360 NEURO HEALTH

VOR TRAINING: SIZE MATTERS HANDOUT

Hello there!

The **VOR Training: Size Matters handout**, created by Kamran Barin, PhD, consists of five pages that demonstrate the relationship between head movement parameters and the resulting velocities experienced during VOR training.

This handout is intended for healthcare professionals.

Use as a practical study aid or reference to incorporate value-added knowledge into your workflow.

Enjoy!

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Key components include:

1. Peak Head Velocity Tables and Graphs (Pages 3-4):

- Tables showing the relationship between metronome settings (10-240 beats/min), frequency (0.08-2.00 Hz), and peak head velocity (deg/sec) across different amplitudes of head movement (±10° to ±30°)
- A visual illustration of a head turn with "Ding" markers indicating the turning points
- A color-coded graph plotting these relationships, with separate lines for each amplitude
- Note: These are the velocities that patient experiences during computerized DVA testing.

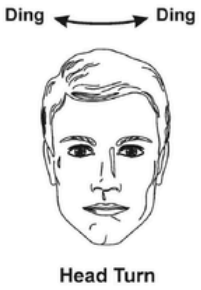
2. Average Head Velocity Tables and Graphs (Pages 5-6):

- Similar tables showing average head velocity values (rather than peak) for the same parameters
- Corresponding color-coded graph for average velocity values
- Note: These are equivalent velocities that patient experiences during bedside/non-computerized DVA testing.

The document effectively demonstrates how increasing either the metronome speed (beats/min) or the amplitude of head movement (degrees) results in higher VOR demands in terms of degrees per second. This would be clinically useful for standardizing and quantifying vestibular assessment protocols and targeted VOR training.

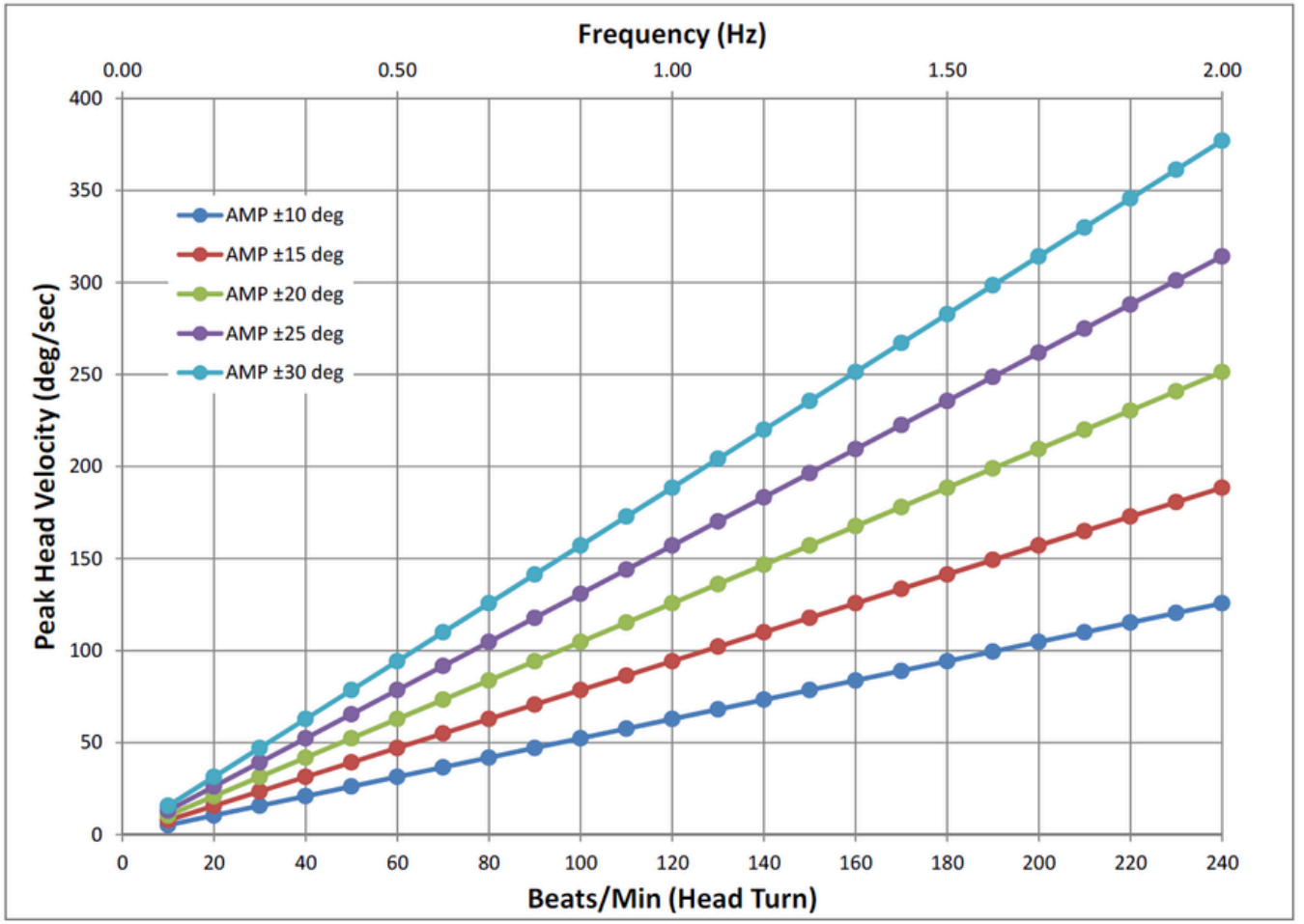
Peak Head Velocity (deg/sec) vs. Metronome Setting (Beats/Min)

