# VAST.Rehab
REHABILITATION IN VIRTUAL REALITY

# BASE PACK FOR PULMO

2025.1

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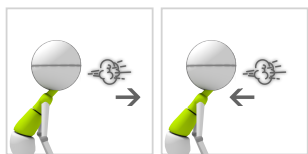
- Windows 10/11
- Intel Core i5 (8th gen or newer). Important: Avoid ultra-low-power versions (e.g., i5-8250U), as they may not meet performance requirements. Prefer standard or high-performance CPUs.
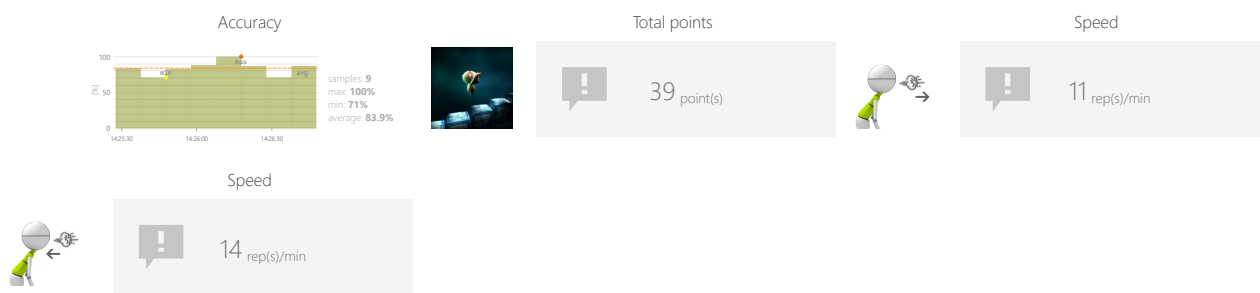- Minimum: 8 GB RAM (16 GB or more recommended for optimal performance).

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# SPEED
## STAIRS

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

## CONTROL MODES

## RESULTS

| Accuracy |
|---|

samples: **9**
max: **100%**
min: **71%**
average: **83.9%**

| Total points |
|---|

39 point(s)

| Speed |
|---|

11 rep(s)/min

| Speed |
|---|

14 rep(s)/min

## ADJUSTMENTS

• Task duration

• Device range

• Exhalation

• Max time per floor

• Number of stairs

• Pause length

• Resistance

## OBJECTIVES

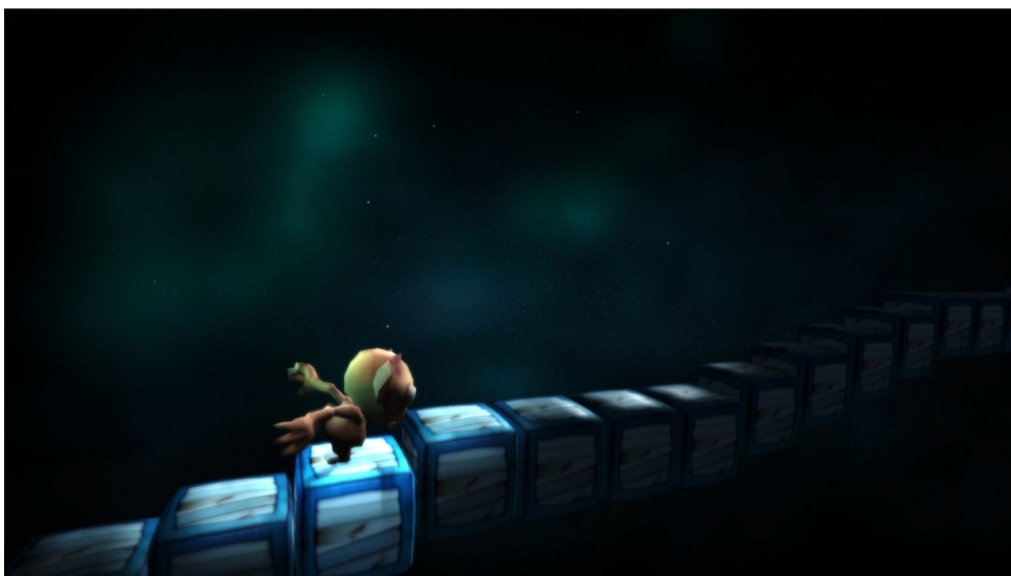• Jumping

• Knees lifting

• Dynamics of planned movements

## INSTRUCTION FOR PATIENT

Climb the stairs before they disappear.

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# SPEED
STAIRS

## SAMPLE SETTINGS







**Difficulty**
**custom**

**Duration**
90s

**Device range**
? ⟷ ?

**Exhalation**
20% ⟷ 80%
? ⟷ ?

**Max time per floor**
15s

**Number of stairs**
5

**Pause length**
3

**Resistance**
max

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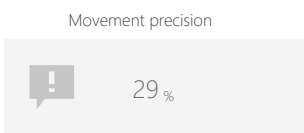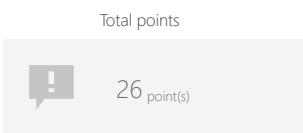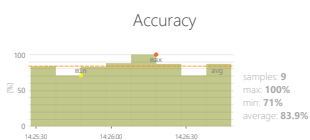REHABILITATION IN VIRTUAL REALITY

# MOVEMENT PRECISION
## FISH

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

## CONTROL MODES



## RESULTS



Accuracy

samples: **9**
max: **100%**
min: **71%**
average: **83.9%**

Total points

26 point(s)

Movement precision

29 %

## ADJUSTMENTS

• Task duration

• Movement mode

• Device range

• Route shape

• Exhalation

• Inhalation
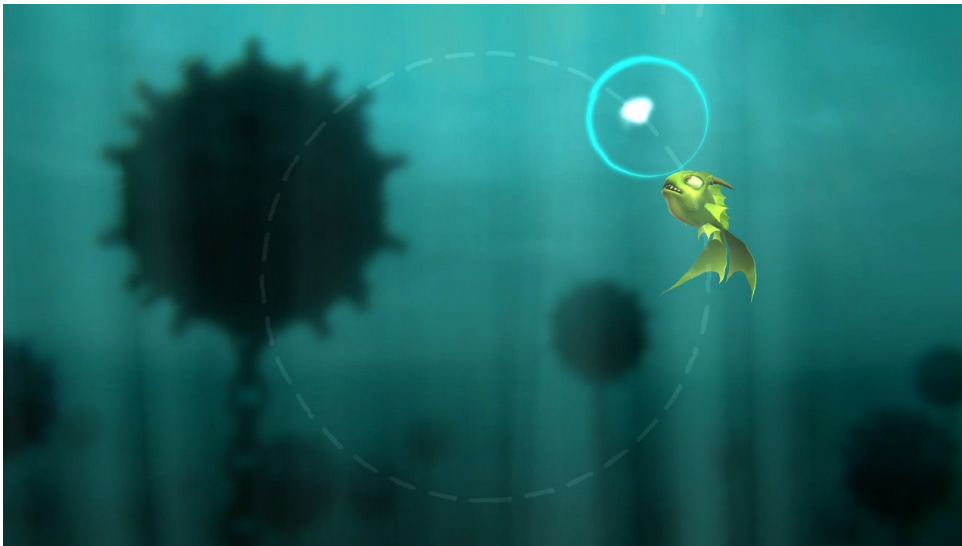
• Speed of objects

• Resistance

## OBJECTIVES

• 3D space movements reproduction

• Planned movements

• Muscle strengthening

• Movement precision

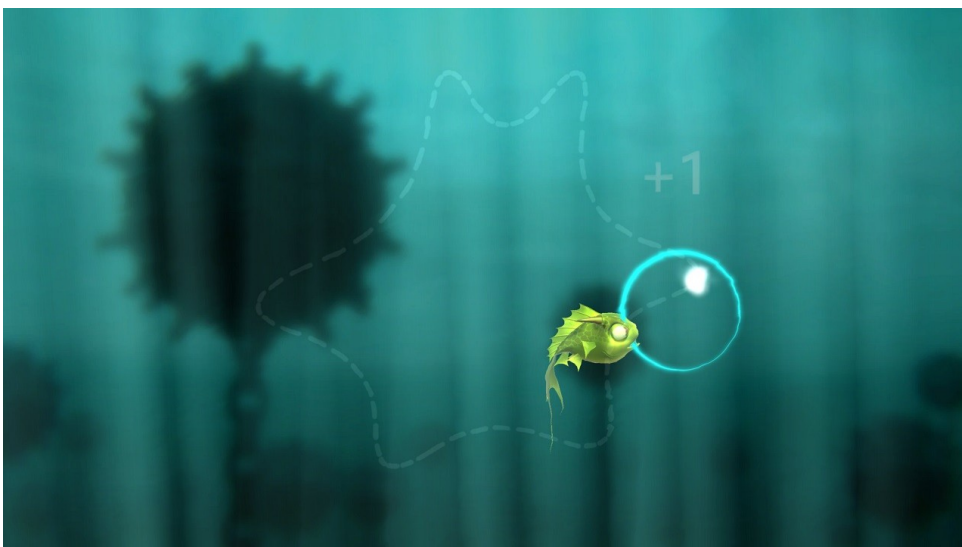• Visual motor coordination

## INSTRUCTION FOR PATIENT

Move the blue circle to protect the sparks source from the fish. When the sparks source is inside the circle it is safe.
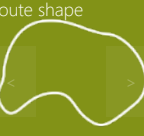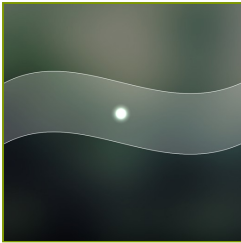
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# MOVEMENT PRECISION
FISH

