The Science and Techniques of General Movement Patterns
General Movement Patterns

- Flexion
- Extension
- Push
- Squat
- Rotation
General Movement Patterns

Gait Variations

Ortho-Kinetics®
Training General Movement Patterns

- All movement begins with the spine
  - Flexion
  - Extension
  - Rotation (Type I & Type II)
- Upper region movement
  - Push patterns
  - Pull patterns
- Lower region movements
  - Squat patterns
  - Gait and lunge patterns
- Most every sport or life movement can be classified as a variation or combination of these GMPs.
Felxion Patterns

- Highest degree of spinal movement
- Check for lesions and lack of movement at each vertebral joint prior to exercise.
- Typically more focus should be spent on lumbar and cervical flexion than on thoracic flexion.
- Lumbar flexion should be well established prior to aggressive training of rotational movements or ballistic flexion movements.
- Trunk flexion strength can be trained without flexing the trunk through isometric training.
Flexion Patterns
Flexion Stabilization
Extension Patterns

- Limited range of available spinal movement
- Check for lesions and lack of movement at each vertebral joint
- Typically more focus should be spent on thoracic extension for postural development
- Thoracic extension should be well established prior to aggressive training of rotational movements.
- Trunk extension strength can be trained without extending the trunk through isometric stabilization exercises.
Extension Patterns
Extension Stabilization
Rotation Patterns

- Varied range of available rotation at each section of the spine
- Check for lack of movement in each direction.
- Lumbar flexion and thoracic extension should be well established prior to aggressive training of rotational movements.
- The spine does perform pure rotation & will tend to move the most in the least restricted plane & at the weakest link.
- Look for assisting rotation at hips & other joints during rotational movements.
Rotation Patterns
Rotation Stabilization
Squat Patterns

- Squatting is one of the most common and highest demanded movements performed on a daily basis.
- Thoracic extension should be well established prior to aggressive loading of squat movements.
- Variety of stances, ROMs, and loading options available within reason.
- Squat strength can be developed without squatting through isometric & static training exercises.
Squat Patterns
Squat Patterns
Squat Patterns
Push Patterns

- Pushing is a common movement in daily activity & critical demand for certain sports.
- Bilateral pushing exercises should typically be trained while stabilized or braced in good posture & must consider scapula movement.
- Specific scapular-humeral rhythm required for pushing in different planes.
- Pushing movements should consider transference, i.e., Pushing while standing versus supine.
- Unilateral pushing has numerous different demands and benefits than bilateral.
Push Patterns

Push
Push Patterns
Pull Patterns

- Pulling is a common movement in daily activity & a critical demand for certain sports.
- Bilateral pulling movements should typically be trained while stabilizing lumbar and cervical areas in good posture & attempting to extend the thoracic area.
- Specific scapular-humeral rhythm required for pulling in different planes.
- Consider transference, i.e., Pulling while standing versus seated.
- Unilateral pulling has numerous different demands and benefits than bilateral.
Pull Patterns
Pull Patterns
Gait Patterns

- Efficient gait movement and general gait variations inclusive with accompanying spinal movement, are undoubtedly the keys for optimal performance in most sports and daily life demands.
- Static training of gait / lunge positions can be beneficial for strengthening weak hip / ankle / spine & core muscles involved in gait function.
Gait Patterns

- **Efficient** dynamic training of lunge movements can dramatically improve the entire gait process & strengthen the multiple subsystems involved in gait function.
- **Specific** speed and agility training is helpful for preparation for the numerous gait variances required of an athlete if properly integrated.
Gait Pattern Training
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