beats/min head turn	Freq (Hz)	Amplitude of Head Movement (deg)				
		±10	±15	±20	±25	±30
10	0.08	5	8	10	13	16
20	0.17	10	16	21	26	31
30	0.25	16	24	31	39	47
40	0.33	21	31	42	52	63
50	0.42	26	39	52	65	79
60	0.50	31	47	63	79	94
70	0.58	37	55	73	92	110
80	0.67	42	63	84	105	126
90	0.75	47	71	94	118	141
100	0.83	52	79	105	131	157
110	0.92	58	86	115	144	173
120	1.00	63	94	126	157	188
130	1.08	68	102	136	170	204
140	1.17	73	110	147	183	220
150	1.25	79	118	157	196	236
160	1.33	84	126	168	209	251
170	1.42	89	134	178	223	267
180	1.50	94	141	188	236	283
190	1.58	99	149	199	249	298
200	1.67	105	157	209	262	314
210	1.75	110	165	220	275	330
220	1.83	115	173	230	288	346
230	1.92	120	181	241	301	361
240	2.00	126	188	251	314	377



Head Turn

These are the velocities that patient experiences during computerized DVA. The green box represents the calculations based on performing computerized testing at 2 hertz with head movements at 20 degrees side to side.

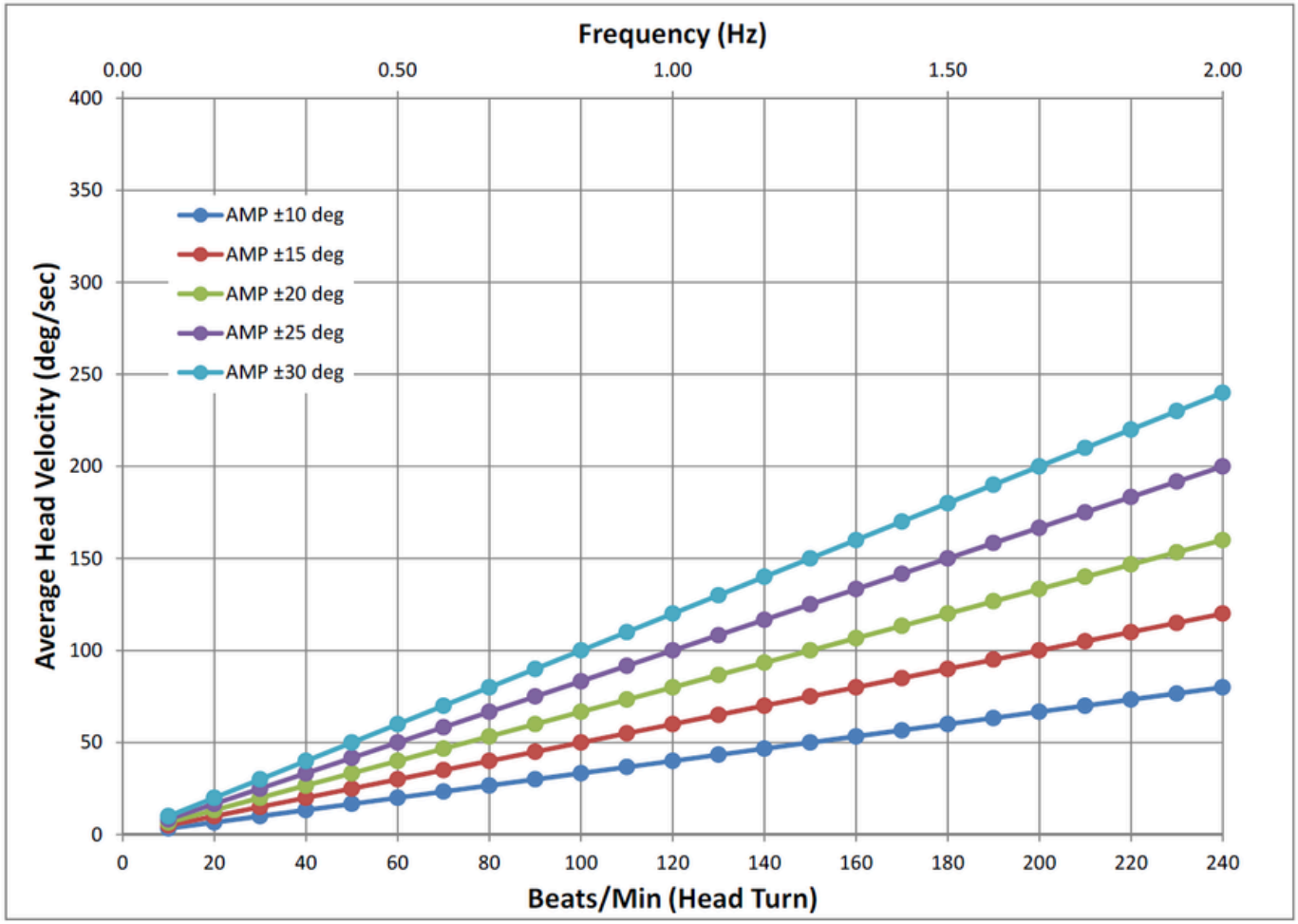


These are the velocities that patient experiences during computerized DVA.

Average Head Velocity (deg/sec) vs. Metronome Setting (Beats/Min)

beats/min head turn	Freq (Hz)	Amplitude of Head Movement (deg)				
		±10	±15	±20	±25	±30
10	0.08	3	5	7	8	10
20	0.17	7	10	13	17	20
