

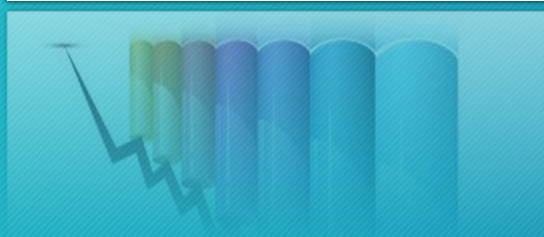
Periodization





What is Periodization?

- Periodization is planned long-term variation of the **volume** and **intensity of training** to prevent overtraining and promote optimal performance at desired time.



Periodization

Proposed in 1960's by

Leo **Matveyev**



Defining Volume and Intensity

DEFINING VOLUME AND INTENSITY



Volume-

- Amount of work performed per exercise, per day (sets x reps)

Intensity-

- The power output of the exercise

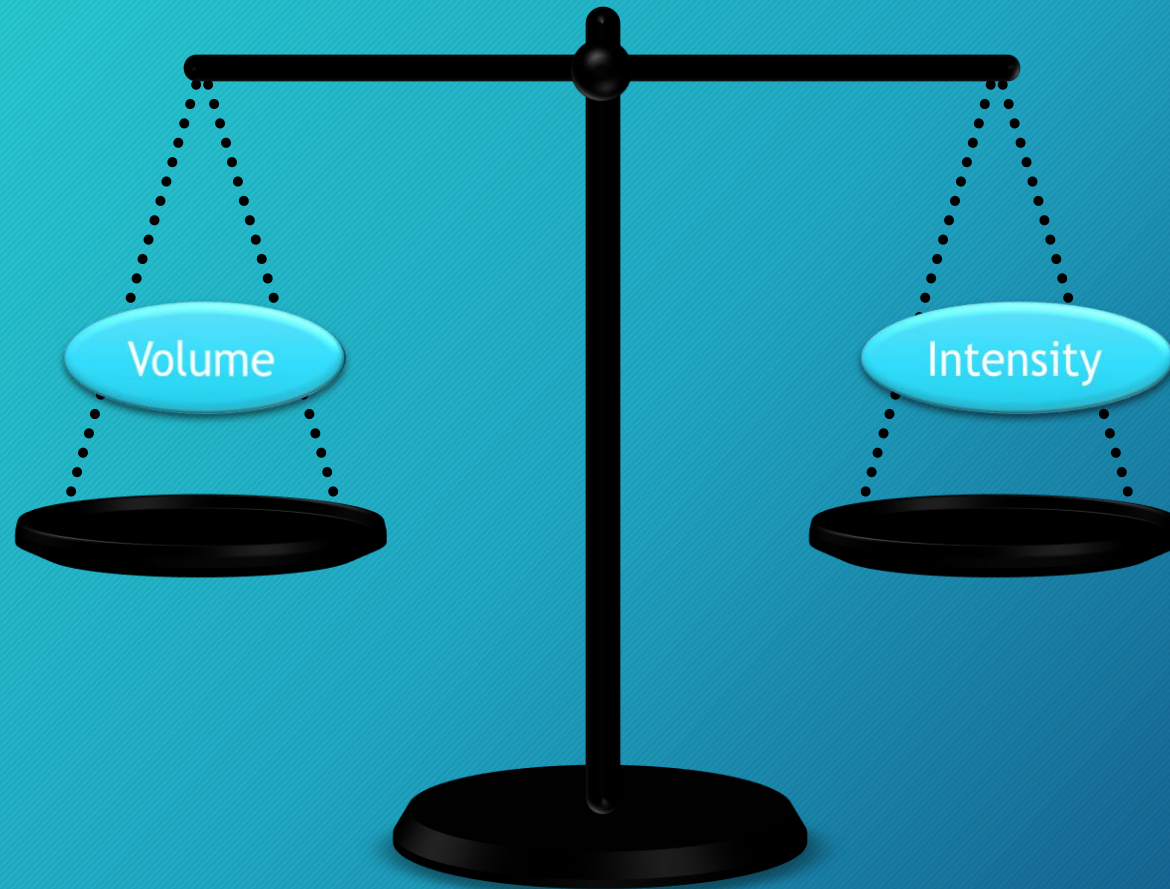


Estimating Volume and Intensity



- **Exercise intensity-** Monitored by calculating the relative intensity (% of 1RM)
- **Training intensity-** Average mass lifted per exercise, per week, per month





