



ARE YOU PREPARED?

ADAPTING THE GENERAL PREPARATION PERIOD FOR THE FITNESS INDUSTRY

The fitness industry has much to gain by following the tried and tested principles of General Physical Preparedness that have been used for decades in the sporting world, writes strength coach *Tony Boutagy, PhD.*

The old Soviet coaches used the term 'General Physical Preparedness' (GPP) to refer to the non-specific development of work capacity prior to the season of sport-specific training. The goal was to enhance a large number of biomotor capacities, so that the athletes could tolerate and positively adapt to higher volumes and intensities of work in later phases of training.

General, not specific

Reading through all of the classic Eastern Bloc texts on sports theory, the thing that most struck me was the systematic approach to goal specific training blocks. All athletes, across all sports, commenced their training season by building work capacity and general fitness across a wide range of physical capacities that, and here's the interesting part, were specific to general fitness but not specific to the sport. Whether the athlete was a hammer thrower, wrestler or track runner, programs emphasised endurance, mobility, strength-endurance, jumping, sprinting and so on.

The sports blueprint for GPP

One of the greatest weightlifters of all time, Naim Süleymanoglu, who passed away



Personal trainers can utilise his approach and methods but apply them to foundational fitness before the development of hypertrophy and body composition



THE QUICK READ

- General Physical Preparedness (GPP) refers to the non-specific development of work capacity prior to the season of sport-specific training
- The principles can be adapted for use in the fitness industry, where, rather than being sport-specific, the goals are typically muscle mass and body composition-focused
- The themes of a general preparation period in the fitness industry are balance, and general work capacity
- To increase general physical preparedness in the fitness industry, a GPP will consist of a block of training, typically three to four programs, that emphasises the development of a wide range of physical capacities.

in 2017, was known for his prodigious work volumes, often training 10 to 12 hours a day. Despite being the strongest man in the world for his weight class, in his GPP, he performed general conditioning that included stretching, jogging, jumping, table tennis and soccer¹.

The famed Russian powerlifting coach Boris Sheiko also includes sports participation and general fitness conditioning in the GPP for his powerlifters². Even the tattooed, goatee sporting, bar breaking legendary strength coach, Louie Simmons, believes that a training year should commence with a GPP focusing on work capacity (Farmer's walking, sled dragging etc.), as well as weak links or injury prone areas (like the elbows and rotator cuff³). Only later phases of training programs see the introduction of techniques and methods to develop the specific requirements of the sport. It was believed - and demonstrated over several decades - that the sports-specific programs were better performed, and better tolerated, after the development of general physical preparedness.

GPP for fitness

In the fitness industry, where the primary goals are typically improvements in muscle mass and body composition rather than sporting prowess, the same generalised theories of training hold true: goal-specific training is better performed and better tolerated after the client has been generally physically prepared. Put another way, the ability to perform high volume, advanced workouts, recover set-to-set without diminishing loads and recuperate between sessions so that workouts progressively overload and the client positively adapts to the workload, is predicated upon the various capacities developed in a well-designed GPP.

The themes of a GPP in the fitness industry are balance, and general work capacity.

Balance

A GPP is designed to create balance between limbs; between agonist and antagonist; and between prime mover to stabiliser. All of this can be summarised as eliminating weak links or plugging energy leaks.

General work capacity

A GPP also develops non-specific work capacity across a number of biomotor capacities, with the primary goal of increasing general fitness to be able to tolerate and positively adapt from the demands of goal specific training in later phases.

The various biomotor qualities include strength-endurance, flexibility, lactate tolerance, cardiorespiratory capacity and general strength and stability. The greater these areas are developed, the higher the tolerance of the workload in subsequent phases.

There are a lot of misunderstandings regarding a GPP. Most commonly, it is thought to be the training period of a beginner, also called the Anatomical Adaptation Phase, by Tudor Bompa⁴ or the Structural Balance Phase by Charles Poliquin. While every beginner has to start somewhere, the principles underpinning a GPP are so much broader than the introductory programs of a beginner. Examining all the words in a GPP, we can begin to appreciate the numerous capacities this phase of training is attempting to develop:

- **General:** training that is not specific to any activity or sporting end outcome
- **Physical:** covers a number of biomotor capacities, including flexibility, endurance, power and speed development, lactate tolerance, stability and general strength.
- **Preparedness:** increases work capacity and fitness with the primary goal of being able to tolerate and positively adapt from training sessions, while minimising the risk of injury.

A large part of our understanding of the principles governing the GPP is based on the work of the Soviet coaches and scientists, in



particular Dr Anatoli Bondarchuk. In his three-volume series *Transfer of Training in Sports*⁵, Bondarchuk outlines the steps you would take from a GPP to sports specific training. Personal trainers can utilise his approach and methods but apply them to foundational fitness before the development of hypertrophy and body composition.

To understand the transference of training, we work backwards: what does an advanced fitness program look like and what are the physical requirements to be able to perform correctly, safely and without diminishing load? Then, we deconstruct those abilities, choose the assessments that reflect the demands, and focus on them during the GPP. From this point, the client is ready to build upon that foundation with goal specific programs.

Again, regardless of the ability level of a client, the goal of a GPP is to improve work capacity by adhering to progressive overload and increased training volume which, in turn, dictates the amount of training they can complete, recover from and to which they can positively adapt.

Readiness to train

Tests to assess readiness to train, which become the focus of a GPP, should always be individualised. Often, they will include neglected muscle groups and movement patterns that have been de-prioritised over the previous blocks of training. Other areas of focus include previous injuries or imbalanced areas due to sporting practice or poor programming, which strength coach Ian King calls the 'unintended imbalances'⁶.

