1. Record Nr. UNINA9910795203403321

Titolo	Lumbar injury biomechanics / / [edited by] Jeffrey A. Pike
Pubbl/distr/stampa	Warrendale, Pa. (400 Commonwealth Dr., Warrendale PA USA) : , : Society of Automotive Engineers, , [2013]
ISBN	0-7680-8703-1 0-7680-8053-3
Descrizione fisica	1 online resource (1 PDF (xi, 207 pages)) : illustrations (black and white)
Collana	[Progress in technology series] Society of Automotive Engineers. Electronic publications
Disciplina	617.560597
Soggetti	Lumbar vertebrae - Wounds and injuries Biomechanics Lumbar Vertebrae - injuries Human Engineering MEDICAL / Physical Medicine & Rehabilitation MEDICAL / Anatomy Rehabilitation Anatomy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	SAE order no. PT-153.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Blunt Lumbar Trauma -- List of Papers. Viscoelastic shear responses of the cadaver and hybrid III lumbar spine, Paper 942205, Proc. 38 Stapp Car Crash Conf., Society of Automotive Engineers, Warrendale, 1994 / Begeman PC, Visarius H, Nolte L-P, et al. -- Response of the cadaveric lumbar spine to flexion with and without anterior shear displacement, Proc International Research Conference on the Biomechanics of Impact (IRCOBI), Zurich, 2008 / Belwadi A, Yang K -- Human spine behaviour under thoracic and pelvic lateral impacts - comparison with WorldSID dummy behaviour, IRCOBI, Zurich, 2004 / Compigne S, Bouquet R, Caire Y, et al. -- Mechanical properties of the cadaveric and hybrid III lumbar spines, Paper 983160, Proc. 42 Stapp Car Crash Conf., Society of Automotive Engineers, Warendale, 1998 / Demetropoulos CK, Yang KH, Grimm MJ, et al. -- Development of human lumbar spine FE models

for adult and the elderly, Paper 2009-01-0382, SAE International, Warrendale, 2009 / Dokko Y, Kanayama Y, Ito O, et al. -- Lumbar loads in low to moderate speed rear impacts, paper 2010-01-0141, SAE International, Warrendale, 2010 / Gates D, Bridges A, Welch DJ, et al. -- Using national databases to evaluate injury patterns in pedestrian impacts, Paper 2009-01-1209, SAE International, Warrendale, 2009 / Heller MF, Watson HN, Ivarsson BJ, et al. -- Thoracic and lumbar spine injuries and the lap shoulder belt, Paper SAE 930640, Society of Automotive Engineers, Warrendale, 1993 / Huelke DF, Ostrom M, Mackay GM, et al. -- Stiffness properties of human lumbar intervertebral discs in compression and the influence of strain rate, Paper 07-0471, 20 Intl Tech Conf Enhanced Safety of Vehicles (ESV), National Highway Traffic Safety Administration, Washington, DC, 2007 / Kemper A, McNally C, Manoogian S, et al. -- Evaluation of thoracic and lumbar accelerations of volunteers in vertical and horizontal loading scenarios, Paper 2010-01-0146, SAE International, Warrendale, 2010 / Manoogian SJ, Funk JR, Cormier JM, et al. -- Biomechanical experimental studies of the lumbar spine under static and dynamic loading conditions, Paper 950661, Society of Automotive Engineers, Warrendale 1995 / Osvalder A-L -- The effect of age on fat and bone properties along the vertebral spine, paper 2013-01-1244, SAE International, Warrendale, 2013 / Parenteau C, Holcombe S, Zhang P, et al. -- Anthropomorphic test dummy lumbar load variation, Paper 11-0157, 22 Intl Tech Conf Enhanced Safety of Vehicles (ESV), National Highway Traffic Safety Administration, Washington DC, 2011 / Pellettiere JA, Moorcroft D, Olivares G -- Thoracolumbar spine fractures in frontal impact crashes, Annu Proc Assoc Adv Automot Med, 2012;56: 277-283 / Pintar FA, Yoganandan N, Scarboro M -- Lumbar spine injuries in rear impacts of different severities, paper 2013-01-0221, SAE International, Warrendale, 2013 / Yang N, Lam T, Dainty D, et al.

Sommario/riassunto

The amount of load that can be borne by the different components of the lumbar region is fairly well understood, as are resulting injuries from overloading. Less severe lumbar injuries involve a wide range of factors, including: heredity, obesity, age, occupation, sports, cardiovascular risk factors, and depression. Some of the most painful conditions that require high levels of care involve lumbar spine fracture or soft tissue injury from falls, contact sports, vehicle collisions, aircraft ejection, and underbody blasts from roadway explosions (military injuries). Each of these injury scenarios elicits a different kinematic response of the spine as a result of load direction, magnitude, and duration. Updated from a popular earlier volume, this new compendium includes landmark papers from 1994 through 2013 that focus exclusively on lumbar injuries. It also features an introductory chapter, "Blunt Lumbar Trauma" that provides an overview of the anatomy of the lumbar region, injury, and injury mechanisms, as well as an extensive literature update.