

Game Load in Ice Hockey

Veli-Pekka Kurunmäki

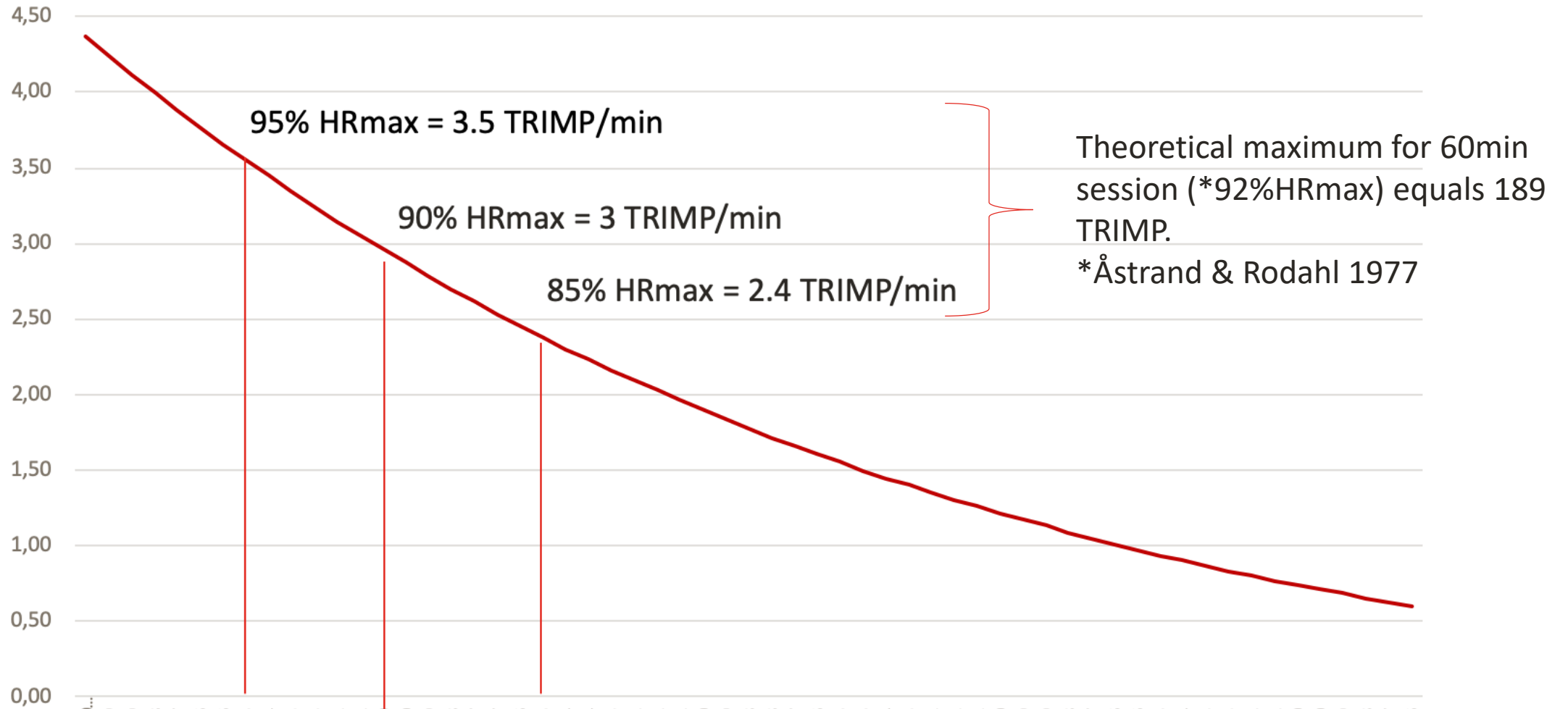
17 May 2019



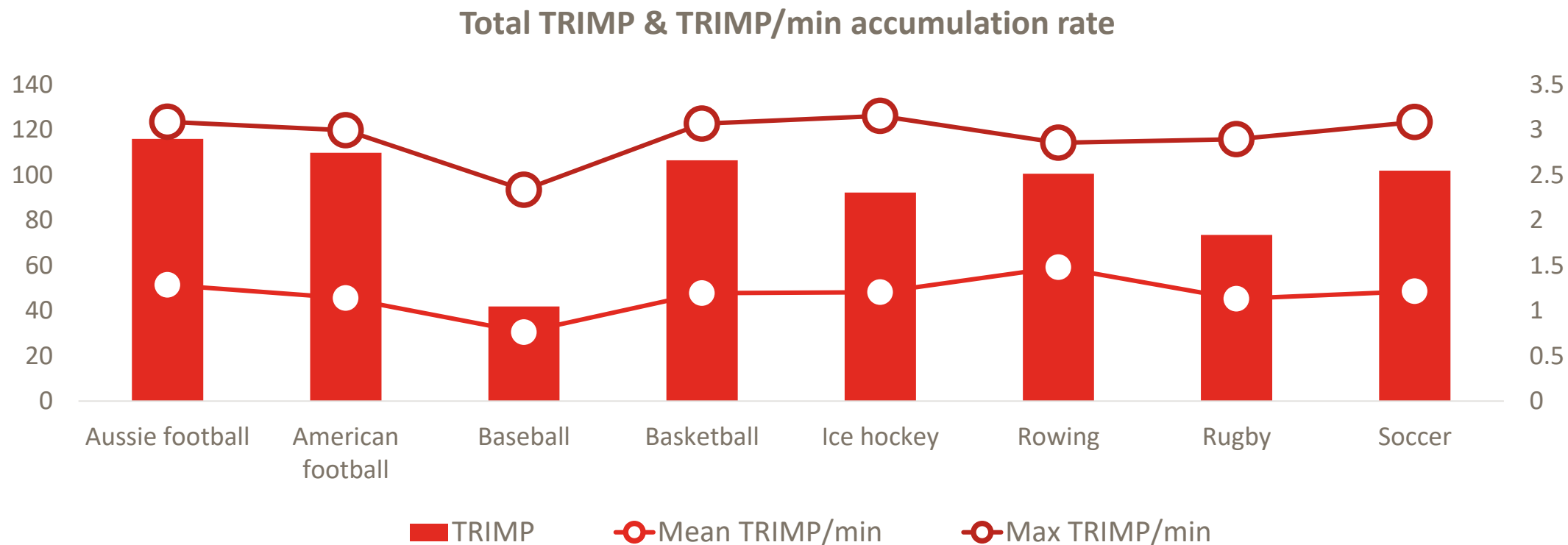
TRAIN AS YOU PLAY

- In all sports training planning starts from understanding the game requirements
- In many sports each training cycle has a specific focus to improve certain quality, such as VO2max, Maximal strength, speed etc.
- In team sports technical, tactical and skill aspects requires a lot of attention. Instead of developing a certain physiological quality, typically training consists of game specific drills and sections.
- Trimp and Trimp/min provides useful Load and Pace metrics tools to catalog internal responses to games, drills and training sessions
- TRIMP requires sport specific scaling in order to utilize it maximally in training planning

