gymnastic injury prevention

Many gymnastic injuries can be prevented by increasing the level of awareness and knowledge among gymnasts, parents and coaches. Gymnastic injuries are often overuse injuries, as gymnasts typically participate year-round with minimal rest or cross-training. Gymnasts may prevent injuries by cross-training with appropriate conditioning programs, learning the correct principles of each technique and resting any previously injured sites.

common gymnastic injuries
- Sprains/strains, predominantly in knees, ankles and wrists
- Shin splints
- Stress fractures, predominantly in wrists, feet, legs and back
- Tendonitis, predominantly Achilles tendon
- Muscle spasms, predominantly in the hamstrings (back of thigh), gastrocnemius/soleus (calf) and back
- Dislocations, predominantly with patellas (kneecaps) and shoulders
- Back injuries, such as spondylolysis/spondylolisthesis, facet dysfunction and sacro-iliac dysfunction
- Hyperextension injuries of the wrist
- Blisters and toenail injuries
- Overuse injuries (often resulting from poor technique training)
- Dehydration/malnutrition

preventing gymnastic injuries
- Work with a gymnastic coach who is knowledgeable about injury prevention, correct technique training and proper placement of child/adolescent into an appropriate age, level and style of gymnastic class.
- Establish a good stretching program to include hip flexors (front of hip), hip adductors (inside of leg), hip abductors (outside of leg), hip rotators (back of hip), quadriceps (front of thighs), hamstrings (back of thighs), gastrocnemius/soleus (calves), back/trunk shoulder girdle and neck. Be cautious of over stretching if already extremely flexible.
- Establish a good strengthening program to include hip flexors, hip adductors, hip abductors, hip rotators, quadriceps, hamstrings, gastrocnemius/soleus, shoulder girdle, back/trunk and neck. It should be noted that for gymnasts, strengthening is done through techniques versus weightlifting.
- Establish activities that promote balance reactions and proprioception (body awareness).
- Establish a plyometric/agility program.
- Wear supportive shoes when appropriate for gymnastics.
- Tape or brace joints if they are unstable or have a history of repetitive injuries.
- Be proactive in learning the correct techniques.
- Limit practice times, age appropriately, to prevent extreme fatigue.
- Hydrate 30 minutes prior to participating in gymnastics and as needed thereafter.
- Utilize rosin (anti-slip rock powder) on shoes/feet/hands to prevent falls and slips.
- Always check floor and equipment prior to use for safety concerns.

gymnastic conditioning programs
- Yoga
- Pilates technique
- Alexander technique
- Formal ballet

pre-performance warm-up guidelines
It is recommended to have a pre-performance warm-up in place for young gymnasts to prepare for the demands of powerful bursts of repetitive movements. A comprehensive warm-up will take approximately 30 minutes.
- Start with five minutes of light aerobic movements to gradually raise the heart rate and warm-up muscles allowing for better blood flow during stretches.
- Spend at least 15 minutes stretching hip flexors, hip adductors, hip abductors, hip rotators, quadriceps, hamstrings, gastrocnemius/soleus, back/trunk, shoulder girdle and neck. Each static stretch should be held at least 30 seconds.
- Spend five minutes on deep core stability and balance techniques.
- Finish with high-intensity, multi-directional tumbling, leaps, jumps and stunts for five minutes.

Sports Performance Orthopedic Rehab Team Specialists
SPORTS
1-866-205-7270

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