

# BASE PACK FOR GAMMA PLATFORM

2025.1



Hardware requirements	
What is needed?	
Therapeutic tasks database	
Speed	
Balance	
Movement precision	12
Functional movements	
Divided attention	28
Memory	30
Problem solving	32
Specialized	34

# WHAT IS NEEDED?

Please make sure the PC where you want this module to be active have VAST.Rehab Patient Panel installed and that the following hardware requirements are met:

- Windows 10/11
- Intel Core i5 (8th gen or newer). Important: Avoid ultra-low-power versions (e.g., i5-8250U), as they may not meet performance requirements. Prefer standard or high-performance CPUs.
- Minimum: 8 GB RAM (16 GB or more recommended for optimal performance).





# SPEED STAIRS

Measure number of repetitions of specific movement pattern an individual is able to perform within predefined time interval.

# **CONTROL MODES**



#### **RESULTS**



#### **ADJUSTMENTS**

- Task duration
- Max time per floor
- Height of jump
- Number of stairs
- Pause length

#### **OBJECTIVES**

• Dynamics of planned movements

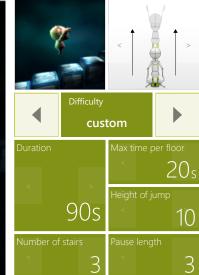
#### INSTRUCTION FOR PATIENT

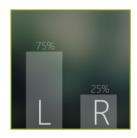
Climb the stairs before they disappear.











# BALANCE WEIGHT DISTRIBUTION TEST

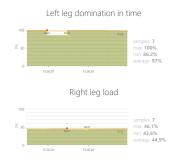
Measure and train individual's skills to perform specific movement patterns while keeping predefined weight distribution.

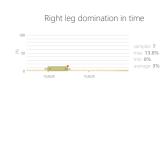
### **CONTROL MODES**



#### **RESULTS**







#### **ADJUSTMENTS**

- Time to complete action
- Show feedback

#### **OBJECTIVES**

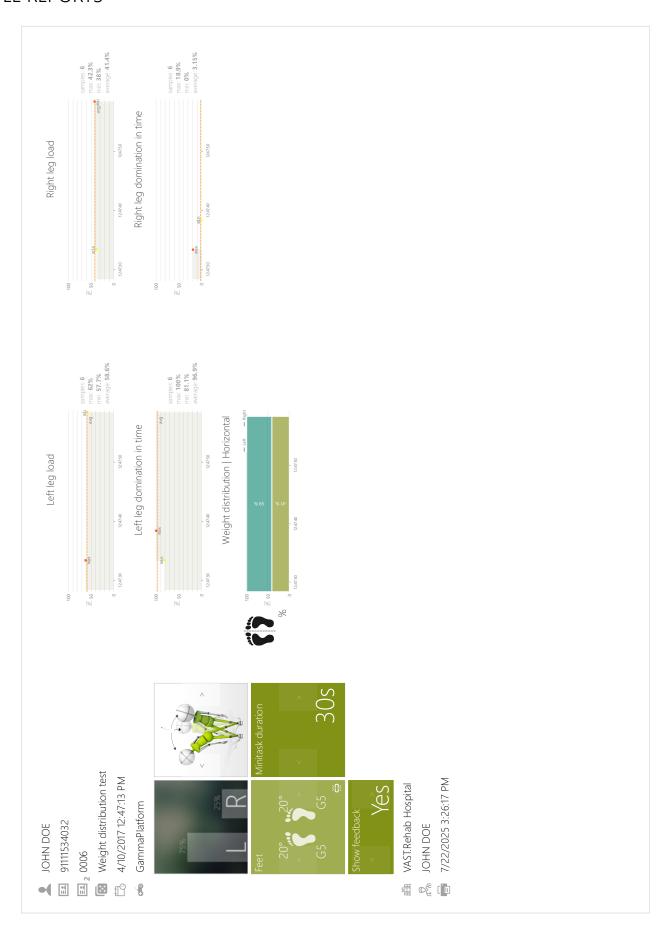
- Postural stability
- Balance and equilibrium training

#### **INSTRUCTION FOR PATIENT**

Keep your body balanced.