## SAMPLE SETTINGS



| | |
|---|---|
| **Difficulty** | |
| ◄ | **custom** | ► |

| Duration | Movement mode |
|---|---|
| < > | < > |
| **90s** | **Left** |

| Device range | Route shape |
|---|---|
| < > | |
| ? ↔ ? | |

| Exhalation | Inhalation |
|---|---|
| 20% ↔ 80% | 20% ↔ 80% |
| ? ↔ ? | ? ↔ ? |
| < > | < > |

| Speed of objects | Resistance |
|---|---|
| < > | < > |
| **100%** | **max** |



| | |
|---|---|
| **Difficulty** | |
| ◄ | **1/3** | ► |

| Duration | Movement mode |
|---|---|
| < > | < > |
| **90s** | **Left** |

| Device range | Route shape |
|---|---|
| < > | |
| ? ↔ ? | |

| Exhalation | Inhalation |
|---|---|
| 20% ↔ 80% | 20% ↔ 80% |
| ? ↔ ? | ? ↔ ? |

| Speed of objects | Resistance |
|---|---|
| < > | < > |
| **100%** | **max** |

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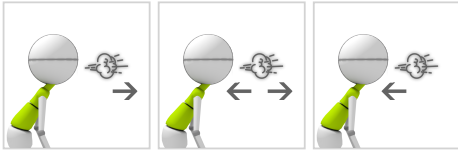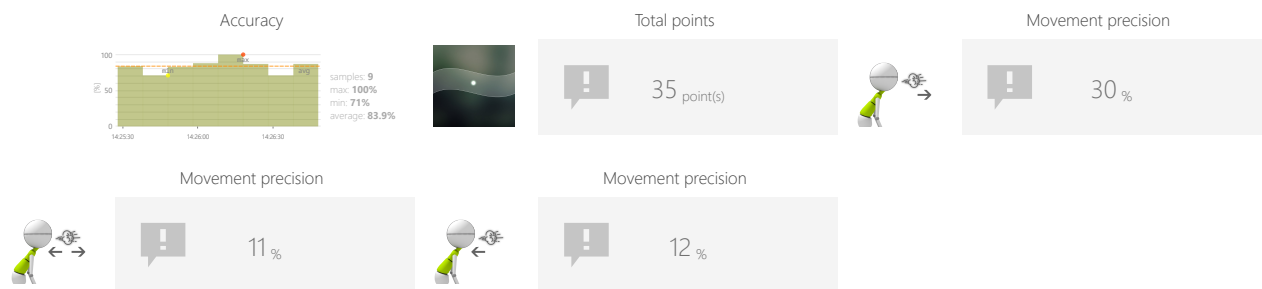REHABILITATION IN VIRTUAL REALITY

# MOVEMENT PRECISION
## GRAPH

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

## CONTROL MODES

## RESULTS

### Accuracy
samples: **9**
max: **100%**
min: **71%**
average: **83.9%**

### Total points
35 point(s)

### Movement precision
30 %

### Movement precision
11 %

### Movement precision
12 %

## ADJUSTMENTS

- Graph shape (sinus or square, amplitude, border, etc.)
- Task duration
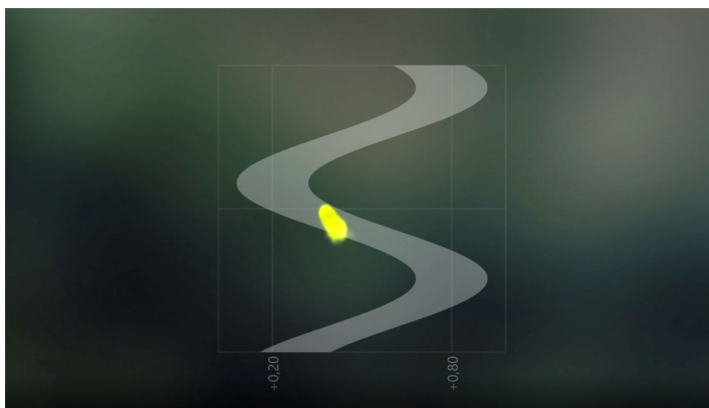- Device range
- Exhalation
- Resistance

## OBJECTIVES

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

## INSTRUCTION FOR PATIENT

Try to stay within the borders.

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# MOVEMENT PRECISION
GRAPH

## SAMPLE SETTINGS



Difficulty
**3/3**

Graph configuration
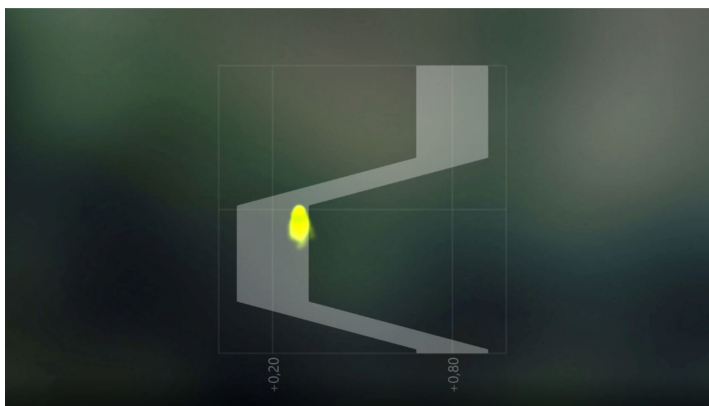⟲: 4.0s  ↤⊢↦: 20%

Duration
**30s**

Device range
? ↦ ?

Exhalation
20% ⟷ 80%
? ↔ ?

Resistance
**max**



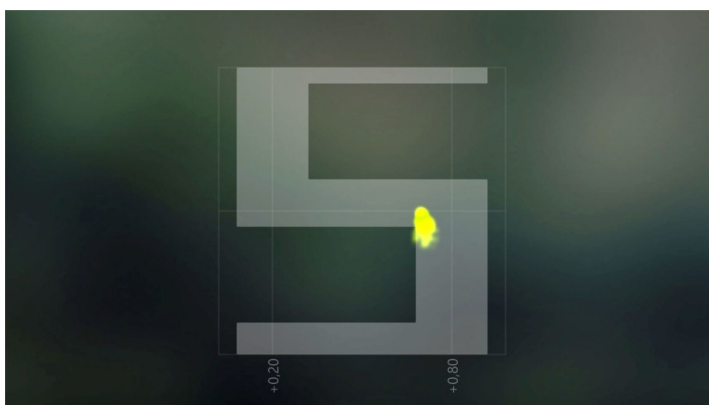Difficulty
**1/3**

Graph configuration
⟲: 4.0s  ↤⊢↦: 40%

Duration
**90s**

Device range
? ↦ ?

Exhalation
20% ⟷ 80%
? ↔ ?

Resistance
**max**



Difficulty
**custom**

Graph configuration
↤⊢↦: 20%  ↑: 2.0s  ↓: 2.0s  ↗: 1.0s  ↘: 1.0s

Duration
**30s**

Device range
? ↦ ?

Exhalation
20% ⟷ 80%
? ↔ ?

Resistance
**max**

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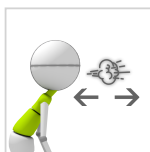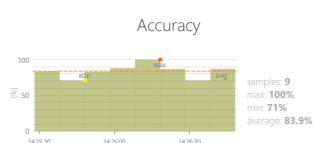REHABILITATION IN VIRTUAL REALITY

# MOVEMENT PRECISION
## UMBRELLA

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

## CONTROL MODES



## RESULTS

Accuracy

samples: **9**
max: **100%**
min: **71%**
average: **83.9%**

Total points

15 point(s)

Movement precision

39 %

## ADJUSTMENTS

• Task duration
• Path
• Device range
• Exhalation
• Inhalation
• Umbrella size
• Resistance

## OBJECTIVES

• Movement precision
• Visual motor coordination

## INSTRUCTION FOR PATIENT
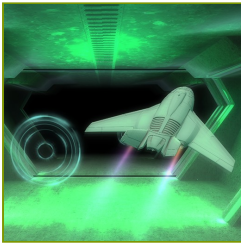
Don't let the hippo get wet - keep the umbrella above him!

