



#### Procedural Reaction Time (PRT) instruction screen



Go/No Go test screen



# the brain thermometer<sup>™</sup>

Defense Automated Neurobehavioral Assessment

## Features

- DANA™ is a Neurocognitive Assessment Tool (NCAT) running as a mobile application on Android devices, enabling deployment down range.
- Includes both **cognitive and psychological test batteries**, making it more robust than just cognitive testing.
- Uses evidence based tests.

## **Benefits**

- **The Brain Thermometer:** Fast screening for changes in neurobehavioral and cognitive function.
- Very sensitive to changes in cognitive efficiency due to any cause (e.g. concussion, combat-related stress, deployment-related exhaustion).
- Quick and simple way to capture longitudinal cognitive biometrics.
- **Tracks changes in cognitive processing** over time. Monitors responsiveness to treatment.
- **Supports quicker triage and assessing** fit for duty and return to duty determination.

# **DANA Configurations**

#### **DANA Brain Vital**

Enables Role of Care 1 providers (e.g. Combat Medics or Corpsmen) to accurately and objectively assess Warfighters' cognitive function in under five minutes. Utilizes Simple Reaction Time, Procedural Reaction Time, and Go/No Go Tests.

### **DANA Standard**

Assists Role of Care 1-4 providers to assess Warfighters suspected of functional impairment due to other reasons, such as emotional distress or deployment exhaustion. Can also be used down range as a follow up to DANA Brain Vital.

#### **DANA Modular**

Can be configured to include any combination of individual cognitive and psychological tests.





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PRT results over time

### **Detailed PRT results**

## **Detailed Product Features:**

Summary Report Screen

- · Results are immediately available and can be exported in CSV and PDF formats
- Embedded tests of effort to identify malingering.
- Tested in a variety of military field conditions, including: Arctic, Jungle, Desert, Mountainous, and Shipboard in high sea states; tested in Afghanistan.
- Modularity enables real-time test battery configuration based on specific needs and use cases.
- Off line log-in capability.
- Received 510(k) clearance from the FDA.

## **Clinical Information:**

- Demonstrated as valid and reliable in all settings.
- Shown sensitivity and distinguished impaired vs non-impaired in a variety of populations, including extremely depressed, acute concussion, hypoxia and mild cognitive impairment due to PTSD.
- Clinical studies published in Neuroreport, Military Medicine, Journal of Neurotrauma and PLoS One.

DANA Brain Vital (5 Minutes)	DANA Standard (20 Minutes)	DANA Modular (Varies)
Simple Reaction Time	Simple Reaction Time	Can be configured to include any combination of individual cognitive and psychological tests.
Procedural Reaction Time	Code Substitution (Learning)	
Go/No-Go	Procedural Reaction Time	Individual cognitive tests can be modified to change parameters,
	Spatial Processing	including the number of trials.
	Go/No-Go	<ul> <li>Additional tests available include:</li> <li>Combat MACE interview</li> </ul>
	Matching to Sample	<ul> <li>Combat Exposure Scale (CES)</li> <li>PTSD Check List – Military Version (PCL-M)</li> <li>Deployment Stress Inventory (DSI)</li> <li>Code Substitution (Recall)</li> <li>Pittsburgh Sleep Quality Index (PSQI)</li> <li>Primary Care PTSD screen (PC-PTSD)</li> <li>Stanford Sleepiness Scale</li> </ul>
	Memory Search (Sternberg)	
	Simple Reaction Time	
	Patient Health Questionnaire (PHQ-8)	
	Insomnia Severity Index (ISI)	

Stanford Sleepiness Scale

#### For more information:



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