# BALANCE PROTOCOL TEST

Measure and train individual's skills to perform specific movement patterns while keeping predefined weight distribution.

#### **CONTROL MODES**



#### **RESULTS**





#### **ADJUSTMENTS**

- Specify movement's phases to analize
- Time to complete action
- Show feedback

#### **OBJECTIVES**

• Balance and equilibrium training

#### INSTRUCTION FOR PATIENT

Repeat movement pattern prescribed by your clinician trying to keep your body balanced.





Smallest of the Maxima 13.21 [W/100] Highest of the Maxima 28.33 [W/100] Average of the maxima 23.52 [W/100] Highest of the Maxima  $2.33 [m/s^2]$ Average of the maxima 1.80 [m/s²] Smallest of the Maxima 1.01 [m/s²] Highest of the Maxima 1.63 [N/100] Average of the maxima 1.26 [N/100] Smallest of the Maxima 0.71 [N/100] Average of the maxima 39.83 [kg] Smallest of the Maxima 36.60 [kg] Highest of the Maxima 42.30 [kg] Phase: Standing up Highest of the Maxima 0.00 [cm] Average of the maxima -2.38 [cm] Smallest of the Maxima -1.13 [m/s] Highest of the Maxima 0.05 [m/s] Average of the maxima -0.31 [m/s] Smallest of the Maxima -16.67 [cm] Average of the maxima 43.01 [kg] Smallest of the Maxima 40.60 [kg] Highest of the Maxima 44.90 [kg] Yes anding up and sitting down 4/11/2017 10:45:25 AM 7/22/2025 3:26:17 PM VAST.Rehab Hospital GammaPlatform Protocol test 91111534032 JOHN DOE JOHN DOE ≥ 0000 s • 8 E E 



Highest of the Maxima 9.28 [W/100] Smallest of the Maxima 1.39 [W/100] Average of the maxima 5.17 [W/100] Highest of the Maxima  $2.37 [m/s^2]$ Average of the maxima 2.03 [m/s²] Smallest of the Maxima 1.78 [m/s²] Highest of the Maxima 1.66 [N/100] Average of the maxima 1.42 [N/100] Smallest of the Maxima 1.25 [N/100] Average of the maxima 42.30 [kg] Smallest of the Maxima 40.60 [kg] Highest of the Maxima 44.30 [kg] Phase: Stabilization Highest of the Maxima 0.18 [cm] Average of the maxima -1.44 [cm] Smallest of the Maxima -2.76[m/s] Smallest of the Maxima -10.28 [cm] Highest of the Maxima 0.26 [m/s] Average of the maxima -1.25 [m/s]Smallest of the Maxima 40.70 [kg] Highest of the Maxima 44.80 [kg] Average of the maxima 43.04 [kg] Yes anding up and sitting down 4/11/2017 10:45:25 AM 7/22/2025 3:26:17 PM VAST.Rehab Hospital GammaPlatform Protocol test 91111534032 JOHN DOE JOHN DOE ≥ 0000 s • 8 E E 