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# MOVEMENT PRECISION
UMBRELLA

## SAMPLE SETTINGS



| Difficulty | |
|---|---|
| ◀ | **1/3** | ▶ |

| Duration | Path |
|---|---|
| < > | ⏱ : 8.0s > |
| **60s** | |

| Device range | Exhalation |
|---|---|
| < > | 20% ⬌ 80% |
| ? ⬌ ? | ? ⬌ ? |
| | < > |

| Inhalation | Umbrella size |
|---|---|
| 20% ⬌ 80% | < **150**% > |
| ? ⬌ ? | |
| < > | Resistance |
| | < **max** > |

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REHABILITATION IN VIRTUAL REALITY
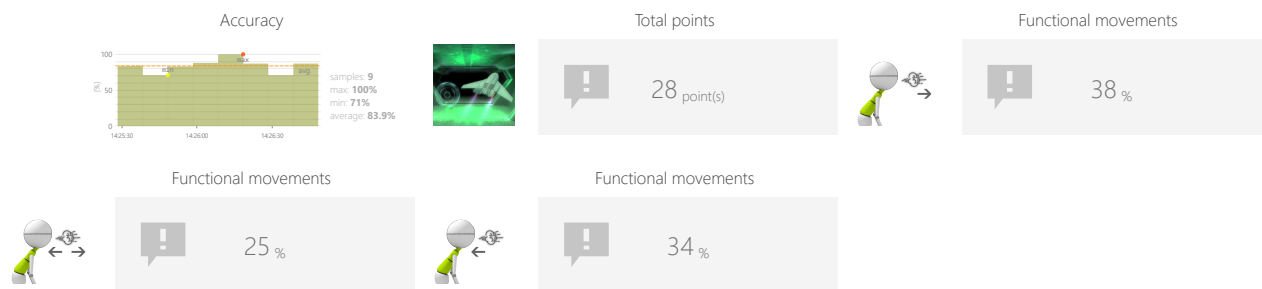
# FUNCTIONAL MOVEMENTS
## AIRPLANE

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

### Accuracy

samples: **9**
max: **100%**
min: **71%**
average: **83.9%**

### Total points

28 point(s)

### Functional movements

38 %

### Functional movements

25 %

### Functional movements

34 %

## ADJUSTMENTS

• Speed
• Task duration
• Device range
• Exhalation
• Resistance

## OBJECTIVES

• Focusing
• Perceptivity
• Movement precision
• Predicting the trajectory of objects in 3D space
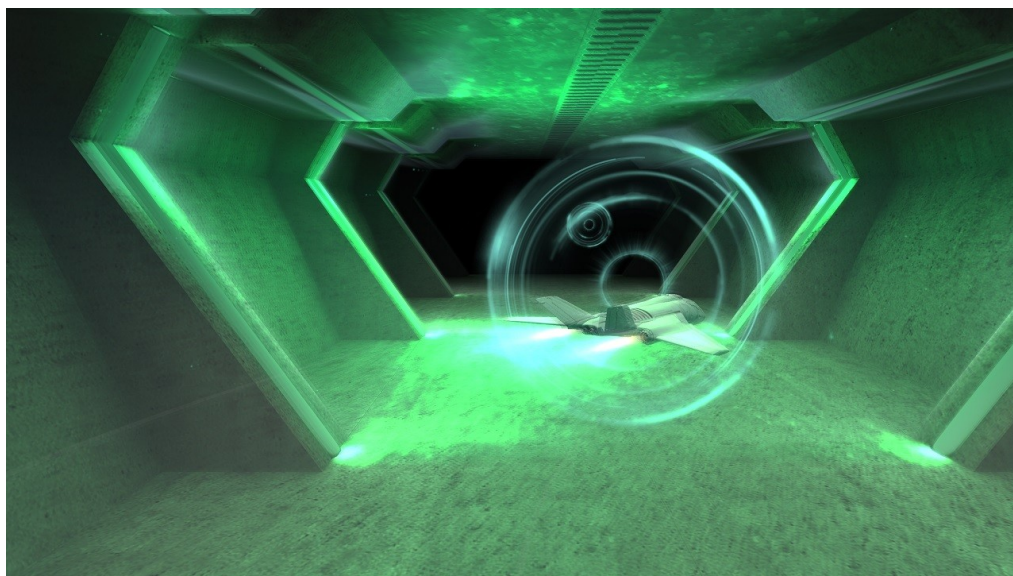• Balance and equilibrium training

## INSTRUCTION FOR PATIENT

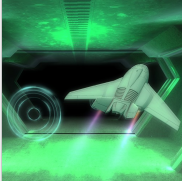Make the airplane fly through the circles. The closer to the center it flies the more points you get.

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# FUNCTIONAL MOVEMENTS
AIRPLANE

## SAMPLE SETTINGS



**Difficulty** 2/4

**Speed**
100%
speed set automatically

**Duration**
90s

**Device range**
? ⟷ ?

**Exhalation**
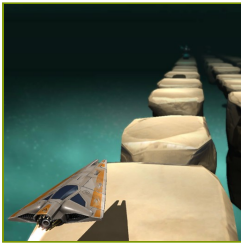20% ⟷ 80%
? ⟷ ?

**Resistance**
max

14

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REHABILITATION IN VIRTUAL REALITY
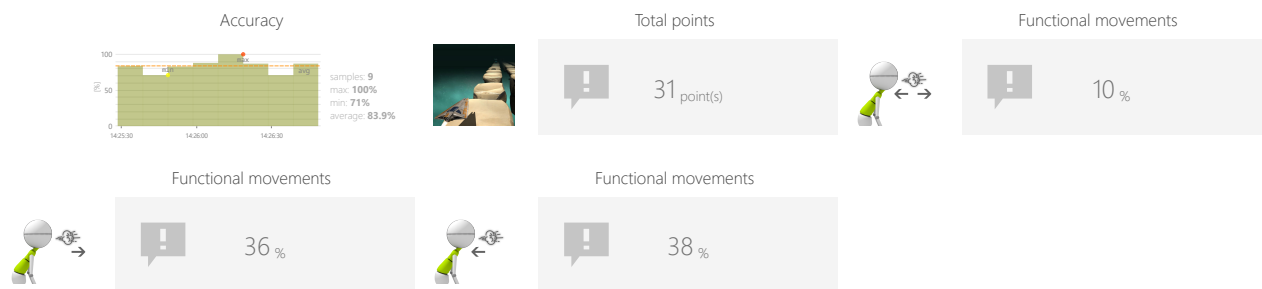
# FUNCTIONAL MOVEMENTS
## STONES

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



Accuracy

samples: **9**
max: **100%**
min: **71%**
average: **83.9%**

Total points

31 point(s)

Functional movements

10 %

Functional movements

36 %

Functional movements

38 %

## ADJUSTMENTS

• Speed
• Task duration
• Device range
• Exhalation
• Inhalation
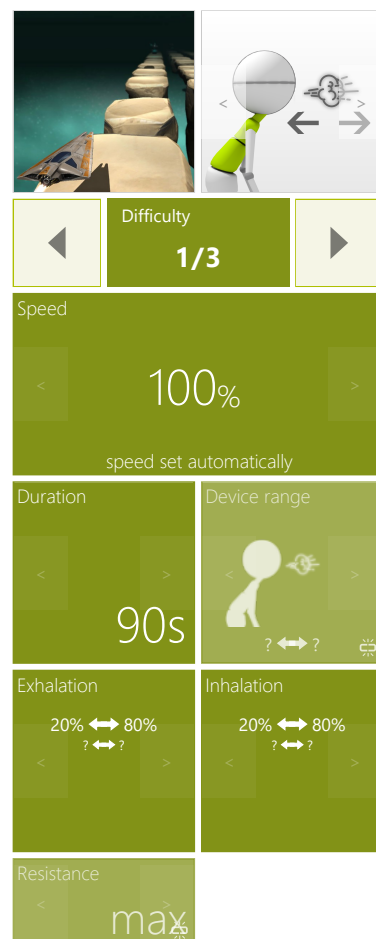• Resistance

## 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.

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# FUNCTIONAL MOVEMENTS
STONES

## SAMPLE SETTINGS



Difficulty
1/3

Speed
100%
speed set automatically

Duration
90s

Device range
? ↔ ?

Exhalation
20% ↔ 80%
? ↔ ?

Inhalation
20% ↔ 80%
? ↔ ?

Resistance
max

VAST.Rehab
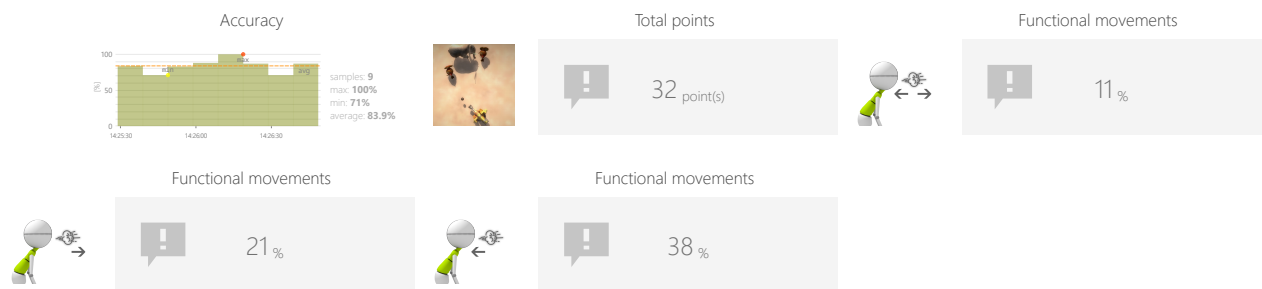REHABILITATION IN VIRTUAL REALITY

# 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

Accuracy

samples: **9**
max: **100%**
min: **71%**
average: **83.9%**

Total points

32 point(s)

Functional movements

11 %

Functional movements

21 %

Functional movements

38 %

## ADJUSTMENTS

• Task duration
• Device range
• Exhalation
• Inhalation
• Enable distractors
• Time between cannonballs
• Time between enemies
• Enemies speed
• Resistance

