commission errors, red squares mark anticipatory responses, and underlined red circles mark omission errors. The light gray region represents the normative range of responses. Commission errors followed by a correct response are linked by a line: an upward slope (light gray) indicates slowing down following an error (typical), and a downward slope (black) indicates speeding up after making an error (unusual). Red numbers above the zero line indicate the number of missed targets (if three or more in a row), and the red number below the zero line indicates the number of seconds elapsed between correct target responses.

Legend:
- ▪ Correct response
- ▪ Correct non-response
- ✖ Commission error
- ⚬ Omission error
- ▪ Anticipatory response
- ▪ Post-commission error correct response
- ╱ Slower post-commission RT
- ╲ Faster post-commission RT
- ▲△ Off-scale resp./error
- ▨ Normative range
- ❙ Interruption
- 3 10s Response gap (# Targets and Sec)

ID: 2   17y Female Medication Response Example Subject (Jan 1, 2001)   **Visual T.O.V.A.** (v9.0-89 sn30000)
Female - 17y 0m 0d   Jan 1, 2018 at 10:30 AM
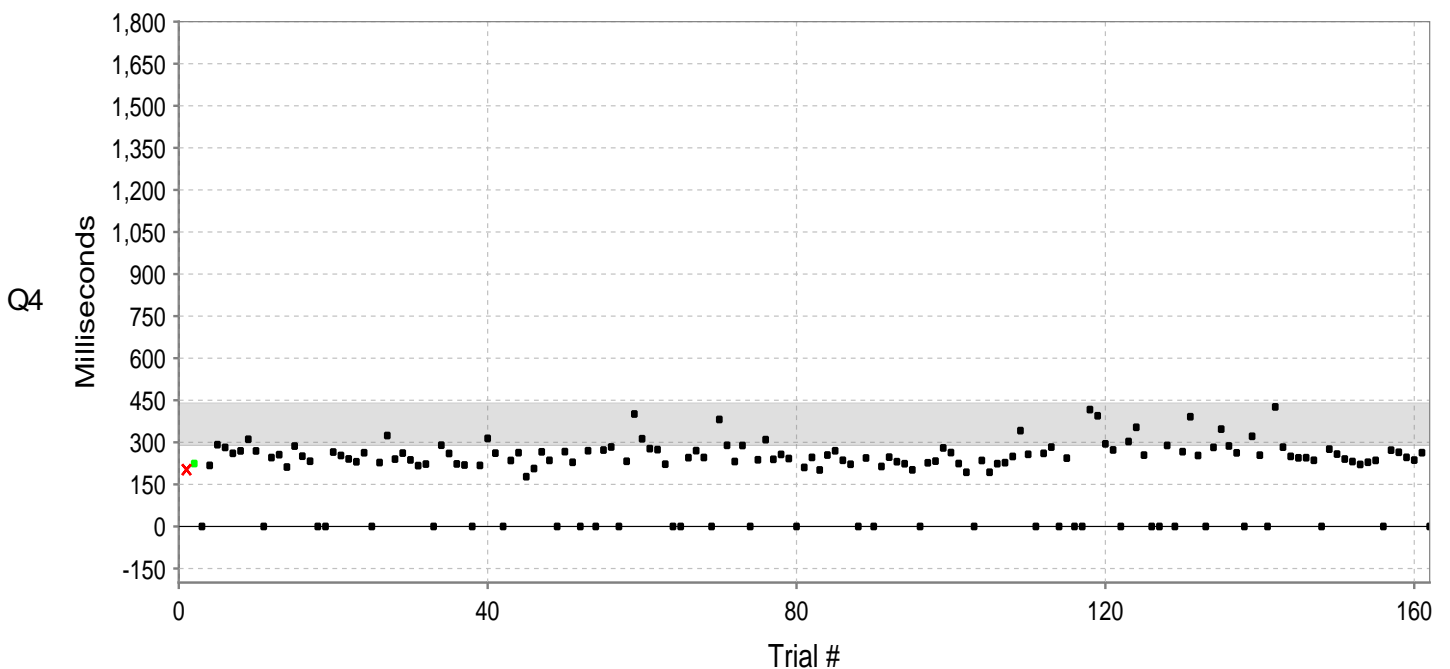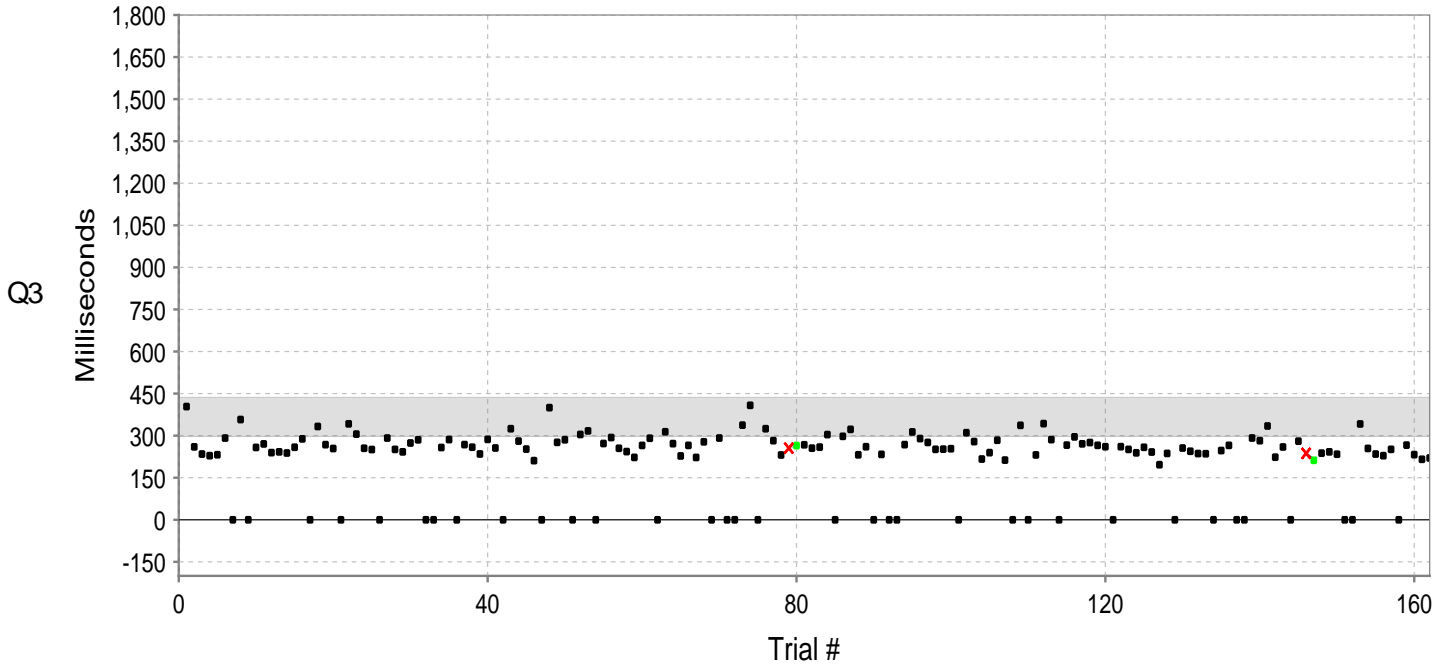
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▪ Correct response	▪—Correct non-response	✖ Commission error	◦ Omission error	▪ Anticipatory response
▪ Post-commission error correct response	╱ Slower post-commission RT	╲ Faster post-commission RT		
▲△ Off-scale resp./error	▨ Normative range	❘ Interruption	3 10s Response gap (# Targets and Sec)	