TRIMP ACCUMULATION RATE



TRIMP IN DIFFERENT SPORTS



Based on 1.4M training sessions

TRIMP SCALE BASED ON DATA MINING

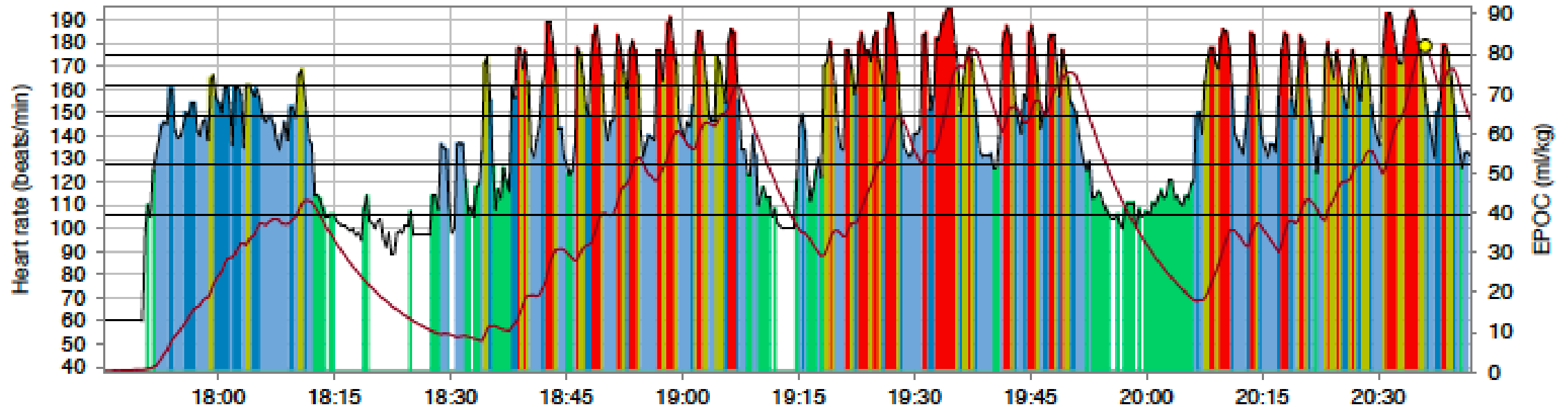
TRIMP scale



TRIMP/min scale



TRIMP ACCUMULATION IN GAME



Warm-up 32

