Principles and Parameters of Exercise
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**PROVRBS-P**
- PROGRESSION
- REGULARITY
- OVERLOAD
- VARIETY
- RECOVERY
- BALANCE
- SPECIFICITY
- PRECISION

**FITT FACTORS**
- FREQUENCY
  - Times per week
- INTENSITY
  - Degree of exertion (i.e. %MHR or #RM)
- TIME
  - Duration (time, distance, sets/reps)
- TYPE (category of ex.)
Progression

• Systematically progress training challenges over time
• Movement skills first
• Endurance
  • Rule-of-thumb is to progress time/distance by no more than 10% per week.
• Strength
  • First master core stability and control of body-weight exercises.
Regularity

- You are what you eat
- You are what you train to become
- If it is important, train it at least once every 7-10 days.
  - Exception: foot marching 2X/month is likely sufficient
Overload

- SAID Principle
  - Specific
  - Adaptation
  - Imposed
  - Demands
- Overload imposes the demand
- Very easy to over-overload
Variety

- Ensures multiple adaptations
  - General Physical Preparedness

- Controls overuse injuries

- Absolutely necessary for the broad-ranging physical requirements of Ranger missions.
Recovery

- Overload-Recover-Repeat-Progress
- High-volume speed and/or power training require greater recovery
- Scheduling recovery
  - Weekly, Monthly, Yearly
- Overtraining not only affects muscles/bones/tendons stress injuries, but also disruption of hormonal balance.
Balance

• Strength
  • body-weight resistance
  • moderate-heavy resistance
  • power

• Endurance
  • aerobic
  • anaerobic

• Movement skills
Specificity

• “Fit for what?”
• For Rangers, the answer is “Fit for current and potential Ranger training and combat missions.”
• Tactical PT
  • operationally relevant degree of intensity and volume
  • preceded by general fitness development (strength, endurance, movement skills).
• Variety/Specificity Paradox
Precision

- Biomechanical correctness

- Goal: movement patterns that are efficient and effective

- Biggest flaws
  - Not stabilizing the core
  - Not squatting effectively
FITT Factors

- Frequency
- Intensity
  - %MHR
  - Load
  - Reps or distance/time
- Time
  - Generally inverse to intensity
- Type
  - General to specific
The Root of All Overuse Injuries

*a violation of the Principles & Parameters of Exercise*

TOO HARD, TOO FAST, TOO SOON, TOO MUCH, TOO OFTEN