

## Subject Index

### A

Acceleration, 142  
     impact, 177  
     rotational, 177  
     translational, 177  
 Achievement motivation, 85  
 Air bag, 142  
 American Medical Association, 249  
 American Red Cross, 77  
 Aquatic Injury Safety Group, 77  
 ASTM Standards, 28, 73  
     F 1292: 340  
 Axial compression, 127  
 Axial compressive loading, 168  
 Axial loading, 127, 142

### B

Baseball, 223  
 Bending, lateral, 127  
 Bicycle safety helmets, 321  
 Boxing, 249, 257  
     tempomandibular disorders, 346  
 Brain swelling, 287  
 Buckling analysis, 168

### C

Cerebral concussion, 116, 249  
 Collar air bag, 142  
 Collegiate sports, 13  
 Coma, lucidity prior to, 287  
 Committee on Prevention of Spinal Cord Injuries Due to Hockey, 37  
 Compression, 154, 203  
 Computer simulation, 142, 168  
 Concussion, 13  
     grading system, 249  
 Concussion gun, 177  
 Consumer Product Safety Commission, 47, 340

Contact injuries, 321  
 Contact velocity, 154  
 Cortical contusion, 154

### D

Deformation depth, 154  
 Depth minimum, 77  
 Diving, 57, 77

### E

Electromagnetic digitizer, 212  
 Encephalopathy, chronic, 249  
 Equestrian sports, 28, 73  
 ETOH intoxication, 73

### F

Fast fourier transform, 304  
 Field hockey, 13  
 Flexion, 212  
 Football, 13  
     catastrophic injuries, 3, 20, 239  
     helmets, 142  
     injury prevention, 3, 20, 142  
     spearing, 239  
     tempomandibular disorders, 346

### H

Hardness, baseball/softball, 223  
 Hazard patterns, 47  
 Head Acceleration Device, 177  
 Headgear, equestrian, 28, 73  
 Head Injury Criteria, 223  
 Helmets, 142  
     bicycle, 321  
     equestrian, 28, 73  
     motorcycle, 321  
 Hematoma, acute subdural, 287

## 364 HEAD AND NECK INJURIES IN SPORTS

### I

Ice hockey, 13, 37  
tempomandibular disorders,  
346  
Impact attenuation, 321, 340  
Impact, biomechanics of, 257

Impact, dynamic, 203  
Impact loading, 346  
Impact postures, 127  
Impact tests, 223  
Impact velocity, 154  
Injury rates, 13  
boxing, 249, 257  
diving, 77  
equestrian sports, 28, 73  
football, 3, 20, 142, 239, 346  
ice hockey, 37  
inertial, 321  
NCAA Injury Surveillance  
System, 13  
NEISS, 47  
taekwondo, 116  
Intercollegiate sports, 13

### J

Jaw-joint disorders, 346  
Justin Sportsmedicine Program,  
28

### K

Kinematic analysis, 203  
Knockout mechanism, 257

### L

Lateral bending, 127, 212  
Loading, 127, 142, 168  
dynamic, 203  
Locus of control, 85

### M

Manikin, 127  
Anthropomorphic Hybrid III,  
203  
head, for baseball tests, 223  
headform, instrumented, 340  
Martial arts, 116

Mathematical modeling, 168  
Monkeys, 177  
Motion analysis, head, 212  
Motivation, contribution to  
injury, 85  
Motor control, 304  
Motorcycle safety helmets, 321

### N

National Center for Catastrophic  
Sports Injury Research,

### U

University of North Carolina,  
20

### N

National Electronic Surveillance  
System (NEISS), 28, 47  
National Injury Information  
Clearinghouse, 47  
National Park System, 28  
NCAA Injury Surveillance  
System, 13

### P

Playground surfaces, 340  
Pools, 57, 77  
Postural control, 304  
Prasad-Mertz risk curves, 223  
Prevention, 20, 37, 346  
approaches, 47  
boxing injuries, 249  
diving injuries, 57, 77  
football injuries, 3, 20,  
142, 239  
helmets, bicycle, 321  
helmets, equestrian, 73  
helmets, motorcycle, 321  
ice hockey spinal injuries, 37  
playground injury, 340

Psychology, sports, 85  
Punchdrunk syndrome, 249

### Q

Quadriplegia, 3, 77, 127

## R

Range of movement, 212  
 Rats, 154  
 Responsibility, shared, 3  
 Rhesus monkeys, 177  
 Risk  
   analysis, 3  
   curves, 223  
   factors, 20, 73  
 Rodent models, 154  
 Romberg test, 304

## S

Self esteem, effect on injuries,  
   85  
 Severity Index, 223  
 Sex orientation, 85  
 Side bending posture, 127  
 Simulation, 223  
   animal models for, 154, 177  
   computer, 142, 168  
   dummy, mechanical test, 127  
   instrumented headform, 340  
   mathematical modeling, 168  
 Soccer, 13  
   tempomandibular disorders,  
     346  
 Softball, 223  
 Somatosensory input, 304  
 Spearing  
   ball carrier, 239  
   concurrent defensive, 239  
 Spielmeier assortment, 177

Spinal injuries, 177  
   cervical, 142, 168, 203, 212  
   cervical compression, 127  
   diving, 77  
   ice hockey, 37  
 SportSmart Canada, 37  
 Standards, 3, 47  
   ASTM, 28, 73, 340  
   baseball, 223  
   equipment, 20  
   safety helmet, 321  
   softball, 223

## T

Tackling, football, 239  
 T.A.D.D. syndrome, 287  
 Taekwondo, 116  
 Tempomandibular disorders,  
   346  
 Tensile strain, 287

## U

United States Pony Clubs, 28

## V

Venospasm, 287  
 Vestibular input, 304  
 Vests, equestrian, 73  
 Visual input, 304  
 Vital cranial triad, 346

## W

Whiplash, 177  
 Wrestling, 13