Highest of the Maxima 27.04 [W/100] Average of the maxima 23.16 [W/100] Smallest of the Maxima 9.08 [W/100] Highest of the Maxima  $2.37 [m/s^2]$ Average of the maxima 1.55 [m/s²] Smallest of the Maxima 1.00[m/s²] Highest of the Maxima 1.66 [N/100] Average of the maxima 1.09 [N/100] Smallest of the Maxima 0.70 [N/100] Average of the maxima 40.87 [kg] Smallest of the Maxima 36.20 [kg] Highest of the Maxima 42.90 [kg] Phase: Sitting down Highest of the Maxima 0.00 [cm] Average of the maxima -1.73 [cm] Smallest of the Maxima -12.08 [cm] Average of the maxima 0.04 [m/s] Smallest of the Maxima 0.00 [m/s] Highest of the Maxima 0.31 [m/s] Smallest of the Maxima 36.30 [kg] Highest of the Maxima 44.80 [kg] Average of the maxima 40.21 [kg] anding up and sitting down 4/11/2017 10:45:25 AM 7/22/2025 3:26:17 PM VAST.Rehab Hospital GammaPlatform Protocol test 91111534032 JOHN DOE JOHN DOE E 0006 • 8 E E 



Stai	Standing up	dn I	Stak	Stabilization	tion	Sitti	Sitting down	uwc
min	max	avg min	min	max	avg	min	max	avg
40.60		44.90 43.01	40.70	40.70 44.80	43.04	36.30	44.80	40.21
36.60	42.30	39.83	40.60	44.30	42.30	36.20	42.90	40.87
1.01	2.33	1.80	1.78	2.37	2.03	1.00	2.37	1.55
-16.67	0.00	-2.38	-10.28	0.18	4.1-	-12.08	0.00	-1.73
0.71	1.63	1.26	1.25	1.66	1.42	0.70	1.66	1.09
13.21	28.33	23.52	1.39	9.28	5.17	9.08	27.04	23.16
-1.13	0.05	-0.31	-2.76	0.26	-1.25	0.00	0.31	0.04

Force Right leg load Power Acceleration Center of mass Left leg load

Velocity



4/11/2017 10:45:25 AM



7/22/2025 3:26:18 PM

JOHN DOE



# MOVEMENT PRECISION

#### GRAPH

Measure and train individual's skills to perform specific movement patterns with predefined speed and range.

### **CONTROL MODES**



#### **RESULTS**



#### **ADJUSTMENTS**

- Graph shape (sinus or square, amplitude, border, etc.)
- Task duration
- Range

#### **OBJECTIVES**

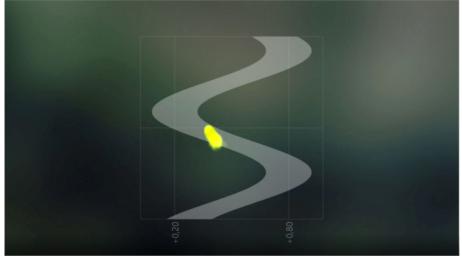
- Movement precision
- Activity in a given rhythm
- Repetitive movements

#### INSTRUCTION FOR PATIENT

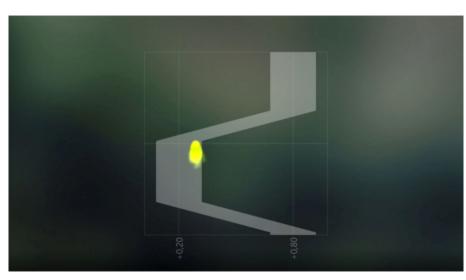
Try to stay within the borders.