Periodization involves **shifting training priorities**

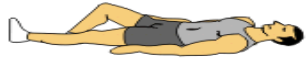
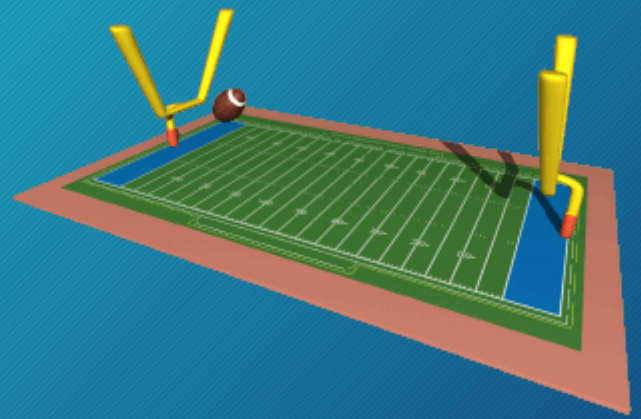
from non-sport-specific activities of high volume and low intensity to sport-specific activities of low volume and high intensity over a period of many weeks to prevent overtraining and optimize performance.



MAY INCLUDE VARIOUS FORMS OF EXERCISE



- General Conditioning
- Sport-Specific Activities
- Resistance Training



General Adaptation Syndrome (GAS)

3 Phases

Alarm Phase

- Body experiences a new or more intense stress
- May last several days or several weeks
- Usually results in excessive soreness & drop in performance

Resistance Phase

- Body adapts to the stimulus and returns to “normal”
- Neurological and muscular adaptations occur
- Lead to increased performance
- Sometimes referred to as “super compensation”

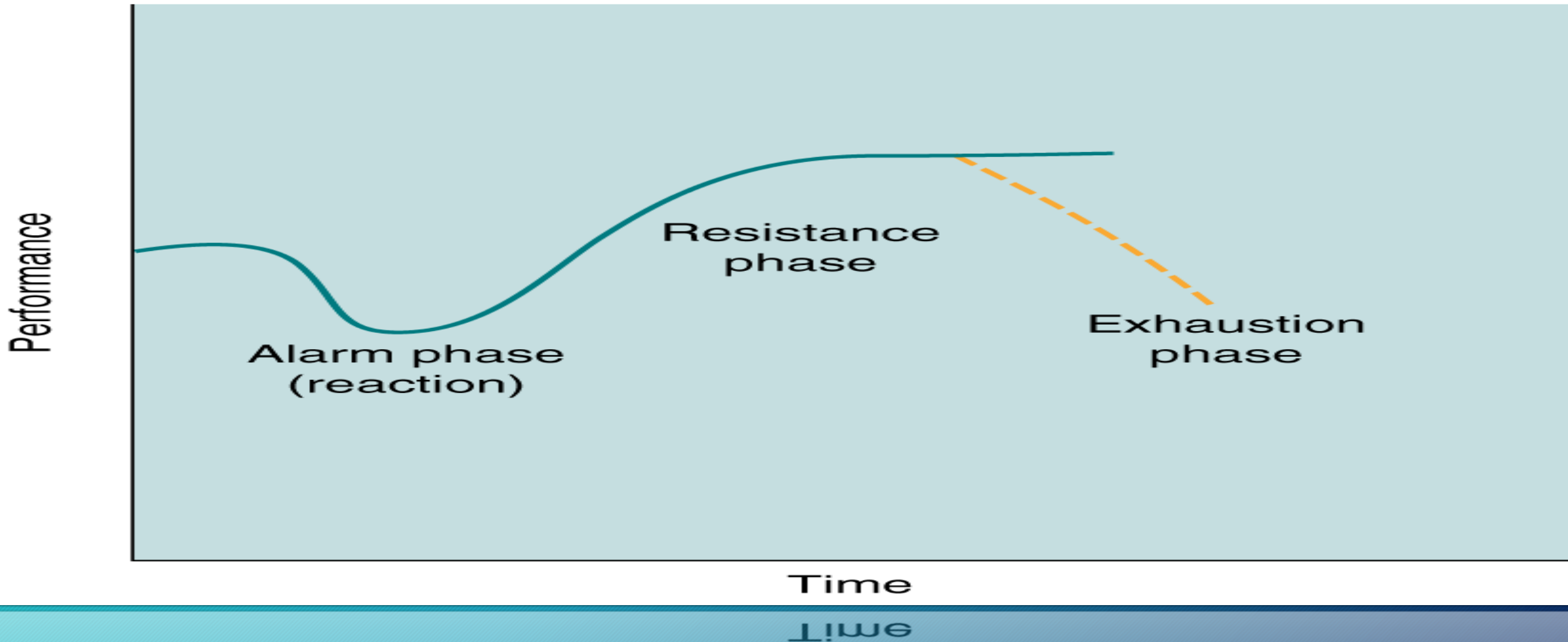


Exhaustion Phase

- Occurs if stress persists for extended periods
- Alarm phase markers may be indicated (fatigue, soreness)
- Athlete loses the ability to adapt to stressors
- Onset may be caused by non-training related stress