## OBJECTIVES

• Divided attention
• Spontaneous movements
• Arms swings
• Muscle strengthening

## INSTRUCTION FOR PATIENT

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

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## SAMPLE SETTINGS



| | |
|---|---|
| **Difficulty** **1/3** | |

| Duration | Device range |
|---|---|
| **90s** | **?** ⟷ **?** |

| Exhalation | Inhalation |
|---|---|
| 20% ⟷ 80% ? ⟷ ? | 20% ⟷ 80% ? ⟷ ? |

| Enable distractors | Time between cannonballs |
|---|---|
| **No** | **1s** |

| Time between enemies | Enemies speed |
|---|---|
| **3s** | **50%** |

| Resistance |
|---|
| **max** |



| | |
|---|---|
| **Difficulty** **custom** | |

| Duration | Device range |
|---|---|
| **90s** | **?** ⟷ **?** |

| Exhalation | Inhalation |
|---|---|
| 20% ⟷ 80% ? ⟷ ? | 20% ⟷ 80% ? ⟷ ? |

| Enable distractors | Time between cannonballs |
|---|---|
| **No** | **1s** |

| Time between enemies | Enemies speed |
|---|---|
| **3s** | **100%** |

| Resistance |
|---|
| **max** |

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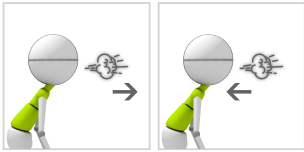REHABILITATION IN VIRTUAL REALITY
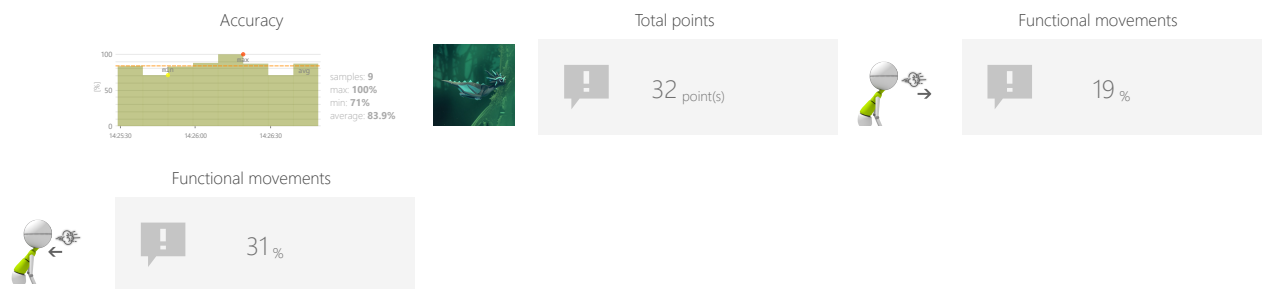
# FUNCTIONAL MOVEMENTS
## DRAGON

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

### Accuracy



samples: **9**
max: **100%**
min: **71%**
average: **83.9%**

### Total points

32 point(s)

### Functional movements

19 %

### Functional movements

31 %

## ADJUSTMENTS

• Task duration

• Device range

• Exhalation

• Coins group size

• Distance between coins

• Gravity force

• Resistance

## OBJECTIVES

• Predicting the trajectory of objects

• Improve range of motion

• Visual motor coordination

• Muscle strengthening

• Planning and Strategy

## INSTRUCTION FOR PATIENT

Fly and collect the coins.

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# FUNCTIONAL MOVEMENTS
DRAGON

## SAMPLE SETTINGS



**Difficulty** custom

| Duration | Device range |
|---|---|
| 90s | ? ⟷ ? |

| Exhalation | Coins group size |
|---|---|
| 20% ⟷ 80% | 3 |
| ? ⟷ ? | Distance between coins |
| | 250% |

| Gravity force | Resistance |
|---|---|
| 100% | max |



**Difficulty** 1/3

| Duration | Device range |
|---|---|
| 90s | ? ⟷ ? |

| Exhalation | Coins group size |
|---|---|
| 20% ⟷ 80% | 5 |
| ? ⟷ ? | Distance between coins |
| | 250% |

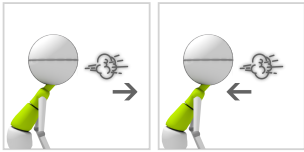| Gravity force | Resistance |
|---|---|
| 100% | max |

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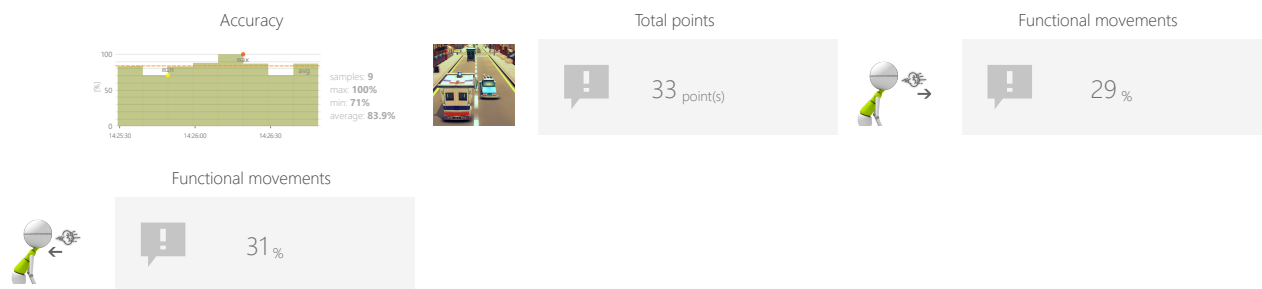REHABILITATION IN VIRTUAL REALITY

# 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

### Accuracy



samples: **9**
max: **100%**
min: **71%**
average: **83.9%**

### Total points

33 point(s)

### Functional movements

29 %

### Functional movements

31 %

## ADJUSTMENTS

• Speed

• Task duration

• Device range

• Exhalation

• Distance between cars

• Resistance

## OBJECTIVES

• Balance and equilibrium training

• 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.

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# FUNCTIONAL MOVEMENTS
AMBULANCE

## SAMPLE SETTINGS



**Difficulty** ◀ **2/3** ▶

Speed
< **50%** >
speed set automatically

Duration
< **30s** >

Device range
? ↔ ?

Exhalation
20% ↔ 80%
? ↔ ?

Distance between cars
< **50%** >

Resistance
< **max** >



**Difficulty** ◀ **custom** ▶

Speed
< **50%** >
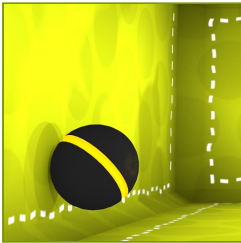speed set automatically

Duration
< **30s** >

Device range
? ↔ ?

Exhalation
20% ↔ 80%
? ↔ ?

Distance between cars
< **200%** >

Resistance
< **max** >

**VAST.Rehab**
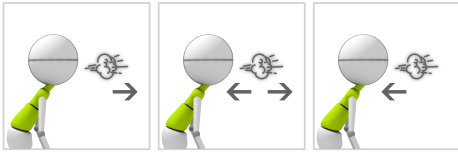REHABILITATION IN VIRTUAL REALITY
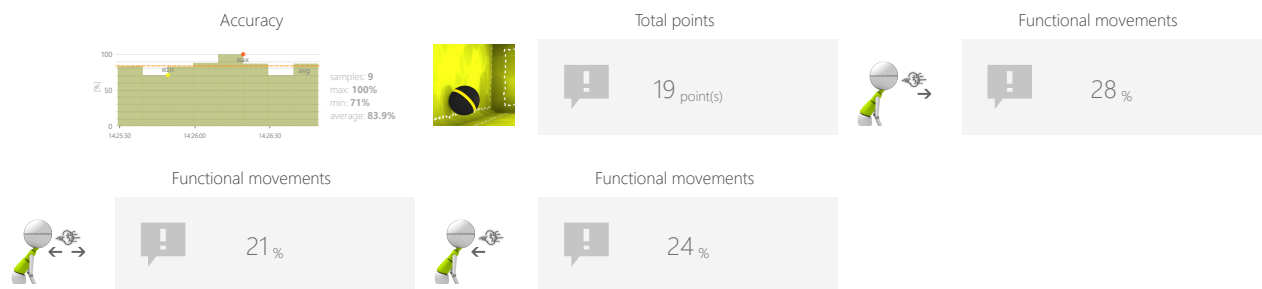
# FUNCTIONAL MOVEMENTS
## ARCANOID

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

### Accuracy

samples: **9**
max: **100%**
min: **71%**
average: **83.9%**

### Total points

19 point(s)

### Functional movements

28 %

### Functional movements

21 %

### Functional movements

24 %

## ADJUSTMENTS

• Task duration
• Device range
• Exhalation
• Reticle size
• Speed of objects
• Resistance

## OBJECTIVES

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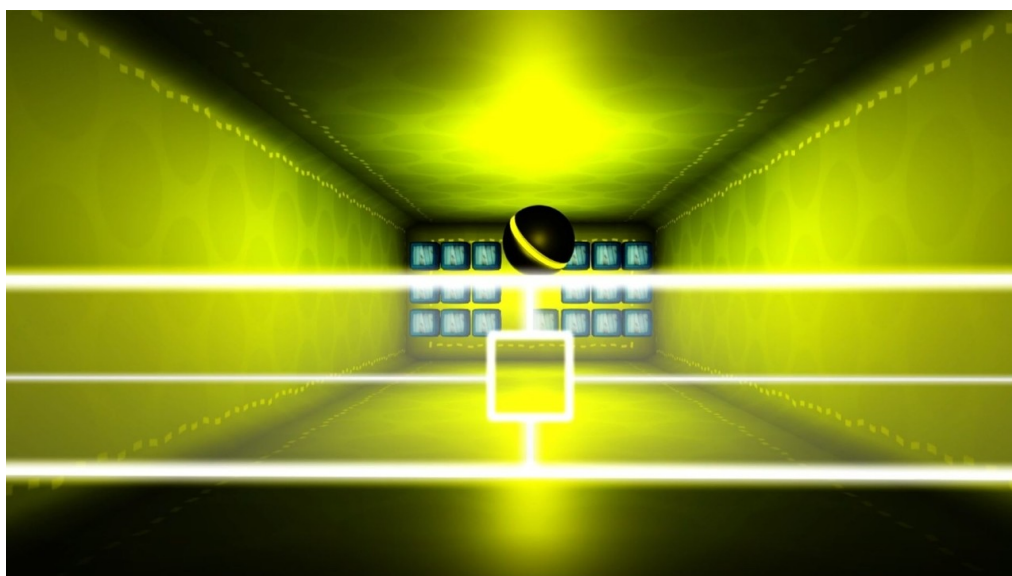• Visual motor coordination

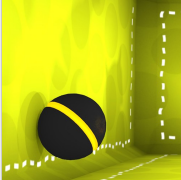## INSTRUCTION FOR PATIENT

Destroy as many boxes as you can.