Typically, a GPP will focus on the smaller muscle groups that are not likely to appear as star performers in later, higher volume, specific phases of training for body composition. These include the ankle and hip stabilisers, in particular the thigh ab- and adductors, the lateral core, the lower back, the shoulder stabilisers and the wrist or gripping muscles.

Furthermore, targeted mobility drills for the ankles, hips, thoracic spine and shoulders are often needed, so that future, full range of motion strength exercises can be performed correctly, comfortably and safely. Thus, a GPP will allot the appropriate time to flexibility to develop this important component of fitness.

Finally, cardiorespiratory fitness also appears prominently during this phase, even if the primary end goal of the training regime is muscle mass. The greater the cardiovascular fitness, mitochondrial function, capillary density and lactate tolerance, the better volume-based workouts for fat loss and hypertrophy can be performed.

The ability to perform higher volumes of work, with less drop off in load and the ability to recover between sets and between training days, ultimately results in superior results in body composition, and this is precisely why a good GPP will increase both speed and endurance.

To summarise the principles of a phase of training to increase general physical preparedness in the fitness industry, we can state that the GPP is a block of training, typically three to four programs, that emphasises the development of:

- exercise mastery, muscle and movement awareness and technique
- mobility and flexibility to perform full range of motion exercises correctly and safely
- cardiorespiratory fitness, anaerobic capacity and lactate tolerance
- general strength, stability, symmetry between limbs, with special emphasis on weak links and neglected areas.

Building on this theory, with skill acquisition and increasing work capacity in mind, many coaches have recommended that strength workouts in the GPP consist of the following:

- higher repetition, lower loads
- lower exercise set volume
- greater training frequency
- inclusion of mobility drills
- large, general exercise variety.

Putting GPP into play

The next step is to design a week of training, where we organise the various components to be developed. For example, one program, lasting 3-4 weeks, might be constructed in the following way:

- The specifics might involve a strength workout to involve:
- 10-15 minutes of targeted mobility for the ankles, hips, thoracic

TABLE 1

Mon	Tues	Wed	Thur	Fri	Sat	Sun
Weights	Cardio	Weights	Flexibility	Weights	Cardo	Rest

spine and shoulders performed prior to strength training.

- 2 work sets per exercise, focusing on general movements for the whole body, with special priority given to the ankles, hip and shoulder stabilisers, lateral trunk, and forearm and wrist muscles. The more typical, larger muscles would be, at this stage, de-emphasised, with the performance of exercises for the thighs and upper body muscles placed later in the workout.
- Where appropriate, exercises to improve trunk stiffness (isometric strength) should be included to develop the rigidity in the torso required in later workouts for the performance of advanced strength exercises.
- For each exercise, higher repetition and lighter load would be used to increase strength endurance, work capacity and skill acquisition.
- Mini-circuits have been used since the 1960's as a way to sequence the exercises in a GPP. With short rest intervals between exercises, this allows for a higher volume of work to be performed in the workout, whilst developing strength-endurance.

Here is an example of a total-body GPP strength workout performed as four mini-circuits of four exercises:

Sets: 2

- Reps: 20 (or 45-second holds for planks)
- Rest between exercises: 10-seconds
- Rest between circuits: 60-seconds

The important features of this GPP workout is that, firstly, it is general, with all muscle groups conditioned with foundational movement patterns; secondly, it develops work capacity, strength endurance and skill acquisition by using high reps, low load and short rest periods between exercises and sets; and thirdly, it prioritises the weak links and commonly neglected muscle groups by performing them at the beginning of the workout.

The same or a similar program would be performed again mid and at the end of the week, ideally totalling three days a week in the weights room. After three weeks, the program would be changed, using exercises now slightly more complex but still using similar variables to continue increasing work capacity, symmetry, stability and strength-endurance.

The development of cardiovascular fitness would be allocated

to the other days in the training week. The choice in mode and type would be individualised and based on the fitness level of the client. These options include either steady state aerobic exercise, performed at approximately 65-75% of maximal heart rate for up to an hour, or interval-based workouts designed to increase anaerobic capacity, lactate tolerance or aerobic power.

In summary, goal specific training phases to improve body composition, decrease body fat and increase muscle hypertrophy assume a certain degree of muscle strength, stability, symmetry and cardiorespiratory fitness. Generalised theories of training, initially developed in the former Soviet Union for sporting mastery, can be used to guide, in principle, the division of a training year in the fitness industry.

The sole purpose of periodising in this way is to arrive at the goal specific training in the best possible condition to be able to complete and tolerate the high training volumes, and recover set-to-set and between sessions, so that one can positively adapt to the workouts, while minimising the risk of injury. To this end, a well-designed GPP will develop all the capacities required to perform goal-specific training, prioritising work capacity, stability, trunk rigidity, symmetry between limbs, general strength, endurance, speed, lactate tolerance and mobility. Used for decades in sports development, the fitness industry has much to gain by following these tried and tested principles. **N**

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TABLE 2

Muscle group	Exercise selection
Lateral core	Side plank
Calf	Single-leg calf raise
Anterior core	Front plank
Ankle stability	Single-leg hopping
Low back	45-degree back extensions
Humeral stabiliser	Side lying dumbbell external rotations
Hip adduction	Modified Copenhagen adductions
Scapulae stabiliser	Dumbbell shrugs
Hip abductors	Banded abductions
Wrists	Dumbbell wrist flexion & extensions
Hamstrings	Swiss ball leg curls
Shoulders	Dumbbell lateral raise
Quads	Step-ups
Chest	Hands elevated push-ups
Glutes	Supine single-leg hip extensions
Back	Seated rows