1st period 62

12

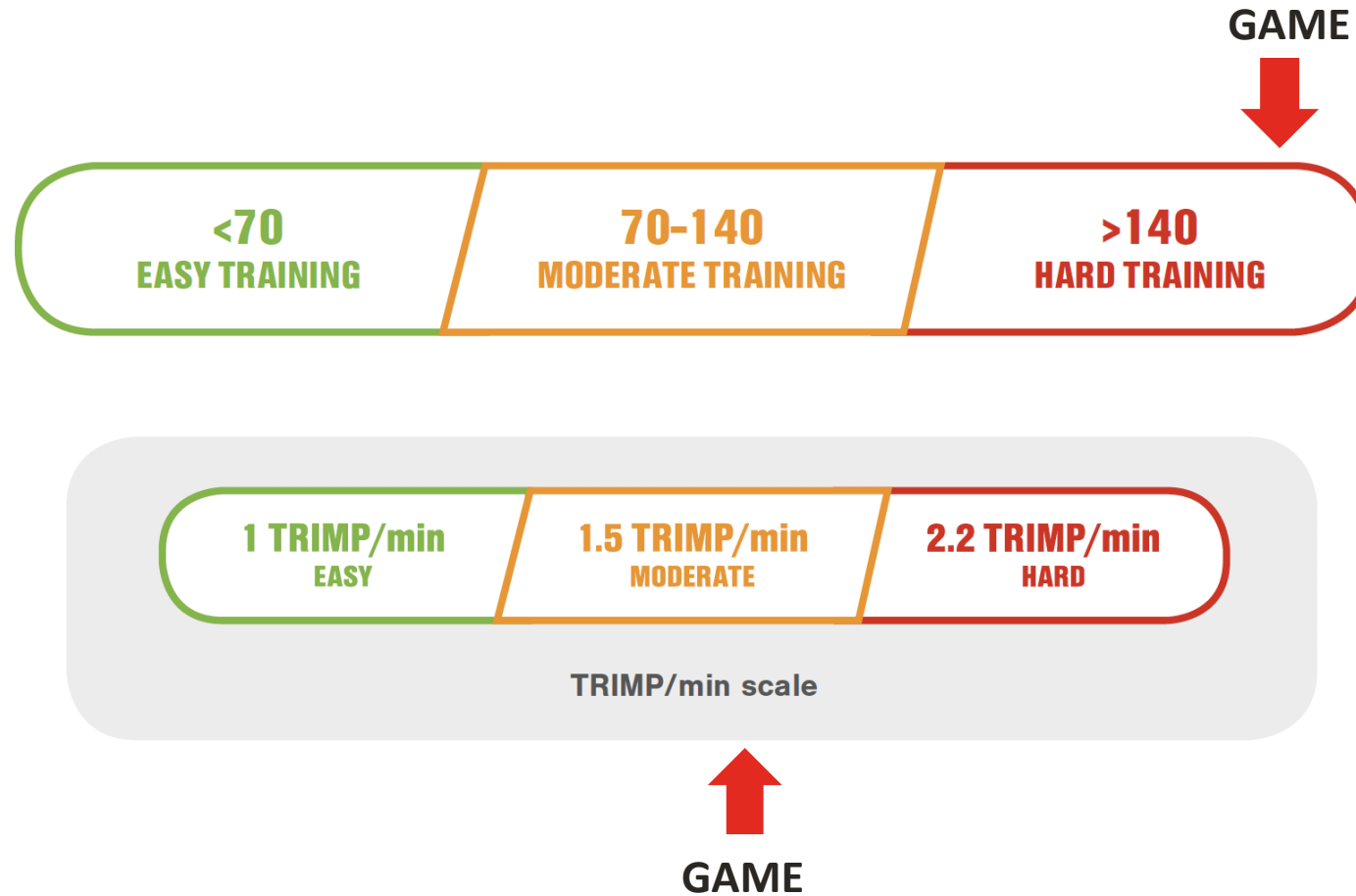
2nd period 59

13

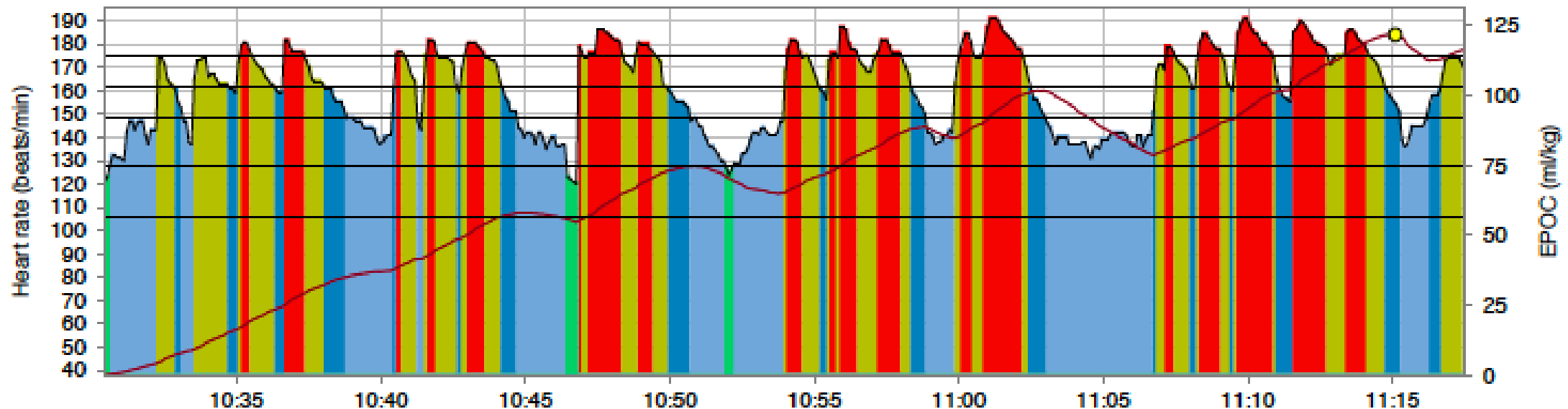
3rd period 55

- **TOTAL TRIMP 233** (175min) => 1.3 TRIMP/min
- TRIMP in 1-3 periods: 176 (105min) => **1.7 TRIMP/min**

