

PhD student **Brian Russell's** PhD focuses on **fatigue assessment to compute mission readiness using machine learning**. During his recent sailing voyage in the Galapagos to collect data to enable the determination of vital signs and movement to identify levels of cognitive and physical fatigue sailing, he "slept" with a local seal!



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Digital Finger Tapping Test for iPhone and iPad  
Posted on Oct 11 2010 by Sybu Data

The Digital Finger Tapping Test is an analytical tool that can be used in a basic research environment to measure a person's motor speed.

The Digital Finger Tapping Test is an easy-to-use researching tool to measure motor speed for people with complaints of neurocognitive dysfunction or at risk of such condition.

The Digital Finger Tapping Test is currently being tested by IntegenAfrica (<http://www.integenAfrica.com>) in Cape Town, South Africa as a possible screening tool for HIV dementia.

**How to use:**

To perform a test, tap the button in the upper right-hand corner of the device screen. Select a device.

**Testing**  
When in testing mode, the results of the test will not be stored. This mode is used for training a patient to use the application.

**Standard**  
Standard mode requires the user to enter the details of the patient.

Stroke Test [Introduction](#) [Why it is needed?](#) [Current Experience](#) [App Settings](#) [Testing](#) [Languages and Platforms](#) [Stay tuned](#)



Brian used the Finger Tap Test and Stroop Test. He also used the BioHarness - a fabric chest strap that can measure heart rate, breathing rate and movement.

**INTRODUCTION**

**WHAT IS THE STROOP EFFECT?**

This is a test of mental speed and flexibility that was first described in 1929 in Germany and then published in English by Stroop in 1935.

**HOW CAN ONE TAKE THE STROOP TESTS?**

The Stroop test have been administered on paper, computers and on apps.

**WHAT IS THE ENCEPHALAPP STROOP?**

EncephalApp is a series of applications designed to evaluate patients with liver disease, the first of which is a Stroop task. It has neutral and incongruent stimuli only.

**WHAT IS INVOLVED WHILE TAKING A STROOP TEST?**

Stroop tests involve correctly identifying the color that the stimuli are presented in representing three kinds of stimuli:

**Neutral:** a non-verbal cue in which the goal is to identify the color, for example #888.

**The correct response is red**

**Congruent:** ink color and the word refer to the same color, for example RED.

**The correct answer is red**

**Incongruent:** ink color and the word refer to the different colors, for example RED.

**The correct answer here is green, not red.**

**WHERE HAS IT BEEN USED?**

It has been found in selected patients to be predictive of minimal hepatic encephalopathy (MHE) in two study centers.



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