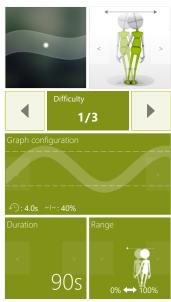


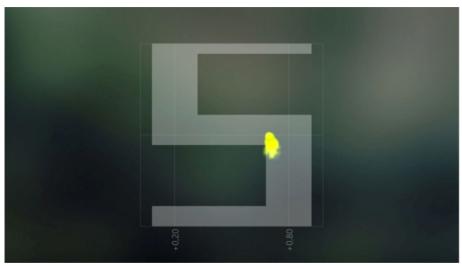


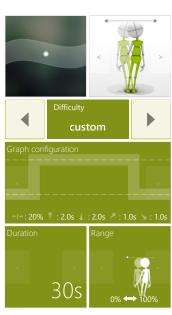
















# **FUNCTIONAL MOVEMENTS**

#### **AIRPLANE**

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

#### **CONTROL MODES**



#### **RESULTS**



#### **ADJUSTMENTS**

- Speed
- Task duration
- Range

#### **OBJECTIVES**

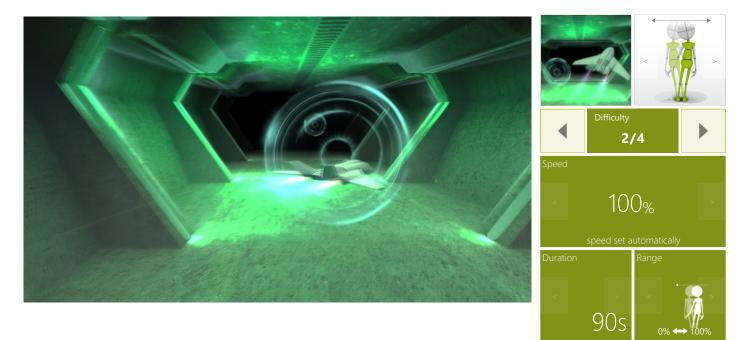
- Focusing
- Perceptivity
- Movement precision
- Predicting the trajectory of objects in 3D space

#### INSTRUCTION FOR PATIENT

Make the airplane fly through the circles. The closer to the center it flies the more points you get.









# FUNCTIONAL MOVEMENTS

#### **STONES**

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

#### **CONTROL MODES**



#### **RESULTS**



#### **ADJUSTMENTS**

- Speed
- Task duration
- Range

#### **OBJECTIVES**

- Perceptivity
- Dynamics of planned movements
- Reaction to the positive visual stimuli
- Response to negative visual stimuli

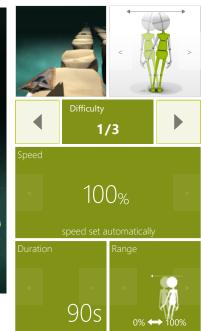
#### INSTRUCTION FOR PATIENT

Make the the spaceship collect the colorful creatures and avoid the rocks.











# **FUNCTIONAL MOVEMENTS**

#### **AUTOMATIC CANNON**

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

#### **CONTROL MODES**



#### **RESULTS**



#### **ADJUSTMENTS**

- Task duration
- Range
- Enable distractors
- Time between cannonballs
- Time between enemies
- Enemies speed

#### **OBJECTIVES**

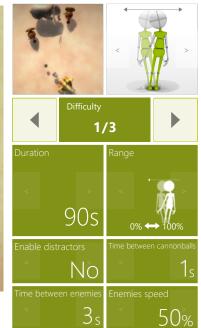
- Divided attention
- Spontaneous movements
- Predicting the trajectory of objects

#### INSTRUCTION FOR PATIENT

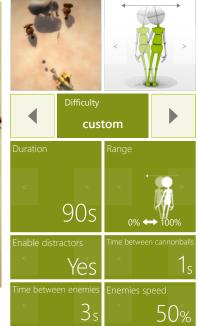
Control cannon(s) to destroy robots, but avoid hitting the elephant!













# **FUNCTIONAL MOVEMENTS**

#### **AMBULANCE**

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

#### **CONTROL MODES**



#### **RESULTS**







#### **ADJUSTMENTS**

- Speed
- Task duration
- Range
- Distance between cars

#### **OBJECTIVES**

- Dynamics of planned movements
- Focusing
- Speed of decision making
- Visual motor coordination

#### INSTRUCTION FOR PATIENT

Go as fast as you can and avoid hitting other cars.