ID: **2** **17y Female Medication Response Example Subject** (Jan 1, 2001) **Visual T.O.V.A.** (v9.0-89 sn30000)
Female - 17y 0m 0d Jan 1, 2018 at 10:30 AM

This page shows a trial-by-trial view of T.O.V.A. test data. Each entry in the table indicates the stimulus type (target or nontarget) and the subject's response to that stimulus. Error responses are shown in red, and response times are in milliseconds. A negative response time indicates a response that was made before the stimulus was presented.

1-27		28-54		55-81		82-108		109-135		136-162	
N		N		N		N		N		N	
N		N		N		N		T	293	T	348
N		N		N		N		N		T	479
N		N		N		T	320	N		N	
N		T	274	N		N		N		N	
N		T	455	N		N		T	265	N	
T	285	N		N		N		N		N	
N		N		T	307	N		N		N	
T	332	T	336	N		T	332	N		T	265
N		N		N		N		N		N	
N		N		N		T	290	N		T	328
N		N		N		T	400	N		N	
N		N		N		N		T	288	N	
N		N		N		N		N		N	
N		T	301	T	352	N		N		N	
N		N		N		N		N		T	366
T	381	N		T	282	N		N		T	328
N		N		T	292	N		N		N	
N		N		N		N		N		N	
N		T	393	N		T	347	N		N	
T	314	N		T	328	N		T	432	N	
N		N		N		N		N		N	
N		N		N		N		N		T	320
N		T	327	N		N		N		N	
N		N		T	343	N		N		N	
T	324	N		N		N		T	339	N	
N		T	287	N		T	313	N		N	

