

Functional Impact of Interactive Metronome© (IM)
on a
16 Year Old Male with Post Traumatic Concussion Syndrome

HISTORY:

N.G. is a 17 year old male, who has had six concussions since the age of two. His mother reports she believes that each successive injury has made N.G. "more susceptible to subsequent concussions". The last injury resulted in hospitalization. He has suffered migraine headaches since the age of eight, following his third concussion. Following this last injury (11-06), N.G. was unable to focus in the classroom. His reading comprehension was severely impaired. His ability to function in the academic setting was so impaired that he was forced to stop attending his high school classes. He is not driving due to impairments in sensory processing. He completed a battery of neuropsychological and cognitive tests between 3-4-07 and 4-9-07. He has a secondary diagnosis of Attention Deficit Hyperactivity, Inattentive Type.

OBSERVATIONS:

N.G. appears to be a healthy, well nourished teenager. He is about 6'3" and weighs about 190#. He is alert, friendly and cooperative. He walks with a normal gait. He has no difficulty with speech and appears to have normal comprehension with casual conversation.

TREATMENT:

The N.G. was seen five days a week for three weeks for IM training . No other treatment intervention was provided. He completed 26,724 repetitions in a four three week protocol. N.G. was asked to continue his normal activities of daily living - unaltered (no additional exercise, walking, etc.).

OUTCOME:

Improvement in IM Scores as documented in Table 1.

TABLE 1.

TASK	TASK AVE. IMPROVEMENT	SUPER RIGHT ON IMPROVEMENT
1	71%	192%
2	55%	60%
3	63%	122%
4	61%	122%
5	37%	77%
6	64%	161%
7	61%	121%
8	71%	148%
9	50%	94%
10	70%	70%
11	75%	133%
12	64%	139%
13	70%	204%
14	54%	91%

N.G. stopped his medication of his own accord after the first week of treatment. He reports reading comprehension, focus and ability to "think fast" have returned to normal. He also reports that he went to the gym "to shoot some baskets" and was astonished to find that his free throw percentage has gone from "about 20% to an actual 83 out of 100 shots - I counted!". He also reports shooting 53% from the three point line - "I couldn't hit a thing from there before".

DISCUSSION:

We are awaiting neuropsychological retesting for pre and post treatment comparison. N.G. is planning on going to summer school to complete the classes he dropped this Spring. He has not resumed driving. He is scheduled for a revisit at this clinic in one month.