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SCIENTIFIC- THEORETICAL PRINCIPLES FOR PLANNING WEEKLY TRAINING LOADS FOR HIGH- PERFORMANCE PARA TRACK AND FIELD THROWERS

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Abstract: This article examines the principles, approaches, and methods for planning weekly training loads for high-performance para track and field throwers (javelin, shot put, discus). Taking into account athletes' physical and functional capacities, the study scientifically analyzes how optimal load distribution in the training process can both preserve athletes' health and improve performance. Particular attention is given to load control, recovery processes, and the effectiveness of individualized approaches in preparation.

Keywords: Throwing events; training process; weekly load; scientifically based planning; functional capabilities of the athlete; individual approach; sports performance; recovery process; athlete health; physical preparedness; load control.

Introduction. In our republic, developing novel methods for training para track and field throwers—so as to select and direct tools that enhance training effectiveness—is an important practical task. Today, significant attention is paid to challenges associated with planning the weekly training loads of para throwers, enhancing the reliability and productivity of their sporting activity. This study supports the implementation of the decisions set in the 2021 Presidential Decree No. PQ-5114 “On additional measures for development of the Paralympic movement” and other normative legal documents relevant to this field.

Para track and field—especially throwing disciplines—demand high levels of physical and psychological preparation. In planning training for athletes with disabilities (para-athletes), their functional potential, sporting experience, health status, and adaptation capacity must be taken into account. Moreover, to achieve top performance, training loads must be structured in weekly cycles in a precise, scientifically justified manner.

Aim and Tasks **Aim:** To scientifically plan and optimize weekly training loads for high-performance para throwers (shot put, discus, javelin), corresponding to their physical capacities, preparation levels, and classification, so as to enhance their sporting results.

Tasks:

1. Analyze the technical and energetic demands of para throwing events.
2. Define criteria for assessing the individual and functional characteristics of athletes with disabilities.
3. Review theoretical and practical methods used for planning training loads for elite para athletes.
4. Develop an optimal weekly load model and formulate recommendations.
5. Monitor athlete condition and evaluate effectiveness based on the proposed model.

Object of study: The training process of high-performance para track and field throwers.

Subject of study: The content, structure, and methodology of planning weekly training loads for para throwers.

Scientific Novelty

- A model is proposed for individualizing weekly training loads for para athletes based on classification and physical capability.
- Psychological factors and rehabilitation elements are integrated theoretically into the load planning process.
- A multi-component weekly load model is developed, harmonizing strength, plyometric, technique, recovery, and psychological preparation elements.

Practical Significance

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- The developed weekly training model may serve as a practical guide for para-athlete coaches.
- The model aims to improve athletes' performance while protecting their health.
- The recommendations may be applied in the practice of para track and field athletes and in sports medicine institutions.

Main Part (Outline of Content)

1. Characteristics of Para Throwers and Throwing Disciplines

Throwing events (shot put, discus, javelin) require strength, balance, coordination, and refined technique. Para athletes are classified into various functional categories (e.g. F34, F57, etc.), reflecting their physical capabilities. Thus, a tailored, individualized training load system is essential.

2. Principles of Planning Weekly Training Loads

The weekly training load should be planned according to key principles such as:

- **Progressiveness** – gradual load increase
- **Proportionality** – balance among strength, endurance, speed, and technical loads
- **Individualization** – matching loads to each athlete's condition
- **Systematic structure** – coherent sequence and goal-oriented training design
- **Recovery** – rest and regeneration are integral to the plan

3. Composition of the Weekly Load (Sample Model)

A sample weekly training plan for a high-performance para thrower might be structured as follows:

Day	Main Focus	Objective
Monday	Strength + Technique	Maximal strength and technical work
Tuesday	Plyometric + Recovery	Explosive power and general recovery
Wednesday	Technique + Speed	Precision movement and reaction
Thursday	Strength + Plyometric	Integration of strength & speed
Friday	Simulated Competition	Adaptation to competitive conditions
Saturday	Light Recovery	Circulatory stimulation & muscle recovery
Sunday	Rest	Full recovery and motivational regeneration

This model should be adjusted according to the athlete's age, competitive level, and classification.

4. Special Factors in Planning for Para Athletes

- **Functional assessment** – load determined by medical and biomechanical indicators
- **Degree of impairment** – limited joint range, muscle strength constraints
- **Psychological factors** – motivation, self-confidence, mental state
- **Ergonomic equipment** – optimization of adaptive throwing platforms or wheelchairs

5. Scientifically Based Monitoring System

Recommended load monitoring methods include:

- Heart rate (HR)
- Subjective fatigue assessment (RPE scale)
- Video technique analysis
- Rehabilitation indicators (muscle soreness, joint mobility)

Conclusion. Organizing the training process correctly—especially by scientifically planning load magnitude and content—plays a pivotal role in achieving high sporting outcomes. In para throwing disciplines, creating weekly training loads aligned with the athlete's individual characteristics not only enhances performance but also protects their health and helps prevent fatigue and injury.

By applying individualization, appropriate load distribution, and recovery planning, load control helps maintain athlete well-being and supports steady performance improvements. Properly structured training loads also foster discipline, psychological stability, and self-confidence, contributing to a sustainable and long-term development of athletic activity.

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