The General Adaptation Syndrome (GAS)



Periodization Cycles

- **Macrocycle** - long period of time, one year
- **Mesocycle** - medium length of time, several weeks to several months
- **Microcycle** - short length of time, one or more weeks



Designing Macrocycles

- When are the planned periods?
 - Off-season (Preparatory)
 - Preseason (First Transition)
 - In-Season (Competition)
 - Considerations for long seasons
 - Maintenance vs. Undulating Microcycles
 - Post-Season (Second Transition)



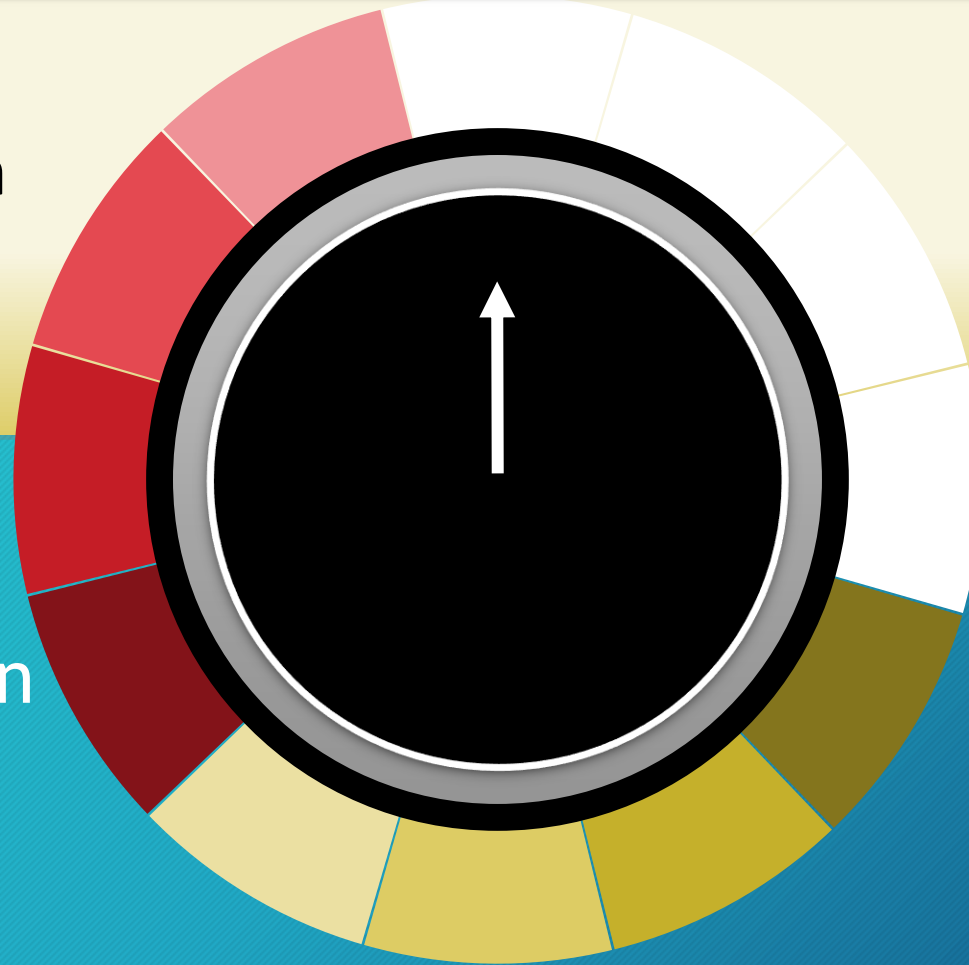
Periodization periods

2nd transition

Preparatory

Competition

First transition



- Preparatory Period

- Usually the longest period
- Occurs during “down time”
- Very few skill practices
- Emphasize basic conditioning
- Consists of three mini-phases