TRANSFERRING GAME REQUIREMENTS TO PRACTICE



EXAMPLE: GAME SPECIFIC PRACTICE



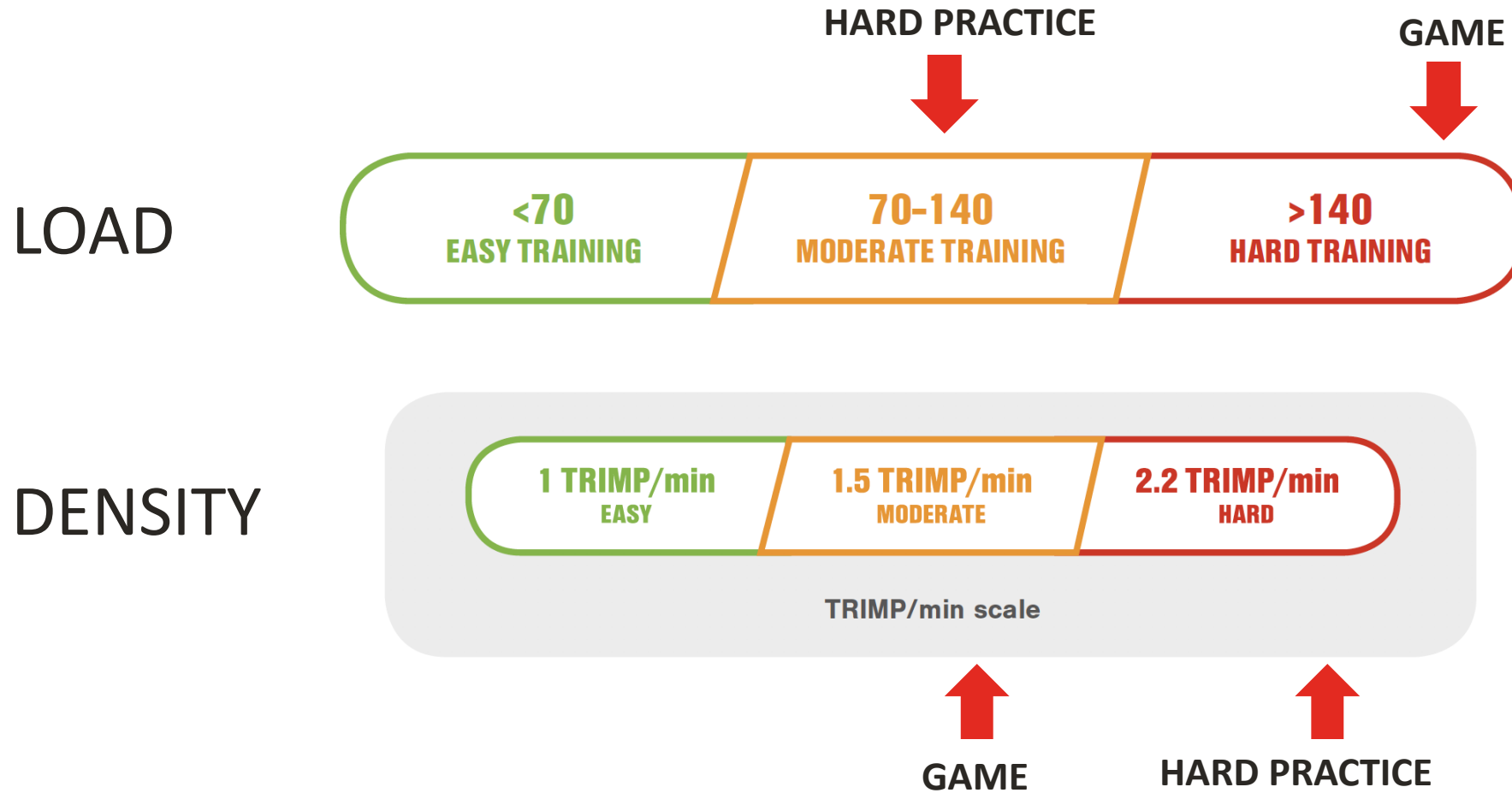
TRIMP 108 (47min) => 2.3 TRIMP/min

Intensity and effort needs to match. Adjustments are done with recovery breaks and training duration

KEY APPLICATIONS:

- Know how much specific sessions and drills are effecting on TRIMP accumulation => training planning
- Observe in real time individual responses: Finish the session earlier or extend recovery periods