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# FUNCTIONAL MOVEMENTS
ARCANOID

## SAMPLE SETTINGS



**Difficulty** custom

| Duration | Device range |
|---|---|
| 90s | ? ⟷ ? |

| Exhalation | Reticle size |
|---|---|
| 20% ⟷ 80% | 100% |
| ? ⟷ ? | Speed of objects |
| | 70% |

| Resistance |
|---|
| max |
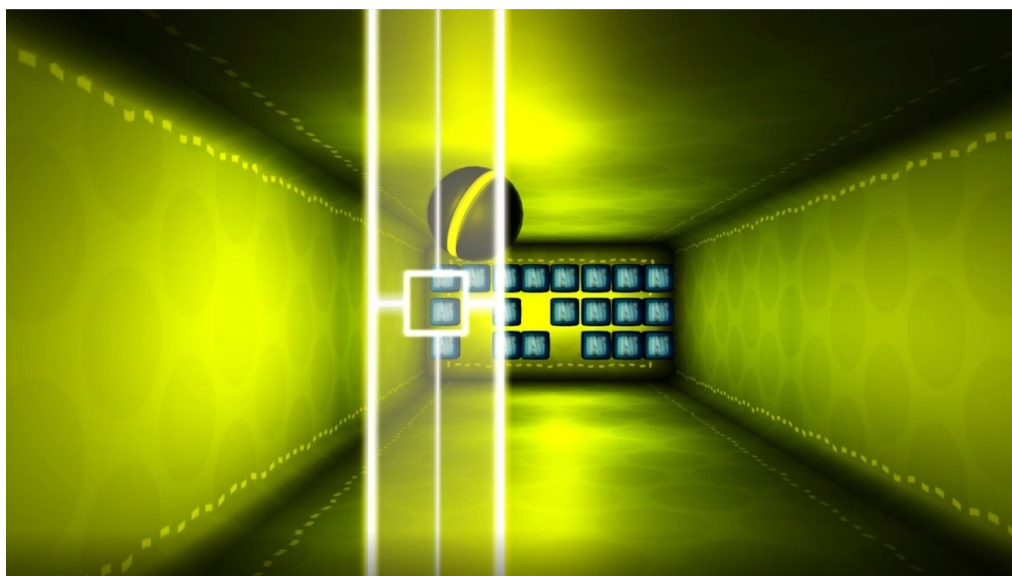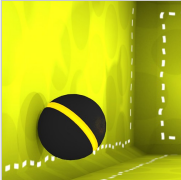


**Difficulty** custom

| Duration | Device range |
|---|---|
| 90s | ? ⟷ ? |

| Exhalation | Reticle size |
|---|---|
| 20% ⟷ 80% | 75% |
| ? ⟷ ? | Speed of objects |
| | 70% |

| Resistance |
|---|
| max |

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REHABILITATION IN VIRTUAL REALITY
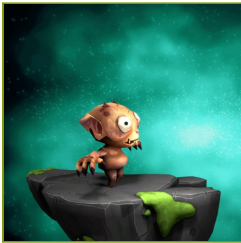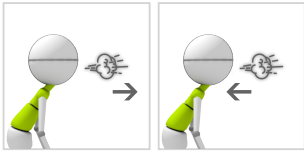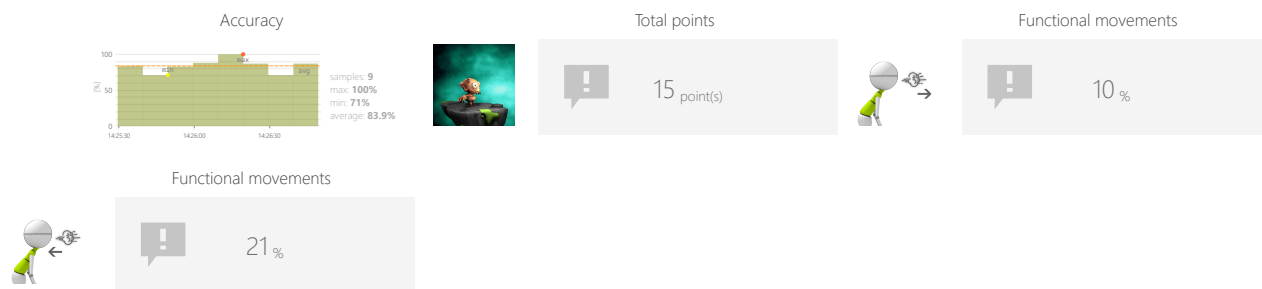
# FUNCTIONAL MOVEMENTS
## ROCKET JUMPING

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

Accuracy



samples: **9**
max: **100%**
min: **71%**
average: **83.9%**

Total points

15 point(s)

Functional movements

10 %

Functional movements

21 %

## ADJUSTMENTS

• Task duration
• Device range
• Exhalation
• Time between objects
• Bomb format
• Speed of objects
• Resistance

## 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.

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# FUNCTIONAL MOVEMENTS
ROCKET JUMPING

## SAMPLE SETTINGS



Difficulty
**1/3**

Duration
**90s**

Device range
? ⟷ ?

Exhalation
20% ⟷ 80%
? ⟷ ?

Time between objects
**5** s

Bomb format
**1**

Speed of objects
**100**%

Resistance
**max**



Difficulty
**custom**

Duration
**90s**

Device range
? ⟷ ?

Exhalation
20% ⟷ 80%
? ⟷ ?

Time between objects
**5** s

Bomb format
**2**

Speed of objects
**100**%

Resistance
**max**

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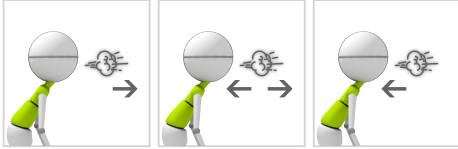REHABILITATION IN VIRTUAL REALITY
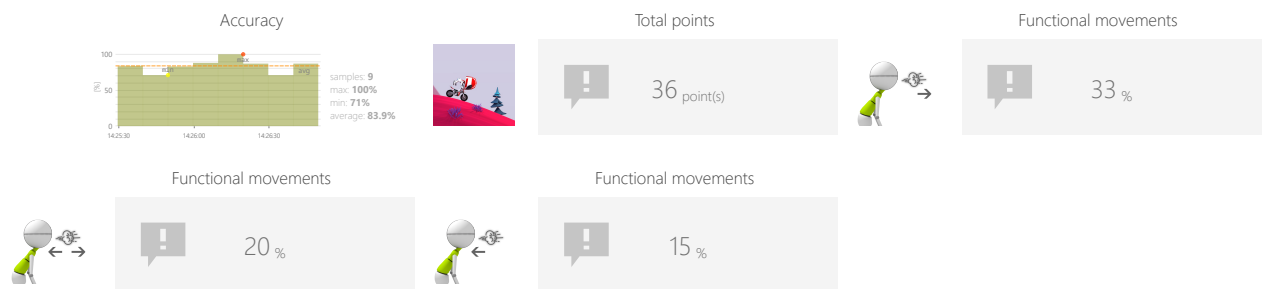
# FUNCTIONAL MOVEMENTS
## MOTOCROSS

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

### Accuracy

samples: **9**
max: **100%**
min: **71%**
average: **83.9%**

### Total points

36 point(s)

### Functional movements

33 %

### Functional movements

20 %

### Functional movements

15 %

## ADJUSTMENTS

• Task duration
• Device range
• Exhalation
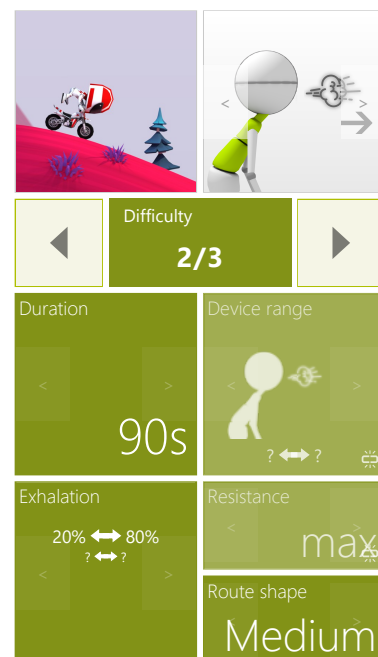• Resistance
• Route shape

## OBJECTIVES

• Dynamics of planned movements
• Planning and Strategy

## INSTRUCTION FOR PATIENT

Accelerate and brake to cover the entire route as quickly as possible without tipping.