163-189		190-216		217-243		244-270		271-297		298-324	
T	345	N		N		N		N		N	
N		N		N		N		N		N	
T	339	N		T	276	N		T	423	T	318
N		N		N		N		N		N	
N		N		N		N		N		N	
N		T	327	N		N		T	303	T	252
N		N		N		T	324	N		N	
N		N		N		N		T	289	N	
N		N		N		T	375	T	321	N	
N		N		T	311	N		N		N	
T	389	T	302	T	455	N		N		N	
N		N		N		N		N		N	
N		N		N		N		N		T	307
N		N		N		N		T	280	N	
N		T	263	T	276	T	318	N		N	
N		N		N		N		N		N	
N		N		N		N		N		N	
T	396	N		N		N		T	254	N	
T	443	N		N		N		T	233	N	
N		N		T	401	N		N		N	
N		N		N		N		T	380	T	252
N		T	346	N		T	318	N		N	
N		N		N		N		N		N	
N		N		N		N		N		N	
T	281	T	282	N		N		T	286	N	
N		N		T	286	N		N		N	
N		T	314	N		N		N		T	342

325-351		352-378		379-405		406-432		433-459		460-486	
T	403	T	250	T	271	T	255	T	336	T	265
T	259	T	242	T	293	T	259	N		N	
T	234	T	273	T	255	T	303	T	231	N	
T	228	T	285	T	243	N		T	342	T	291
T	232	N		T	222	T	297	T	285	T	282
T	291	N		T	265	T	322	N		T	334
N		T	257	T	290	T	231	T	266	T	223
T	357	T	286	N		T	260	T	295	T	259
N		N		T	313	N		T	270	N	
T	258	T	268	T	271	T	233	T	275	T	280
T	270	T	258	T	227	N		T	265	C	236
T	239	T	234	T	265	N		T	260	T	212
T	242	T	286	T	222	T	268	N		T	237
T	238	T	256	T	278	T	313	T	260	T	242
T	258	N		N		T	289	T	250	T	233
T	288	T	324	T	291	T	275	T	238	N	
N		T	280	N		T	251	T	258	N	
T	332	T	252	N		T	251	T	241	T	341
T	267	T	210	T	337	T	253	T	196	T	254
T	254	N		T	408	N		T	236	T	234
N		T	399	N		T	310	N		T	228
T	342	T	276	T	324	T	278	T	255	T	251
T	305	T	285	T	282	T	216	T	244	N	
T	255	N		T	231	T	239	T	236	T	266
T	250	T	304	C	255	T	283	T	235	T	232
N		T	316	T	264	T	212	N		T	215
T	291	N		T	267	N		T	246	T	220

487-513		514-540		541-567		568-594		595-621		622-648	
C	202	T	240	T	272	T	246	T	341	T	287
T	224	T	261	T	283	T	201	T	257	T	262
N		T	237	N		T	254	N		N	
T	217	T	216	T	232	T	269	T	260	T	321
T	291	T	222	T	401	T	235	T	282	T	254
T	281	N		T	312	T	221	N		N	
T	260	T	289	T	277	N		T	243	T	426
T	269	T	260	T	274	T	244	N		T	282
T	310	T	223	T	222	N		N		T	249
T	269	T	219	N		T	213	T	416	T	244
N		N		N		T	247	T	394	T	245
T	245	T	217	T	245	T	230	T	294	T	235
T	256	T	314	T	270	T	223	T	272	N	
T	211	T	261	T	245	T	201	N		T	275
T	286	N		N		N		T	302	T	258
T	250	T	235	T	381	T	227	T	353	T	240
T	232	T	263	T	289	T	233	T	254	T	231
N		T	177	T	231	T	280	N		T	221
N		T	206	T	288	T	263	N		T	229
T	265	T	266	N		T	224	T	288	T	235
T	253	T	235	T	237	T	193	N		N	
T	240	N		T	309	N		T	266	T	272
T	230	T	266	T	239	T	235	T	391	T	264
T	262	T	228	T	256	T	193	T	253	T	246
N		N		T	242	T	223	N		T	236
T	227	T	270	N		T	227	T	282	T	263
T	324	N		T	210	T	249	T	347	N	

T = Correct response to target **O** = Omission error **A** = Anticipatory response
N = Correct nonresponse to nontarget **C** = Commission error **M** = Multiple response
Green = Post-Commission-error correct response **U** = User interrupt **H** = Hardware interrupt