30	0.25	10	15	20	25	30
40	0.33	13	20	27	33	40
50	0.42	17	25	33	42	50
60	0.50	20	30	40	50	60
70	0.58	23	35	47	58	70
80	0.67	27	40	53	67	80
90	0.75	30	45	60	75	90
100	0.83	33	50	67	83	100
110	0.92	37	55	73	92	110
120	1.00	40	60	80	100	120
130	1.08	43	65	87	108	130
140	1.17	47	70	93	117	140
150	1.25	50	75	100	125	150
160	1.33	53	80	107	133	160
170	1.42	57	85	113	142	170
180	1.50	60	90	120	150	180
190	1.58	63	95	127	158	190
200	1.67	67	100	133	167	200
210	1.75	70	105	140	175	210
220	1.83	73	110	147	183	220
230	1.92	77	115	153	192	230
240	2.00	80	120	160	200	240

These are the velocities that patient experiences during computerized DVA. The green box represents the calculations based on performing bedsude testing at 2 hertz with head movements at 20 degrees side to side.



These are equivalent velocities that patient experiences during bedside/non-computerized DVA.

Hey, friend! We're Bridgett & Jeseka, the co-founders & sisters behind 360 Neuro Health.

We help healthcare professionals put context to knowledge and turn it into practical application. We're passionate about developing and teaching practical strategies in assessing and treating balance and dizziness disorders you can implement right away.

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