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## Isokinetics

### An Objective and Safe Method of Measuring Physical Capability

#### Isokinetics—A Valid Science

Isokinetics is a science that has been recognized for since the early 1960s by physicians and scientists.

In 2007 a Medline search produced more than 3,170 citations of peer reviewed articles that discuss the science and practices or techniques utilizing the science. This underscores the acceptance of Isokinetics as a valid science.

Isokinetics measures the degree to which candidates have identifiable ability to exert joint torques which can then be compared to the minimum torques required in a job (determined by a job task analysis) that have been concluded to be important in successful job performance.

#### Adequate Strength Means Minimal MSD Injury Potential

Assuring that employees can generate adequate torques at the joints performing the required motion creates worker safety.

This also avoids the likelihood that abnormal mechanics and biomechanics are used, reducing the potential for injury on the job, particularly if repetitive motions are being used.

Testing of several joints (shoulder, knee and trunk) provides sufficient information to indicate whether the candidate is able to perform the tasks required for a specific job.

#### Accommodating Resistance Ensures Muscle Load Won't Exceed Worker's Ability During Testing

Isokinetics is favored by physicians and other practitioners including physical therapists because of the principle of "accommodating resistance." Accommodating resistance ensures that muscle load can't exceed the worker's ability or tolerance during a pre-employment, joint comparison, or return to work test.

There isn't any artificial resistance produced by the test dynamometer that would cause an injury during testing.

Isokinetics is the safest form of testing because it does not utilize the overload principle where an artificial load is moved by the individual whether or not he or she has the physical strength.

Isokinetic resistance during a CRT test perfectly matches the individual's strength output. Thus no injury can occur from testing.

Simply stated, it isn't possible to create an injury or aggravate an existing injury while performing the CRT test.