The prevention of some dorsal complaints

ADVANCED DESIGN TELESCOPIC PROSTHESIS FOR ABOVE KNEE AMPUTEES

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The Telescopic Prosthesis for AK amputees aims primarily at function, stability and dynamic symmetry. It is a single member assembly hinged at the vicinity of the hip joint and capable of shortening during the swing phase. The shortening is achieved by energy stored in a self-energised system during the stance phase. The author's new design is practical and offers a desirable combination of voluntary and involuntary control for which the prosthesis is also called "Voluntarily Controlled Telescopic". The advantages are : Decrease in the vertical displacement of the hips, more symmetrical kinematics of gait and decrease of the moment applied at the hip of the prosthetic side. Stability and proprioception have been reported by the wearers to be better than those with their conventional limbs.

THE FRACTURE PATTERN AS AN INDICATOR OF IMPACT LOADING OF THE THORAX

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The hardness and loading capacity of hundreds of rib pairs (6th and 7th) have been tested in comparison with the results of about 200 acceleration tests concerning belt protected human cadavers. Rib fractures have some individual aspects indicating the direction and strength of the impact. So we can differentiate between static and dynamic loading. Elasticity and loading capacity of ribs decrease with advancing age.

THE PREVENTATION OF SOME DORSAL COMPLAINTS

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The proas muscles play a dominating role of maintaining postural equilibrium. A study is presented on the change in the form of the spine as a consequence of pregnancy. Certain exercises have been critisized. The Proas muscles which are usually sufficiently strong have the tendency of spontaneously shortening which influences the posture and the spine. Good postures are related to good chair design. Desk design is also important especially when reading and writing are involved. Anteflexion (school-) headache and dorsal complaints are common with children, students and adults and are related to horizontal desks. A slanted desk will prevent large loading of postural muscles as well as some ligamentous structures.