

Subject Index

A

Abrasiveness, synthetic turf, 103
 Anthropometric test devices, 60
 Artificial turf, *see* Synthetic turf
 ASTM F 355, 123
 ASTM F 1551, 103
 AstroTurf, field performance over 30 years, 123
 Athletic equipment
 certification, 89
 helmet fitting errors, 83
 Athletic fields, *see* Football fields

B

Biostatistics, youth football, 21

C

Catastrophic injury, transient quadriplegia, 53
 Certification, protective equipment, 89
 Cervical spinal cord
 anthropometric test devices, 60
 injuries, 42
 neck protection, 75
 stenosis, 53
 Cervical test device, improved, 60
 Chinstrap, helmet fitting errors, 83
 Coaching
 education, 3
 legal issues, 184
 safety orientation and training skills program, 21, 167
 Compliance, protective equipment certification, 89
 Compression resistance, synthetic turf, 103
 Computed tomography, spinal stenosis, 53
 Concussion, management, 35
 Conditioning, 167
 Contusion, 35
 Creeping red fescue, 145
 Crumb rubber, turfgrass, 132
 Cutting height, turfgrass, 145

D

Dimensions, of facilities, injury prevention, 97
 Dissemination, injury prevention information, 3
 Dynamic bases, envelope system, 114

E

Envelope system, 114
 Epidemiology, youth football, 21
 Equipment, safety and, 167
 Expert witness, 167

F

Facilities
 dimensions, 97
 legal issues, 184
 safety and, 167
 Fall football, NCAA Injury Surveillance System, 9
 Fertility, turfgrass, 132
 Finite element analysis, anthropometric test devices, 60
 Fitting errors, helmets, 83
 Flammability, synthetic turf, 103
 Football facilities, safety guidelines, 97
 Football fields
 enhancing participant safety, turfgrass, 156
 safety guidelines, 97
 traction measurement, 145
 turfgrass, 132

G

G_{max} testing, 123
 Grab tear, synthetic turf, 103

H

Head injuries, 35
 Helmet, fitting errors, 83

I

Impact absorption, *see* Shock absorbcency
 Injury
 catastrophic, 42
 comparison of collegiate fall and spring football, 9
 criteria, anthropometric test devices, 60
 helmet fitting errors and, 83
 insurance underwriting, 172
 surface hardness, turfgrass, 156
 youth football, 21
 Injury prevention
 barriers to, 3

coaches safety orientation and training skills program, 21
 envelope system, 114
 football fields and facilities, 97
 legal issues, 184
 protective equipment certification, 89
 safety standards and, 172
 youth football, 21

Insurance underwriting, 172

K

Kentucky bluegrass, 132, 145

L

Leagues, legal liability, 184
 Legal issues, 184
 Legal liability, 172, 176
 Light, reduced conditions, turfgrass, 132
 Litigation, 176, 184

M

Magnetic resonance imaging, spinal stenosis, 53
 Maintenance, turfgrass, 156
 Mesh element matrices, interlocking, 156
 Misuse, legal issues, 184

N

NCAA Injury Surveillance System, 9
 Neck injury, *see* Cervical spinal cord
 Neck protection equipment
 anthropometric test devices, 60
 evaluation, 75
 Noncontact practices, 9
 "Nottsfilm", 114

O

Officiating, legal issues, 184

P

Performance standards
 neck protection, 75
 synthetic turf, 103
 Pile wear, synthetic turf, 103
 Plant growth regulator, turfgrass, 132
 Post care, 167
 Products liability, 184
 Protective equipment
 certification, 89
 legal liability, 184

Q

Quadriplegia, transient, return to play, 53

R

Resiliency-softness, turfgrass, 156

Return to play

 after transient quadriplegia, 53
 following concussion, 35

Risk

 avoidance and management, 184
 factors, catastrophic injury, 42
 injury, 172

Root zone, 156

Ryegrass, perennial, 132, 145

S

Safety

 coaches and, 21, 167
 improved cervical test device, 60
 protective equipment certification, 89
 risk avoidance and management, 184

Safety education, 21

Safety guidelines, football fields and facilities, 97

Sand-based root zone, turfgrass, 132, 156

Schools, legal liability, 184

Shock absorbency

 envelope system, 114
 synthetic turf, 103, 123
 turfgrass, 132

Shoe traction

 synthetic turf, 103, 123
 turfgrass, 132, 145

Space, of facilities, injury prevention, 97

Sports field base construction, 114

Sports insurance, 172

Spring football, NCAA Injury Surveillance System, 9

Standards, protective equipment certification, 89

Stenosis, 53

Stingers, 53

Supervision, of coach, 167

Surface hardness, turfgrass, 156

Surfaces

 safety guidelines, 97
 (*see also* Synthetic turf)

Surveillance, barrier to injury prevention, 3

Symptoms, continuing, concussions, 35

Synthetic turf

 envelope system, 114
 field performance over 30 years, 123
 standard test methods and performance standards, 103

T

Tackling

- catastrophic injury and, 42
- head down, 42
- safety and, 167

Tall fescue, 145

Test methods, synthetic turf, 103

Test standards, neck protection, 75

Tolerance, concussions, 35

Training, legal issues, 184

Trauma, repeated, concussions, 35

Tuft bind, synthetic turf, 103

Turfgrass

- enhancing participant safety, 156
- management research program, 132

traction measurement, 145

Turf system, 103

U

Unbound structures, envelope system, 114

W

Water permeability

envelope system, 114

synthetic turf, 103

Y

Youth football

injury, 21

injury prevention, barriers to, 3