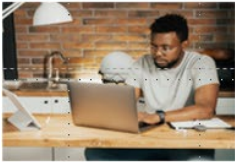


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ERGONOMICS ON-DEMAND!

*Ergonomics for Health Care
and Safety Professionals*

Presented by Mark Anderson, PT, CPE



APPENDICES

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Ergonomics, Taylor and Francis.

Human Factors, Human Factors and Ergonomics Society.

(Reference www.ergoweb.com for a very complete list of ergonomics related journals)

Professional Organizations

American Industrial Hygiene Association

2700 Prosperity Avenue, #250

Fairfax, VA 22031

(703) 849-8888

American Society of Safety Engineers

1800 E. Oakton St.

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Glossary

Anthropometry: The measurement of the dimensions, and certain other physical characteristics such as weight and centers of gravity, of the human body as a whole or of its segments.

Clearance dimensions: The dimensions of a workspace required to provide appropriate space for body members to maneuver without interference from surrounding structures or equipment.

Contact point or Pressure point: A body site at which an item of workplace equipment or a tool exerts pressure on the tissues. Soft tissue sites are of most concern to ergonomics since the compression of the tissue can occlude blood vessels, irritate nerves and tendons, or damage the muscle tissue itself.

Dynamic work: Work activities involving movement and thus requiring the muscles to both contract and relax during the activity.

Elbow height: The anthropometric dimension referring to the height of the elbow above the floor when the arm is hanging relaxed at the side of the standing individual.

Elbow rest height: The anthropometric dimension referring to the elbow above the seat surface when the upper arm is hanging relaxed and the elbow is bent so that the forearm is parallel with the floor.

Ergonomics: The scientific study of the relationship between humans and their working environment.

Extended reach radius: The area that can be reached by extending the arm from the shoulder.

Fixed work posture: A work posture that does not permit the operator to freely change position so as to relieve postural stress. Fixed postures tend to statically load muscle groups since movement of the body segments and/or trunk is inhibited.

Foot-candle: A unit measure of illumination striking a surface. One foot-candle is equivalent to one lumen per square foot.

Functional reach or “dynamic” reach: An anthropometric dimension representing the arm reach capability when the body is allowed to bend and/or rotate at the shoulder and hips so as to extend the reach beyond that obtainable when the body is in a static or fixed posture.

Normal reach radius: The area that can be conveniently reached with a sweep of the forearm, with the upper arm hanging in a natural position vertically at the side. All materials, tools, controls, and containers should be arranged within the normal reach radius whenever possible.

Normal work area: The area in front of the worker which can be used for work with a normal expenditure of effort.

Power grasp/grip: A grasp in which the hand wraps around the handle being grasped. In the power grasp the thumb aligns the hand with the long axis of the forearm and the wrist assumes a slight ulnar deviation. The power grip provides more than five times the gripping strength of a precision grip.

Precision grasp/grip: A grasp in which the object is held by the force of the thumb vs. the first (or first and second) finger(s). It provides precise aim but has limited strength.

Reach envelope: The surface in space centered on the left/right midline plane of the body representing the reach capability of the population percentile of interest. The envelope may be described as a functional reach envelope.

Viewing angle: The angle, either vertical or horizontal, at which the worker views the task measured from the center line of the horizontal line of sight when the operator is looking straight ahead.