Preparatory Period Breakdown



Hypertrophy/Endurance Phase

- **Early stages of preparatory period**
- **1 to 6 weeks**
- **High Volume/Low Intensity 3-6 sets of 10-20 reps @ 50-75% 1RM**

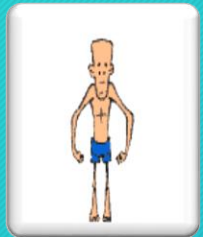
Basic Strength Phase

- **Middle stage of prep. Period**
- **Few weeks**
- **Moderate Volume/High Intensity**
- **2-5 sets of 4-8 reps @ 80-90% 1RM**

Strength/Power Phase

- **Final Prep. Stage**
- **Few weeks**
- **Low Volume/High Intensity**
- **3-5 sets of 2-5 reps @ 75-95% 1RM**

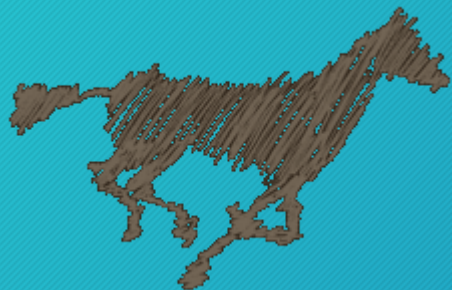
www.revivephysio.net



Mesocycles Defined - 1st Transition



- Break between high-volume training and high-intensity training
- Important to minimize distractions
- Maximize athlete focus



Mesocycles Defined - Competition

- The goal is to peak strength and power
- Increase intensity/Decrease volume

In-Season Training

- Peak only lasts a few weeks
- Maintain strength for the season with moderate volume/intensity
- Practice in skill technique increases rapidly
- Time spent conditioning decreases
- 1-3 sets of 1-3 reps @ $\geq 93\%$ 1RM

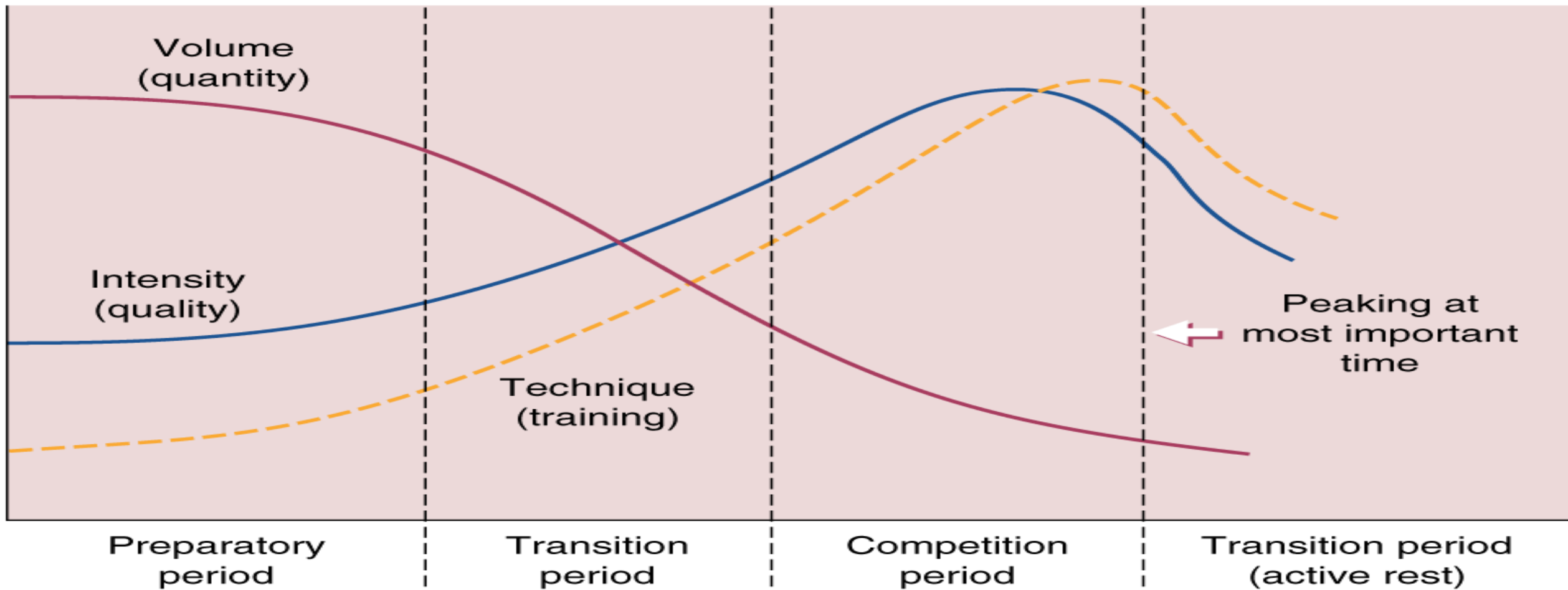


Active Rest (second transition)

