



Systems and Working Methods to Improve Physical Ergonomics

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Anthropometry refers to the measurement of the human individual. An early tool of anthropology, it's been used for identification, for the needs of understanding human physical variation, in paleoanthropology and in various attempts to correlate physical with racial and psychological traits. Anthropometry involves the systematic measurement of the physical properties of the physical body, primarily dimensional descriptors of body size and shape.[citation needed] Since commonly used methods and approaches in analyzing living standards weren't helpful enough, the anthropometric history became very useful for historians in answering questions that interested them. Today, anthropometry plays a crucial role in industrial design, clothing design, ergonomics and architecture where statistical data about the distribution of body dimensions within the population are wont to optimize products. Changes in lifestyles, nutrition, and ethnic composition of populations cause changes within the distribution of body dimensions (e.g. the increase in obesity) and need regular updating of anthropometric data collections. Today, ergonomics professionals apply an understanding of human factors to the planning of kit, systems and dealing methods to enhance comfort, health, safety, and productivity. This includes physical ergonomics in reference to human anatomy, physiological and bio mechanical characteristics; cognitive ergonomics in reference to perception, memory, reasoning, motor response including human-computer interaction, mental workloads, deciding, skilled performance, human reliability, work stress, training, and user experiences; organizational ergonomics in reference to metrics of communication, crew resource management, work design, schedules, teamwork, participation, community, cooperative work, new work programs, virtual organizations, and telework; environmental ergonomics in reference to human metrics suffering from climate, temperature, pressure, vibration, and light; visual ergonomics.

Today anthropometry is often performed with three-dimensional scanners. a worldwide collaborative study to look at the uses of three-dimensional scanners for health care was launched in March 2007. The Body Benchmark Study will investigate the utilization of three-dimensional scanners to calculate volumes and segmental volumes of a private body scan. The aim is to determine whether the Body Volume Index has the potential to be used as a long-term computer-based anthropometric measurement for health care. In 2001 the United Kingdom conducted the most important sizing survey so far using scanners. Since then several national surveys have followed within the UK's pioneering steps, notably Size USA, Size Mexico, and Size Thailand, the latter still ongoing.

Size UK showed that the state had become taller and heavier but not the maximum amount needless to say. Since 1951, when the last women's survey had taken place, the typical weight for ladies had gone up from 62 to 65 kg. However, recent research has shown that posture of the participant significantly influences the measurements taken, the precision of 3D body scanner may or might not be high enough for industry tolerances, and measurements taken may or might not be relevant to all or any applications (e.g. garment construction, Despite these current limitations, 3D Body Scanning has been suggested as a replacement for body measurement prediction technologies which (despite the good appeal) have yet to be as reliable as real human data. Body weight, for instance, is a crucial function and parameter for growth with reference to fetal age of the fetus. There'll be great variations within the weight of a 16 weeks old fetus. The load won't be constant for each fetus and can vary from individual to individual.

Therefore, instead of an appropriate or standard value, a variety is often specified like 90 to 100 grams. This number of variations applies to all or any other anthropometric measurements. Often, the scientific world cover their ignorance by stating that the speed of growth of particular human fetus depends on its intrinsic growth potential and environment provided by the traditional mother. It's a clear function of the genetic potential. The fetal growth isn't a private growth and depends on the composite growth of the organs. Growth of the individual organs is controlled by the genetic potential, the environment provided by the mother and by the fetus itself. Scientists have or try to work out such relationships through series of investigations. The fetal dimensions obtained from spontaneous abortions and pathological pregnancies on mainly formed and glued specimens.

The expansion of an organ from inception to a definitive functional stage depends on the integrated function of the entire organism which depends on variety of parameters like the macromolecule content of the cells which is one among the foremost important factors. Functioning of an organ is vital for development of the organism. A Nigerian study showed that the birth weight of the human fetus also depends upon the dimensions and weight of the mother including her height and weight. Further a Polish study reported an identical report that some measurements just like the ear height, muscular strength of the shoulders, skin fold thickness, and mandibular breadth including the peak of the upper and therefore the lower limbs.

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