# **FUNCTIONAL MOVEMENTS**

#### **ARCANOID**

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

#### **CONTROL MODES**



#### **RESULTS**



#### **ADJUSTMENTS**

- Task duration
- Range
- Reticle size
- Speed of objects

#### **OBJECTIVES**

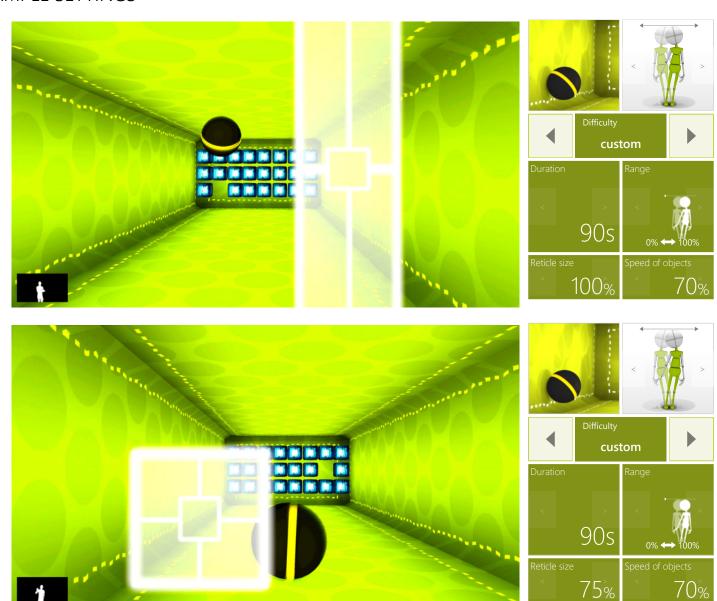
- Dynamics of planned movements
- Predicting the trajectory of objects in 3D space
- Visual motor coordination

#### INSTRUCTION FOR PATIENT

Destroy as many boxes as you can.











# **FUNCTIONAL MOVEMENTS**

#### **ROCKET JUMPING**

Measure and train individual's skills to perform movements based on real-world situational biomechanics. They usually involve multi-planar, multi-joint movements which place demand on the body's core musculature and innervation.

#### **CONTROL MODES**



#### **RESULTS**



#### **ADJUSTMENTS**

- Task duration
- Time between objects
- Bomb format
- Height of jump
- Speed of objects

#### **OBJECTIVES**

- Spontaneous movements
- Dynamic responses to emerging moving targets
- Predicting the trajectory of objects

#### INSTRUCTION FOR PATIENT

Help the creature jump over incoming rockets and avoid being hit.









# DIVIDED ATTENTION SORTER

Measure and train individual's skills to successfully execute more than one action at a time, while paying attention to two or more channels of information.

#### **CONTROL MODES**



#### **RESULTS**



#### **ADJUSTMENTS**

- Task duration
- Range
- Number of objects
- Gap size
- Speed of objects

#### **OBJECTIVES**

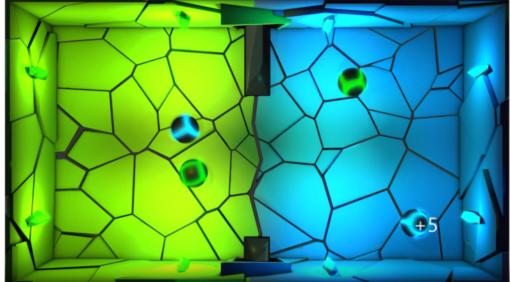
- Predicting the trajectory of objects
- Focusing
- Perceptivity
- Movement precision
- Exercise with or without support from healthy limb

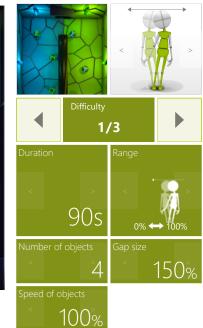
#### INSTRUCTION FOR PATIENT

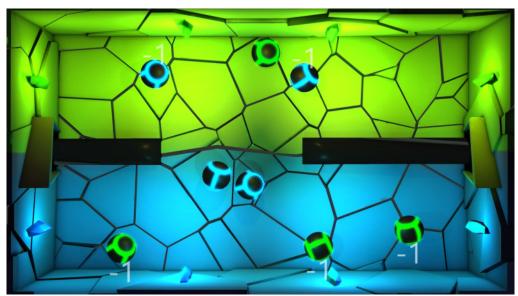
Pass or block the balls so that the blue balls are on the blue side and the green balls are on the green side of the screen.















