# A FAsT™ Review

*The FAsT™ hand screening system is designed to provide objective measurement of the screened hand's functional capabilities. The results derived from this screen are intended as an indication of functional performance only. No medical diagnosis is intended or implied.*

## PURPOSE OF THE TEST:

The purpose of the **F**unctional **As**sessment **T**est (FAsT™) is to provide a quick comparison of the tested individual's functionality capabilities with the capabilities associated with uninjured healthy hands. By testing applicants for a particular job function that may cause problems with individuals who have prior injuries such as carpal tunnel syndrome, the employer may place applicants in job positions commensurate with their abilities. This reduces the probability of further injury to the employees and allows for a safer job environment.

An injured hand performs repetitive tasks differently than healthy, non-injured hands. By comparing the screened hands to the known capabilities of healthy hands, we can determine the probability that the screened hands compare favorably or poorly with respect to the healthy hands. This probabilistic comparison is presented in the FAsT™ chart (shown to the right).

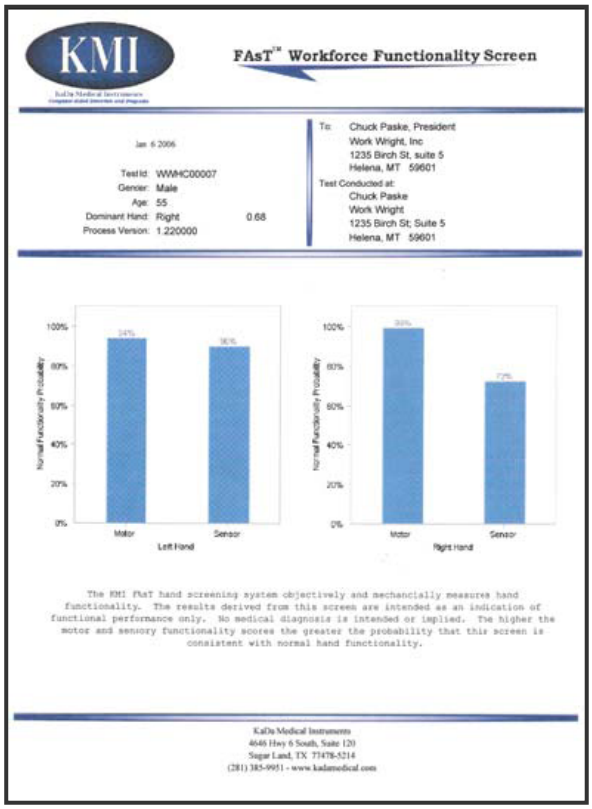


Figure 1: Sample FAsT™ Chart

*Figure 1 Screen result indicates a high probability of "normal" functionality with the left hand and that some impairment of sensory abilities appears present in the right hand.*

## EFFECTS DUE TO PRIOR INJURY:

Prior injury (lacerations, bruises, broken bones, loss of digits, etc) may directly influence the outcome of the functionality screen. However, such influence is expected to be consistent with the physical impairment present at the time of the testing. As the injury has time to heal, the functionality indicated by the FAsT™ screen will return to a unique "normal" position for that hand and is then usable as a base line for all future functionality screens.