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# FUNCTIONAL MOVEMENTS
MOTOCROSS

## SAMPLE SETTINGS



**Difficulty**
2/3

**Duration**
90s

**Device range**
? ⟷ ?

**Exhalation**
20% ⟷ 80%
? ⟷ ?

**Resistance**
max

**Route shape**
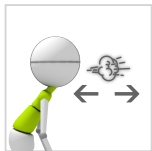Medium

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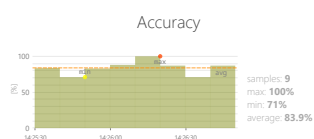
# FUNCTIONAL MOVEMENTS
## GEOMETRY FLIER

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

| Accuracy | Total points | Functional movements |
|---|---|---|
| samples: **9** max: **100%** min: **71%** average: **83.9%** | 32 point(s) | 25 % |

## ADJUSTMENTS

• Speed
• Task duration
• Device range
• Exhalation
• Inhalation
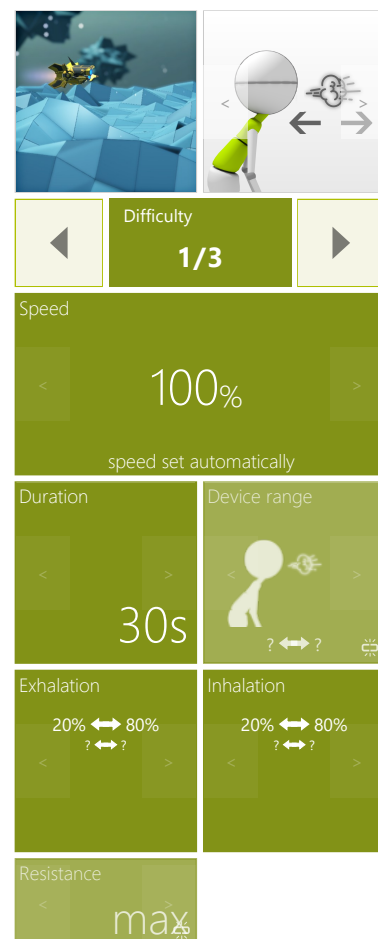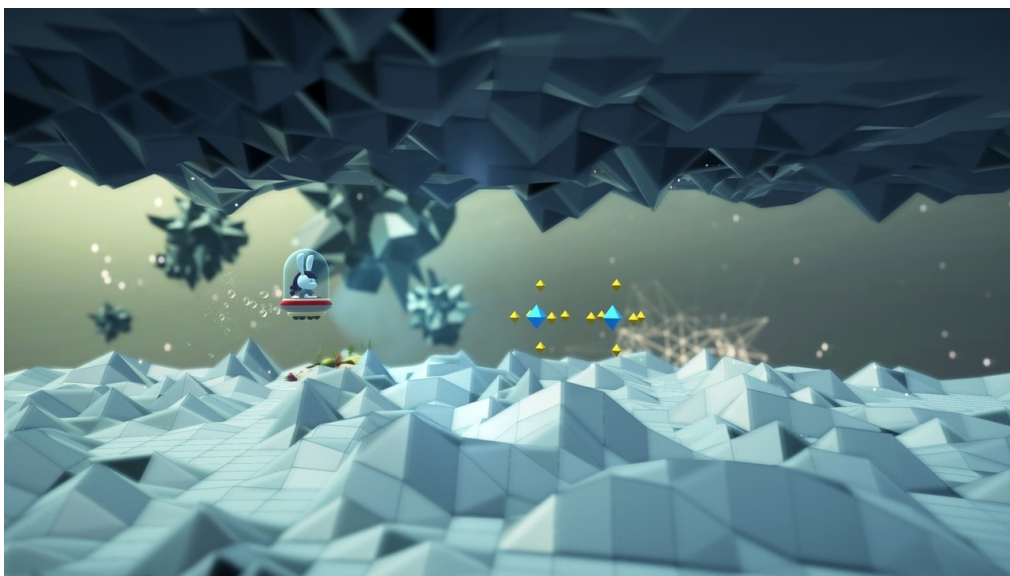• Resistance

## OBJECTIVES

• Dynamics of planned movements
• Activity in a given rhythm
• Visual motor coordination

## INSTRUCTION FOR PATIENT

Control the vehicle to avoid the obstacles.

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# FUNCTIONAL MOVEMENTS
GEOMETRY FLIER

## SAMPLE SETTINGS



### Difficulty
◄ **1/3** ►

### Speed
< **100**% >

speed set automatically

### Duration
< > **30s**

### Device range
< >
? ↔ ?

### Exhalation
20% ↔ 80%
? ↔ ?
< >

### Inhalation
20% ↔ 80%
? ↔ ?
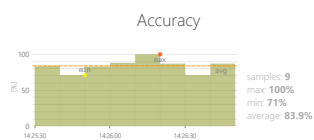< >

### Resistance
< >
max

# FUNCTIONAL MOVEMENTS
## DANCEMAN

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

| Accuracy | Total points | Functional movements |
|---|---|---|
| samples: **9** max: **100%** min: **71%** average: **83.9%** | 22 point(s) | 39 % |

## ADJUSTMENTS

• Task duration
• Device range
• Exhalation
• Inhalation
• Advanced scoring
• Song index
• Resistance
• Spawn rate level

## OBJECTIVES

• Activity in a given rhythm
• Spontaneous movements
• Visual motor coordination

## INSTRUCTION FOR PATIENT
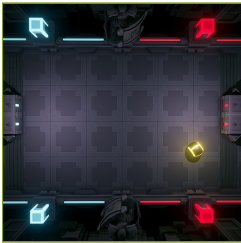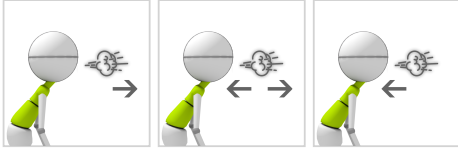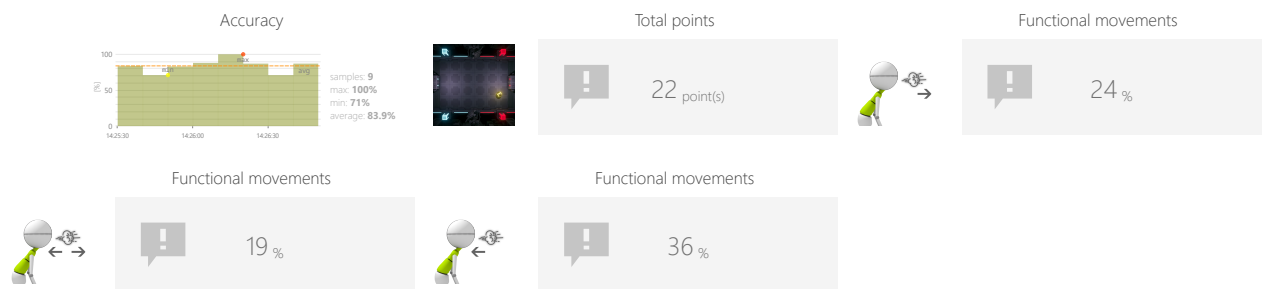
Hit the green characters when they come close.

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# FUNCTIONAL MOVEMENTS
DANCEMAN

## SAMPLE SETTINGS






| ◀ | Difficulty 1/6 | ▶ |

| Duration | Device range |
|---|---|
| <     > | ? ⟷ ? |
| **90s** | |

| Exhalation | Inhalation |
|---|---|
| 20% ⟷ 80% | 20% ⟷ 80% |
| ? ⟷ ? | ? ⟷ ? |
| <   > | <   > |

| Advanced scoring | Song index |
|---|---|
| < | < |
| **No** | **0** |

| Resistance | Spawn rate level |
|---|---|
| < | < |
| **max** | **Easy** |

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# FUNCTIONAL MOVEMENTS
## PONG

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

### Accuracy



samples: **9**
max: **100%**
min: **71%**
average: **83.9%**

### Total points

22 point(s)

### Functional movements

24 %

### Functional movements

19 %

### Functional movements

36 %

## ADJUSTMENTS

• Task duration
• Device range
• Exhalation
• Speed of objects
• Resistance

## OBJECTIVES

• Planned movements
• Focusing
• Predicting the trajectory of objects

## INSTRUCTION FOR PATIENT

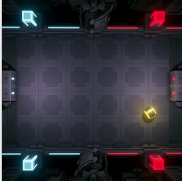Use the paddles to hit a ball back and forth.

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# FUNCTIONAL MOVEMENTS
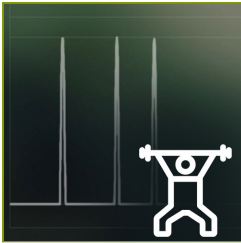PONG

## SAMPLE SETTINGS
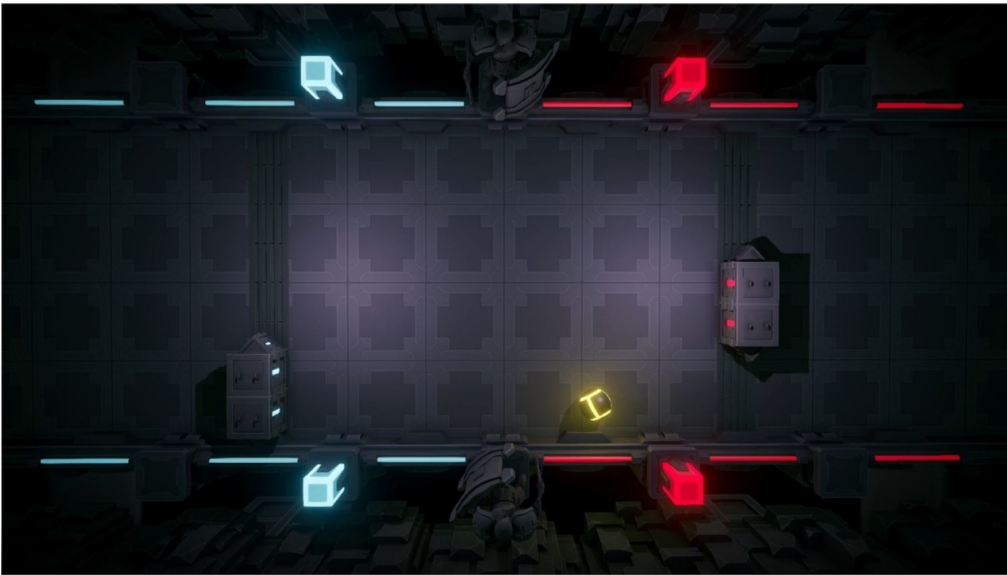


Difficulty
◀ 1/3 ▶

Duration
90s

Device range
? ⟷ ?

