

The Essentials of Human Performance

A human being is a complex and fascinating machine, capable of accomplishments beyond the sum of its parts.

The human race evolved from the common ancestors of the primate family to become the dominant form of life on Earth.

Its progress, so far, has resulted from a combination of attributes that are exclusive to humanity. The size of the human brain might be considered a major factor, but it did not develop in isolation from changes in the musculo-skeletal system. There is evidence to suggest that the brain developed quickly to cope with the demands of upper limb and hand function, which was suddenly multiplied exponentially by man's ability to walk upright on two legs and free the hands, with an opposable thumb for intricate manipulation. Although there are other animals which are bipedal, they do not have large brains, so the order of these developments and the key influencers are still unclear.

This development of the human brain perfectly illustrates the symbiotic relationship between mind and body and the fact that these changes occurred incredibly quickly, in evolutionary terms, highlights the high degree of plasticity of the human neuro-musculo-skeletal system.

Our systems inter-relate to deal with survival in our environment. The human machine is not a simple mechanical system, like a Ford Model T motor car, but is instead characterized by a complex interaction of a number of systems very different in nature. This machine then is a Formula 1 Model – a mechanical system monitored and governed by an engine management chip – the brain. There is a problem, however. In many cases, because of the pressures and lifestyles of our world, some parts of the machine have been lying idle for a significant period, instead of fulfilling its potential. Some of the systems need a regular overhaul to restore them to their natural condition.

Over a period of only a few hundred years, we now find ourselves surrounded by a hard world of concrete and plastic, which is not an environment that is conducive to the way we have evolved to function. With our natural physical acts inhibited, we are more vulnerable to physical and psychological stress.

We have become robot-like with repetitive movements being forced upon us by our working environment and practices, even our so-called healthy activities, like cycling, running and golf, encourage repetitive movements.

The relatively small amount of time over which these major environmental changes have taken place have not given our evolutionary process time to adapt. Quite literally the technological revolution has outpaced human evolution and now, with injury and illness all too frequent, and health costs soaring globally, the time could not be better to redress the imbalance.

These inhibitions of our natural function can not only compromise our performance daily and contribute to pain, but they can compromise our sports and work performance as well.

To counter these impacts, FLX Health has created an app, which looks at the intrinsic biomechanical profile of a worker. This is a measure of the capacity of each joint and system to perform naturally for that individual. It complements the movement and risk assessments found in the HSE MSD risk assessment tool and by identifying the areas of the body that needs addressing to prepare the body better for those (high or low risk) tasks, and then which are the best self-help exercises to help mitigate the risk.

The app has two sections: injury risk management and self-help pain management. It is a very person-centred approach, promoting self-awareness and empowering users to take control of their bodies.

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