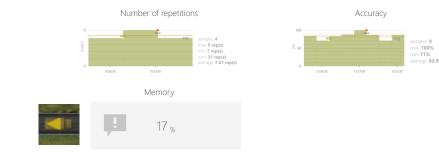
# MEMORY TRUCKS

Measure and train individual's skills to memorize information.

### **CONTROL MODES**



#### **RESULTS**



#### **ADJUSTMENTS**

- Task duration
- Range
- Variations

#### **OBJECTIVES**

- Logical tasks
- Focusing
- Perceptivity

#### INSTRUCTION FOR PATIENT

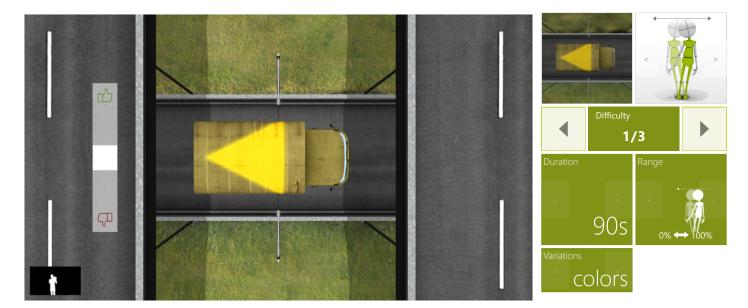
Remember the shape and/or its color on the roof of the car you see. Decide with thumbs up or down whether the next car has the same shape and/or color on the roof as the previous one.

Total points

29 point(s)









# PROBLEM SOLVING

#### **CLONES**

Measure and train individual's skills to reach a solution of specific problems. Problem solving may include mathematical or systematic operations and can be a gauge of an individual's critical thinking skills.

#### **CONTROL MODES**



#### **RESULTS**



#### **ADJUSTMENTS**

- Task duration
- Time to complete action
- Range
- Number of pairs

#### **OBJECTIVES**

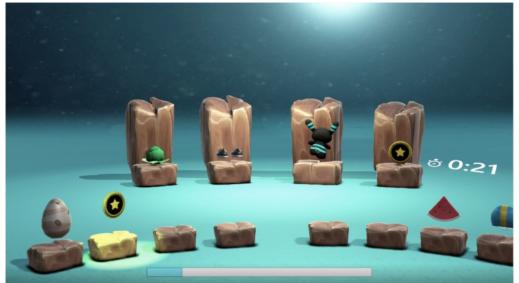
- Perceptivity
- Visual motor coordination
- Logical tasks

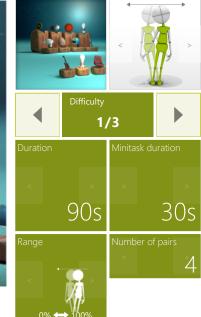
#### INSTRUCTION FOR PATIENT

Select the item which has a pair on the screen.











# SPECIALIZED BLOOD PRESSURE

Specialized tasks and evaluations that collect data from multiple categories or do have a unique objectives.

# **CONTROL MODES**



#### **OBJECTIVES**

• Monitor external parameters

#### **INSTRUCTION FOR PATIENT**

Measure yourself your blood pressure and type it in the result.





# SPECIALIZED STEPS TEST

Specialized tasks and evaluations that collect data from multiple categories or do have a unique objectives.

### **CONTROL MODES**



#### **RESULTS**



#### **ADJUSTMENTS**

- Time to complete action
- Show feedback

#### **OBJECTIVES**

• Repetitive movements

#### **INSTRUCTION FOR PATIENT**

Walk in place.