Exhalation
20% ⟷ 80%
? ⟷ ?

Speed of objects
100%

Resistance
max

VAST.Rehab
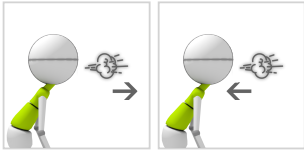REHABILITATION IN VIRTUAL REALITY

# STRENGTH
## STRENGTH TEST

Measure and gently motivate to increase individual's force while performing predefined movement patterns.
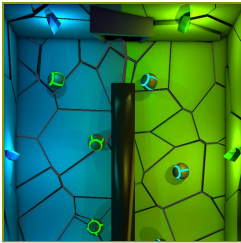
## CONTROL MODES

## ADJUSTMENTS

• Time to complete action

• Resistance

## OBJECTIVES

• Strength examination

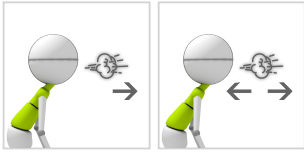• Muscle strengthening

## INSTRUCTION FOR PATIENT

Try to achieve best result
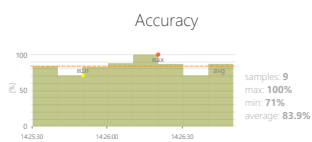
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# DIVIDED ATTENTION
## SORTER

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

| Accuracy | | Total points | | Divided attention |
|---|---|---|---|---|
| samples: **9**<br>max: **100%**<br>min: **71%**<br>average: **83.9%** | | 32 point(s) | | 35 % |

## ADJUSTMENTS

- Task duration
- Device range
- Exhalation
- Number of objects
- Gap size
- Speed of objects
- Resistance

## OBJECTIVES

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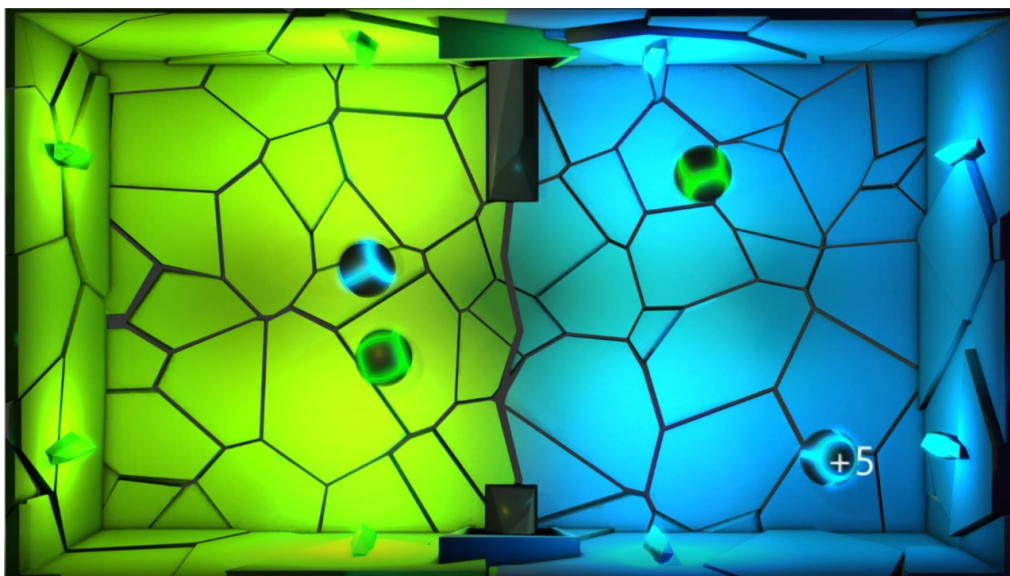- Exercise with or without support from healthy limb
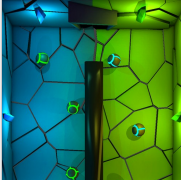
## INSTRUCTION FOR PATIENT

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.

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# DIVIDED ATTENTION
SORTER

## SAMPLE SETTINGS
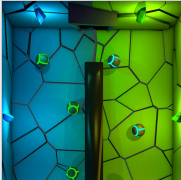


| | Difficulty | |
|---|---|---|
| ◀ | **1/3** | ▶ |

| Duration | Device range |
|---|---|
| | |
| **30s** | ? ⟷ ? |

| Exhalation | Number of objects |
|---|---|
| 20% ⟷ 80% | **4** |
| ? ⟷ ? | |
| | Gap size |
| | **150%** |

| Speed of objects | Resistance |
|---|---|
| **100%** | **max** |



| | Difficulty | |
|---|---|---|
| ◀ | **1/3** | ▶ |

| Duration | Device range |
|---|---|
| | |
| **30s** | ? ⟷ ? |

| Exhalation | Number of objects |
|---|---|
| 20% ⟷ 80% | **4** |
| ? ⟷ ? | |
| | Gap size |
| | **150%** |

| Speed of objects | Resistance |
|---|---|
| **100%** | **max** |

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REHABILITATION IN VIRTUAL REALITY
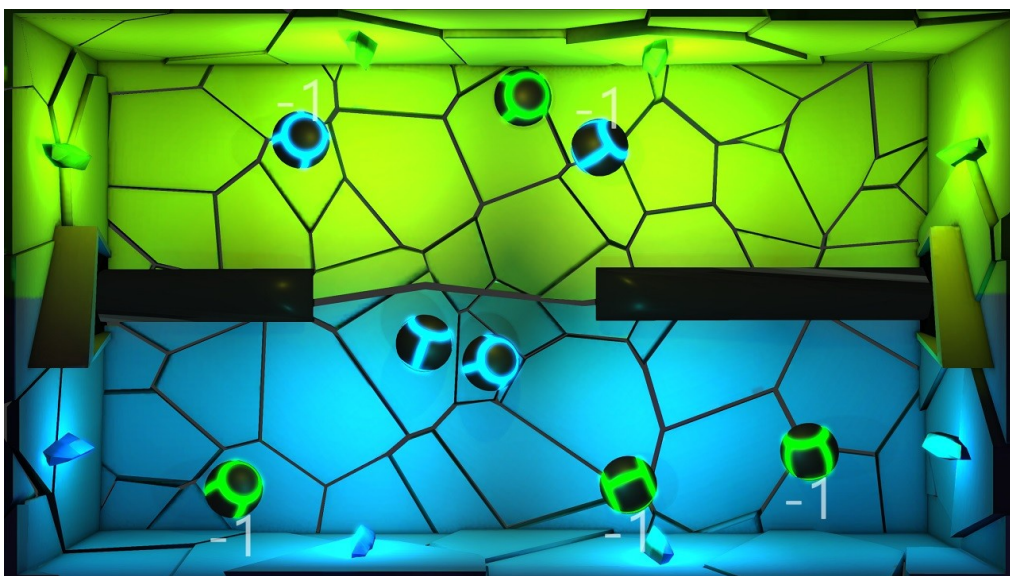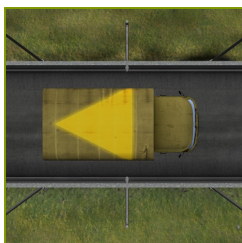
# MEMORY
## TRUCKS

Measure and train individual's skills to memorize information.

## CONTROL MODES



## RESULTS

### Number of repetitions

samples: **4**
max: **9**
min: **7**
sum: **31**
average: **7.67**

### Accuracy

samples: **9**
max: **100%**
min: **71%**
average: **83.9%**

### Total points

20 point(s)

### Memory

29 %
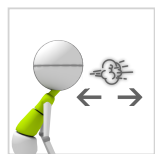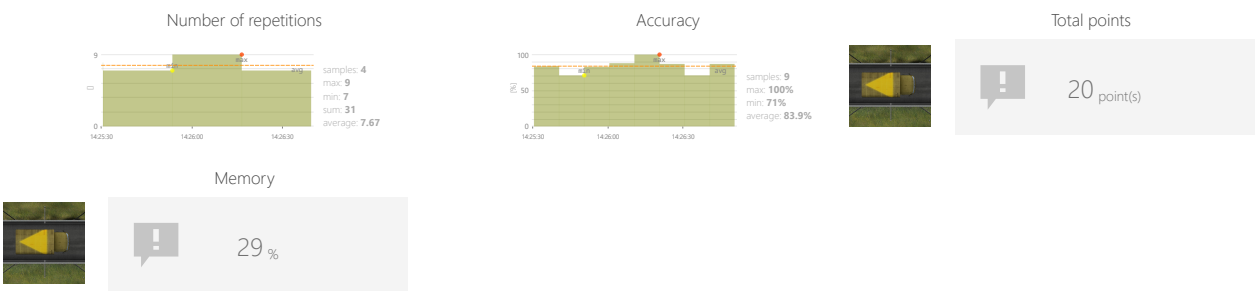
## ADJUSTMENTS

