EPIC Spinal Function Sort

Introduction

The purpose of the EPIC Spinal Function Sort (SFS) is to quantify ability to perform work tasks that involve the spine and lower extremities. The SFS quantifies and documents reported functional capacity with very little effort or expense.

In treatment programs, the patient's progress can be documented easily. The SFS provides a baseline measure of function in everyday tasks, to compare to progress in subsequent treatment, extending the benefits beyond the clinic's walls, into the patient's life at home, at work, and in the community. In comparison with functional tests, magnification of dysfunction can be identified.

In employment screening programs in industrial settings, the SFS compares the job applicant's current abilities to job demands, and sets a baseline of abilities.

Content

In the SFS, drawings of spine and lower extremity tasks are supplemented by drawings that depict common activities of daily living and work tasks. The drawings have been selected by experts in rehabilitation from hundreds of tasks that persons with lower extremity impairments report present significant challenges. Each of the 50 drawings in the test booklet is accompanied by a simple task description.

Procedures

The SFS is an untimed paper and pencil test. The evaluee is instructed to "Look at each drawing and read the description. On a separate answer sheet, indicate your current level of ability to perform the task."

The answer sheet provides a 5-point rating from "Able" to "Restricted" to "Unable." Operational definitions of these adjectives are provided in the standardized instructions. There is also a sixth rating which is depicted as "?" and indicates, "I don't know."

The SFS can be administered by a technician following standardized instructions. Although administration is not timed, the SFS usually requires 8 minutes to complete. Items can be read to the evaluee who is illiterate, although the combination of text and pictures allows evaluees with low literacy levels to complete the test independently.

SFS Figure 15

Unload two 10-pound grocery bags
from the trunk of an automobile.

SFS Figure 23

Cut a piece of lumber with a hand saw.

SFS Figure 39

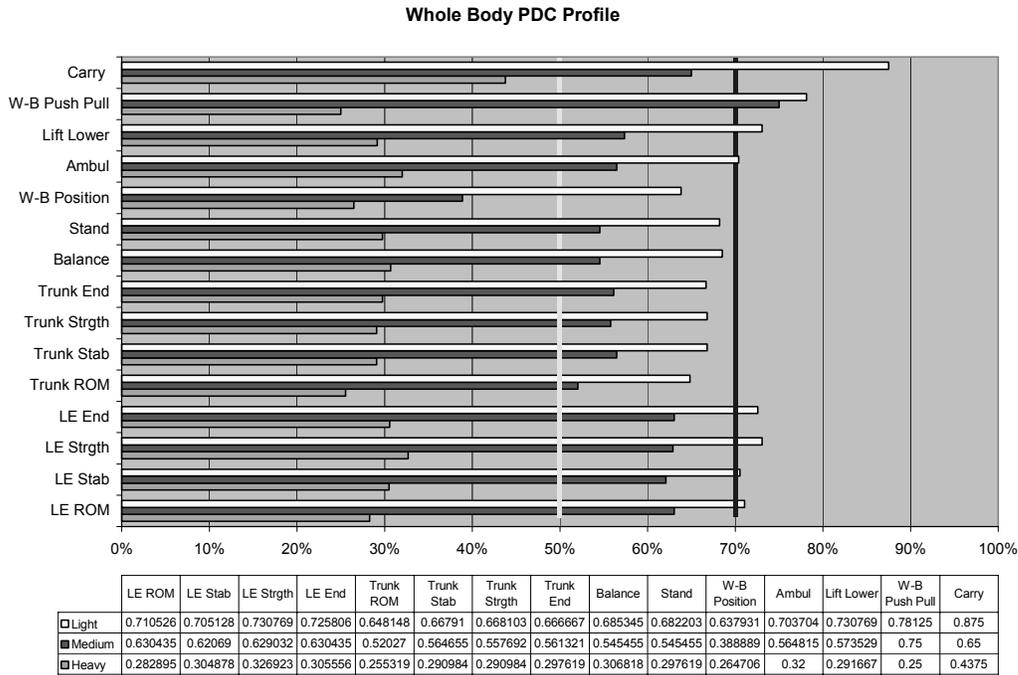Sweep with a push broom.

SFS Figure 46

Lower a 100-pound milk crate from a bench to the floor.

Hand Scoring

The SFS is easily scored by hand and yields a single "Rating of Perceived Capacity" which ranges from zero to 200. Two "internal validity check" drawings are included that are similar to drawings presented earlier. These are used to screen for inconsistent responding, along with a graded scoring strategy that evaluates intra-test consistency.

Computerized Scoring and Analysis

Through use of an Excel spreadsheet that is available at no charge on the Epicrehab.com website, the evaluee's Whole Body PDC Profile can be derived that analyzes 15 physical demand constructs. A sample Profile is presented below:

Whole Body PDC Profile

	LE ROM	LE Stab	LE Strgth	LE End	Trunk ROM	Trunk Stab	Trunk Strgth	Trunk End	Balance	Stand	W-B Position	Ambul	Lift Lower	W-B Push Pull	Carry
☐ Light	0.710526	0.705128	0.730769	0.725806	0.648148	0.66791	0.668103	0.666667	0.685345	0.682203	0.637931	0.703704	0.730769	0.78125	0.875
■ Medium	0.630435	0.62069	0.629032	0.630435	0.52027	0.564655	0.557692	0.561321	0.545455	0.545455	0.388889	0.564815	0.573529	0.75	0.65
☐ Heavy	0.282895	0.304878	0.326923	0.305556	0.255319	0.290984	0.290984	0.297619	0.306818	0.297619	0.264706	0.32	0.291667	0.25	0.4375

Normative values for both healthy and disabled males and females are provided in the SFS examiner's manual. In addition, the SFS Rating of Perceived Capacity score is cross-referenced to the U.S. Department of Labor's Physical Demand Characteristic of Work system, described below:

PHYSICAL DEMAND CHARACTERISTICS OF WORK
1993 Leonard N. Matheson, PhD

PHYSICAL DEMAND LEVEL	OCCASIONAL 0 - 33% of the workday	FREQUENT 34 - 66% of the workday	CONSTANT 67 - 100% of the workday	Typical Energy Required
SEDENTARY	10 lbs.	Negligible	Negligible	1.5 - 2.1 METS
LIGHT	20 lbs.	10 lbs. and/or Walk/Stand/Push/Pull of Arm/Leg controls	Negligible and/or Push/Pull of Arm/Leg controls while seated	2.2 - 3.5 METS
MEDIUM	20 to 50 lbs.	10 to 25 lbs.	10 lbs.	3.6 - 6.3 METS
HEAVY	50 to 100 lbs.	25 to 50 lbs.	10 to 20 lbs.	6.4 - 7.5 METS
VERY HEAVY	Over 100 lbs.	Over 50 lbs.	Over 20 lbs.	Over 7.5 METS

Through use of the PDC crosswalk, the evaluee's score can be linked to performance on the EPIC Lift Capacity test, and to more than 12,000 occupational descriptions in the Dictionary of Occupational Titles.