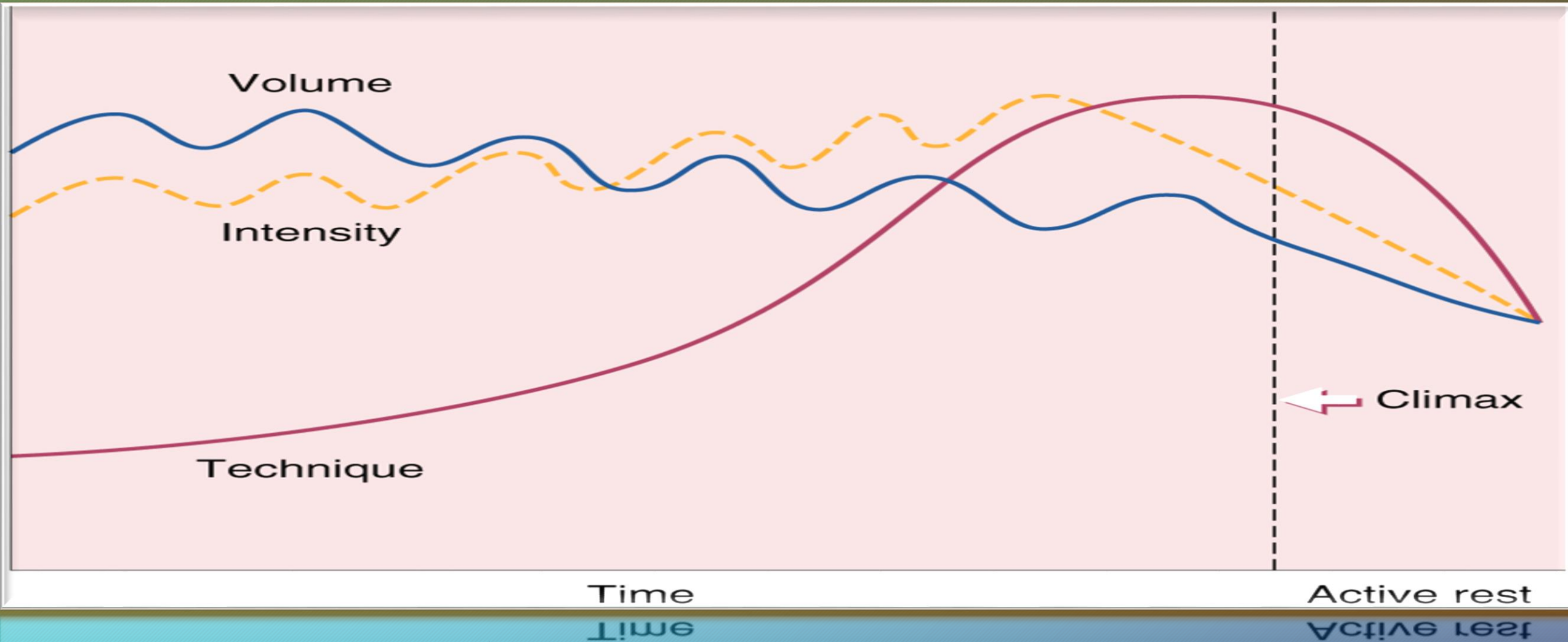
- Restoration
- Remain physically active
- Lasts 1-4 weeks
- Mental and physical break from sport



Matveyev's Model of Periodization: Appropriate for Novice Athletes



Modifications of Matveyev's Model of Periodization; for Advanced Athletes



4 X 4 Matrix



	FREQUENCY	INTENSITY	VOLUME	REST
POWER	1-2 week	85-95%	1-4 reps 1-2 sets	4-6min
STRENGTH	3-4 week	75-85%	4-8 reps 3-4 sets	2-3min
HYPERTROPHY	4-6 week	60-75%	8-12 reps 4-6 sets	30-90s
ENDURANCE	5-7 week	<60%	12-15 reps 5-7 sets	<30s

SECOND EDITION

PERIODIZATION TRAINING FOR SPORTS

*Science-based
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Periodization Training for Sports



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Thank You