• Task duration

• Device range

• Exhalation

• Inhalation
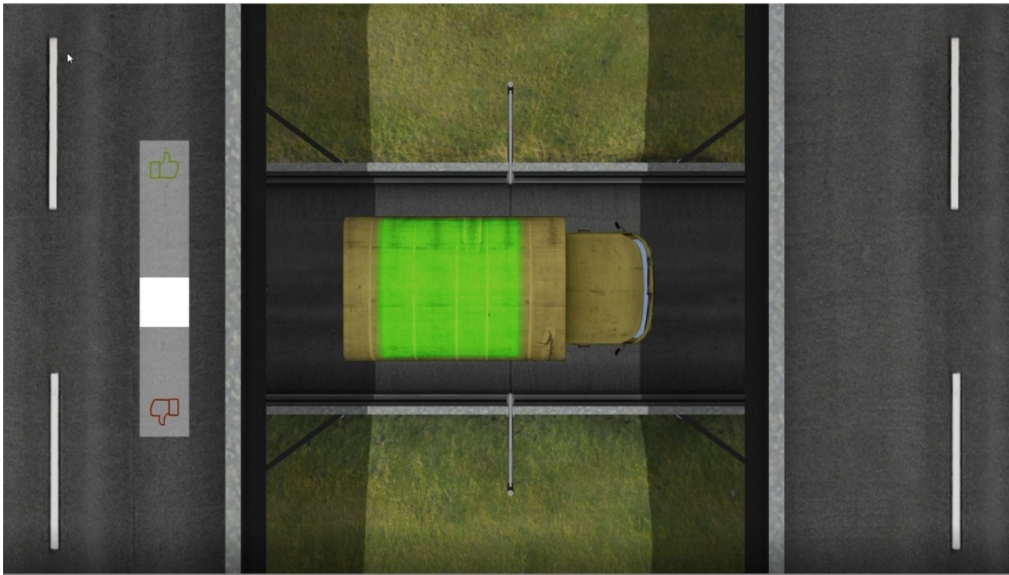
• Resistance

• Variations

## OBJECTIVES

• Logical tasks
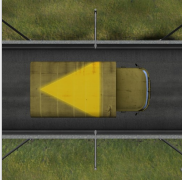
• Focusing

• 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.

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# MEMORY
TRUCKS

## SAMPLE SETTINGS



Difficulty **1/3**

| Duration | Device range |
|---|---|
| 30s | ? ⟷ ? |

| Exhalation | Inhalation |
|---|---|
| 20% ⟷ 80% | 20% ⟷ 80% |
| ? ⟷ ? | ? ⟷ ? |

| Resistance | Variations |
|---|---|
| max | colors |



Difficulty **2/3**

| Duration | Device range |
|---|---|
| 30s | ? ⟷ ? |

| Exhalation | Inhalation |
|---|---|
| 20% ⟷ 80% | 20% ⟷ 80% |
| ? ⟷ ? | ? ⟷ ? |

| Resistance | Variations |
|---|---|
| max | shapes |

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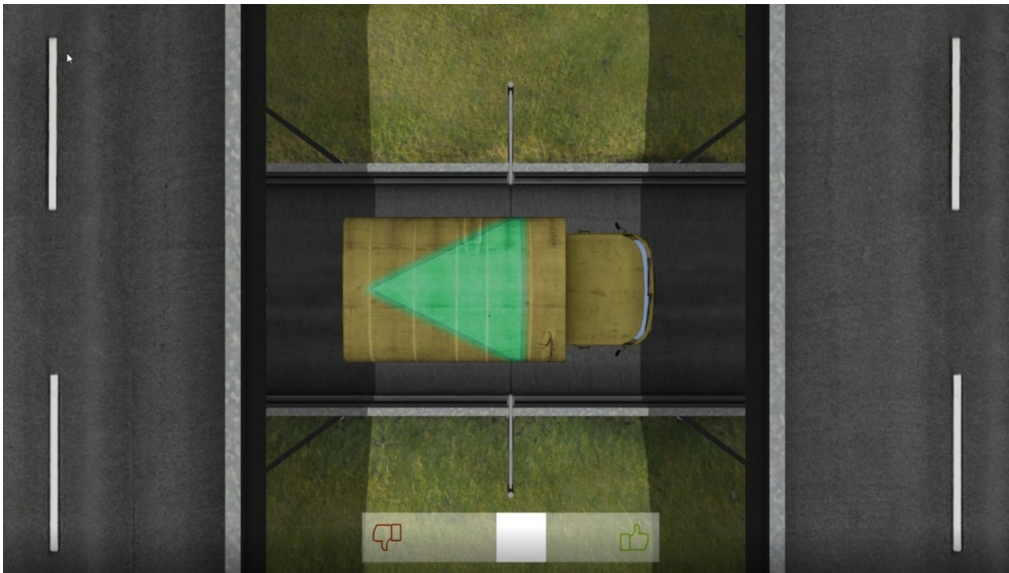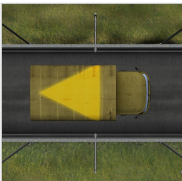
# PROBLEM SOLVING
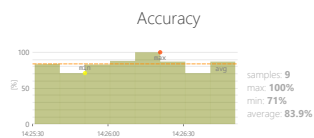## CLONES

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

| Accuracy | Total points | Problem solving |
|----------|--------------|-----------------|
| samples: **9** max: **100%** min: **71%** average: **83.9%** | 19 point(s) | 14 % |

## ADJUSTMENTS

• Task duration

• Time to complete action

• Device range

• Exhalation

• Inhalation

• Number of pairs

• Resistance

## OBJECTIVES

• Perceptivity

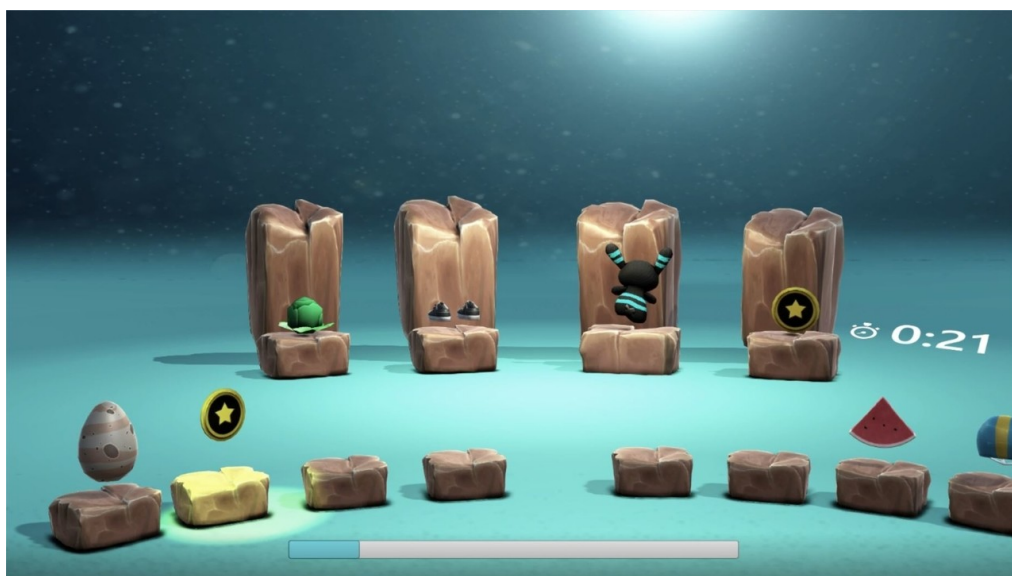• Visual motor coordination

• Logical tasks

## INSTRUCTION FOR PATIENT

Select the item which has a pair on the screen.

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# PROBLEM SOLVING
CLONES

## SAMPLE SETTINGS



Difficulty
**1/3**

| Duration | Minitask duration |
|---|---|
| **90s** | **30s** |

| Device range | Exhalation |
|---|---|
| | 20% ⟷ 80%<br>? ⟷ ? |

| Inhalation | Number of pairs |
|---|---|
| 20% ⟷ 80%<br>? ⟷ ? | **4** |
| | Resistance |
| | **max** |

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# SPECIALIZED
## BLOOD PRESSURE

120 / 80
mm Hg

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

## CONTROL MODES

## ADJUSTMENTS

• Device range

• Resistance

## OBJECTIVES

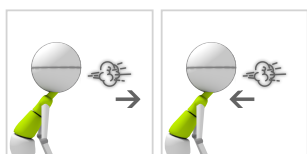• Monitor external parameters

## INSTRUCTION FOR PATIENT

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

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# SPECIALIZED
## GONOGO TEST

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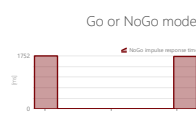
## CONTROL MODES



## RESULTS

| Always Go mode | Number of Go impulses missed (always Go mode) | Go or NoGo mode | Number of NoGo impulses hit (Go or NoGo mode) |
|---|---|---|---|



samples: **5**
max: **951 ms**
min: **751 ms**
average: **803 ms**

**0**



samples: **5**
max: **1847 ms**
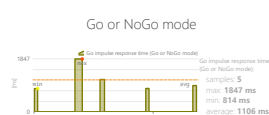min: **814 ms**
average: **1106 ms**

**2**

| Number of NoGo impulses noticed (Go or NoGo mode) | Number of Go impulses missed (Go or NoGo mode) | Time delay caused by distraction | Always Go mode |
|---|---|---|---|
| **4** | **1** | **37** % | **3000** ms |

| Go or NoGo mode | Go or NoGo mode | Go or NoGo mode | |
|---|---|---|---|





**3032** ms

## ADJUSTMENTS

- Device range
- Exhalation
- Required proper repetitions
- Hit if
- Resistance

## OBJECTIVES

- Spontaneous movements
- Speed of movement
- Response to negative visual stimuli
- Reaction to the positive visual stimuli

## INSTRUCTION FOR PATIENT

Hit the button when positive trigger appears.

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