

Educators such as US PT Gary Gray have provided us with useful “language” to use when discussing function and have provided order where there was confusion in terms of functional theory. The “laws” below are a classic example of this adapted by Physical Solutions. They offer an insight and a framework for understanding functional exercise.

## **The 13 Laws of Function**

1. 3-Dimensionality
  2. Isolated vs. Integrated
  3. Gravity Orientation
  4. Bodyweight/Free Weight vs. External Load
  5. Stabilization
  6. Subconscious vs. Conscious
  7. Eccentric & Concentric
  8. Proprioceptively Enhanced vs. Confused
  9. Motor programme correlation and relative timing
  10. Inclusive of all motor components
  11. Open and closed chain considerations
  12. Task/sport specificity
  13. Fun/encouragement/success
- 3-Dimensional
    - Empower the movement into all three planes of motion
    - Be aware of sagittal plane dominance and transverse plane neglect
    - Utilise plane dominance where functionally appropriate
    - Avoid plane dominance where inappropriate
  - Isolated vs. Integrated
    - Function works as a chain of links
    - Is the movement causing a “chain reaction”?
    - Isolate in order to integrate
    - Integration without Compensation ...correct compensations and causes
  - Gravity Orientation
    - Gravity is my competition
    - Mirror the position and loads of the desired activity
    - Respect how gravity should be influencing movement
    - Utilise the reaction between gravity, body-weight and the ground...the ground reaction
  - Bodyweight/Free Weight vs. External Load
    - Manipulating a functional load...intrinsic or extrinsic?
    - Loads reflect the functional task
    - Machine pitfalls – Are we confusing gravity?
    - If you let it go... it should hit the ground!
  - Stabilization
    - Safety vs. Function – when to stabilize, when not.
    - Question traditional “core” training...how functional are sit-ups?
    - Static stability verses dynamic stability ...we move in a dynamic world

- Subconscious vs. Conscious
  - Is the activity subconsciously “reactive”?
  - Paralysis by analysis – “over-thinking” shackles sub-conscious performance
  - Achieve appropriate sub-conscious responses to enhance sub-conscious function
  - Isolation pitfalls (VMO, Pelvic tilt, TVA training)... dangers of the conscious mind.
  
- Eccentric Load & Concentric Force
  - Correct sequencing of movement.
  - Eccentric loading followed by concentric force. Load to unload back to reload.
  - Absorbing force and producing power
  - The essential component of the ground reaction and “plyometric” movement
  
- Proprioceptively Enhanced vs. Confused
  - Getting to know the proprioceptors – who are they and what are they trying to tell us?
  - Providing a rich but relevant proprioceptive environment
  - Achieving sub-conscious motor responses from proprioceptive enhancement
  
- Motor Programme Correlation and Relative Timing
  - Understand and utilise the primal patterns
  - Movements start and finish under complete control and with correct eccentric/concentric timing
  - Bio-mechanical timing for success
  
- Inclusive of all motor components
  - Support and attend to all components
  - Stability, flexibility, strength, power, agility, balance, endurance, speed etc
  - Be inclusive and exclusive according to goals
  
- Open and closed chain considerations
  - Function requires a constant opening and closing of the chain...training should reflect this
  
- Task/Sport Specificity
  - Can I tell what you are training for by watching you train?
  - Transforming components of the end activity into functional movements in training.
  - Completing the cycle of carry-over into function.
  
- Fun / Encouragement/Success
  - If it's fun, chances are it's functional!
  - Can I provide my athlete meaningful measurement of their performance?
  - Am I truly giving my athlete every chance to succeed?