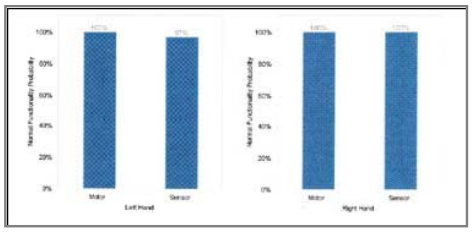

**Figure 2**: First candidate

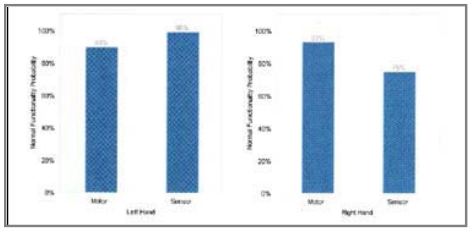

**Figure 3**: Second candidate

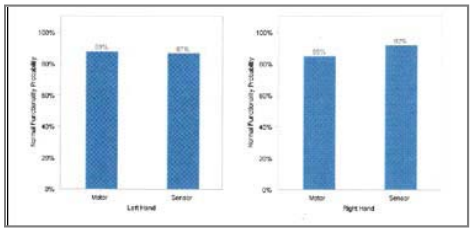

**Figure 4**: Third candidate

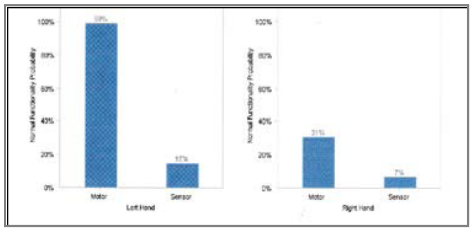

**Figure 5**: Fourth candidate

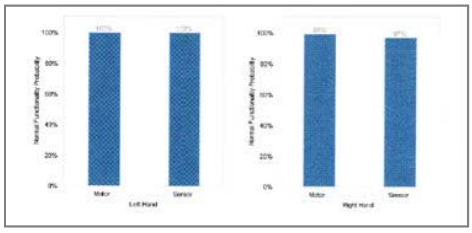

**Figure 6**: Fifth candidate

## GENERAL SCREENING APPLICATION:

**Safe placement.** The figures to the left represent the FAsT™ hand functionality screen results for each of five candidates that have been selected for work positions. The positions require the completion of essential tasks that include varying degrees of fine motor control (hands). Based on the physical abilities represented by each candidate, three of them have clearly demonstrated a higher probability of good motor and sensory (fine-motor) skills. The second candidate has demonstrated "good to marginal" skills, while the fourth candidate has demonstrated a strong lack of sensory skills which would be needed in fine motor control situations. These screening reports can be used in conjunction with other placement tests in facilitating the safest placement of the best qualified candidate into each position. Safe placement screening also serves to establish a baseline for monitoring hand functionality throughout the period of employment.

## GENERAL INTERPRETATION:

The FAsT™ Hand Functionality screen may also be used to provide early warning that an individual needs medical attention. Scores in the range of 50% to 85% may indicate that an injury may be developing. In the event of pain, tingling, numbness, or difficulty holding objects, the screened individual should seek medical assessment. These individuals should be monitored every 6 months. In the case of screening results below 50%, and in the absence of obvious physical limitations of the screened individual, medical assessment is indicated. Individuals with physical handicaps such as prior broken bones, diseases such as arthritis, or known damaged nerves may find that lower than normal functional capabilities are "normal" for them. These individuals should be screened more frequently to determine whether the job requirements are contributing to their loss of hand functionality.

**DOSIMETRY:**

**Proactive employee safety.** If a position is suspected of contributing to the loss of employee hand functionality, the specific application of screening results can document that the job requirements do, or do not, contribute to an unsafe working environment. *For example, a given job requires that the employee use equipment which vibrates in a cold or wet environment. Since carpal tunnel syndrome (CTS) has been associated with vibration in a cold or wet environment, does this position foster CTS in the employees?*

Dosimetry not only supports the identification of the unsafe practice/ environment, it directly supports the correction of the unsafe situation and the promotion of a safer working environment. Dosimetry can be used to validate the efficacy of ergonomic adjustments and directly supports the maintenance of an employee safe working environment.

By screening employees every three to six months, a data base can be built which shows that employees do, or do not, show a statistically significant change in their hand functionality over time. If no change is present for the average of the employees, individual cases of CTS may be exacerbated by the job, but may not have been caused by the job. Conversely, a trend towards the loss of hand functionality by the majority of the employees would define a dose rate at which injury could be statistically predicted over time. This would indicate that the job requirements/equipment probably needs to be modified to reduce on-the-job injuries and maintain a safer working environment.

**RETURN TO WORK:**

If an employee has been screened (during the placement process or later), a baseline for that employee has been set. If the employee is injured on the job, and undergoes rehabilitation, subsequent screening will indicate whether the employee is properly rehabilitated before returning to work. While the employee may not achieve pre-injury levels, it will be clear from the tests whether the individual has adequately recovered and can now safely perform the essential tasks of the position.

**SEPARATION SCREENING:**

If an employee leaves employment, they should be screened to determine their hand functionality as they depart. By comparing this separation screen to prior screens, documentation will be available to show that the individual left employment with, or without, the same physical capabilities as when they were hired and placed in a position. Documented hand functionality facilitates fast, effective post employment actions.