GAME VS. PRACTICE

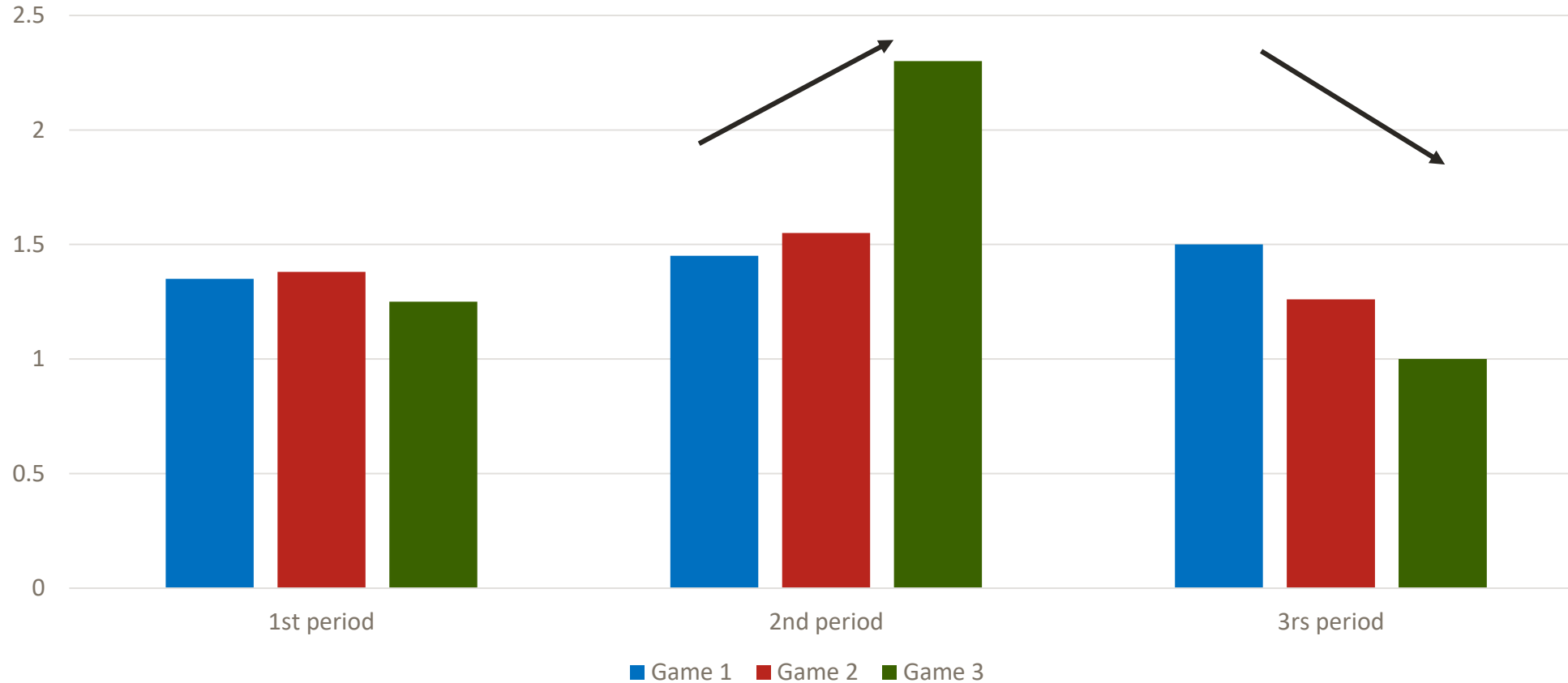


3 GAMES A WEEK

Team (25 players) average:

	HR Average	PeakHR	TE	Anaer	TRIMP	Trimp/min	HIT
Game 1	67 %	96 %	4.1	65 %	215	1.24	11.30
Game 2	65 %	95 %	4.1	64 %	238	1.27	11.54
Game 3	62 %	93 %	3.5	61 %	205	1.05	6.03

3 GAMES A WEEK: TRIMP PER PERIOD



In 1st game load is in control and tempo remains throughout the game

In 2nd and 3rd game load starts to increase in 2nd period and fatigue occurs clearly in 3rd period

SUMMARY

- TRIMP and TRIMP/MIN can be used to observe Load, Density and Pace of the workout / training segment.
- Sport/team specific scaling is needed
- Adjust training schedule to be ready for games
- Train as you play, but control the load wisely
- Everyone is different. Age, minutes in play, training history and many other unexpected factors