



UNIVERSITAS

Miguel Hernández

PLANIFICACIÓN DEL ENTRENAMIENTO DEPORTIVO

Unidad Didáctica 3- Los modelos de planificación y periodización en el deporte individual y colectivo

Tema 3.4. Los modelos emergentes

Grado en Ciencias de la Actividad Física y el Deporte

Curso 2019-20 – Segundo semestre

Profesor: Manuel Moya Ramón

Departamento: Ciencias del Deporte

UNIDAD DIDÁCTICA 3.

TEMA 3.4. Los modelos emergentes.

3.4.1. Periodización inversa.

3.4.2. Modelos “day-to-day”.

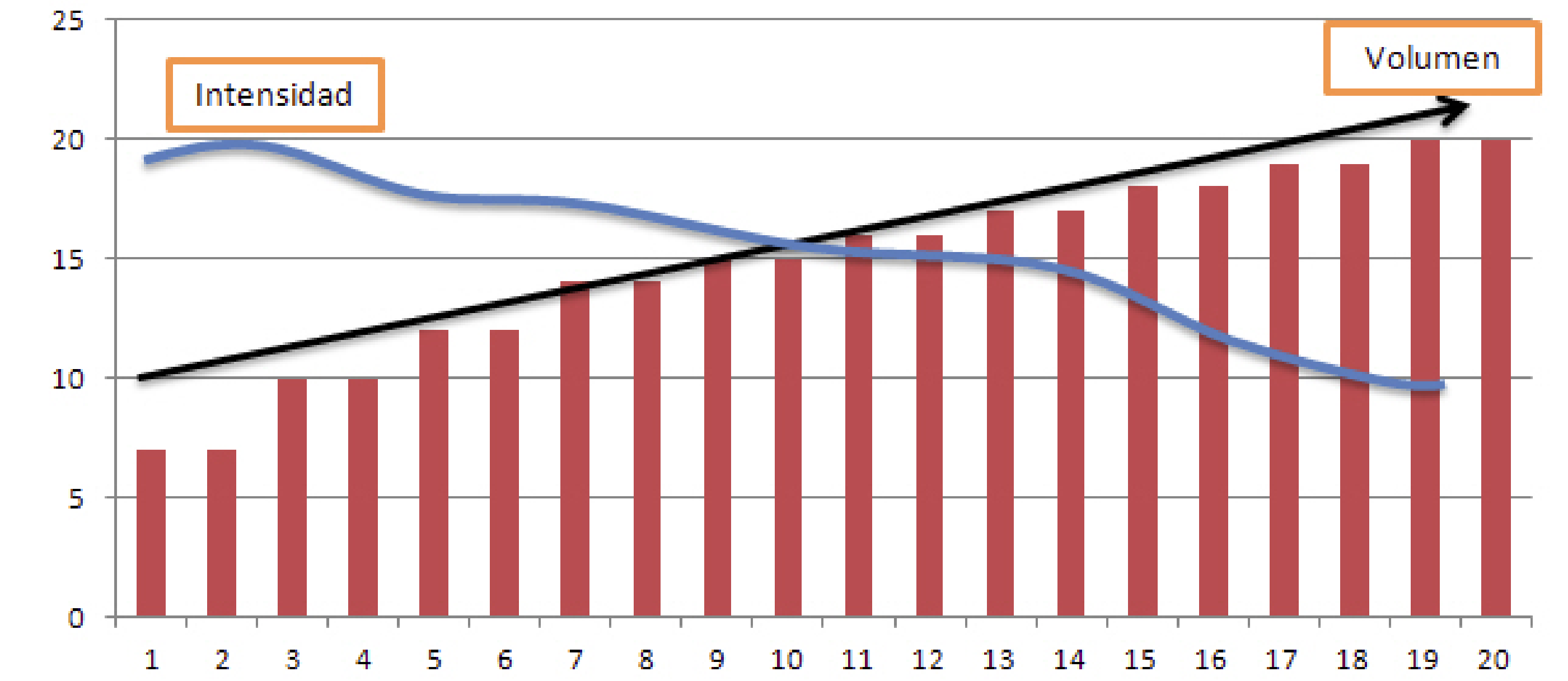
REFERENCIAS

Básicas

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Complementarias

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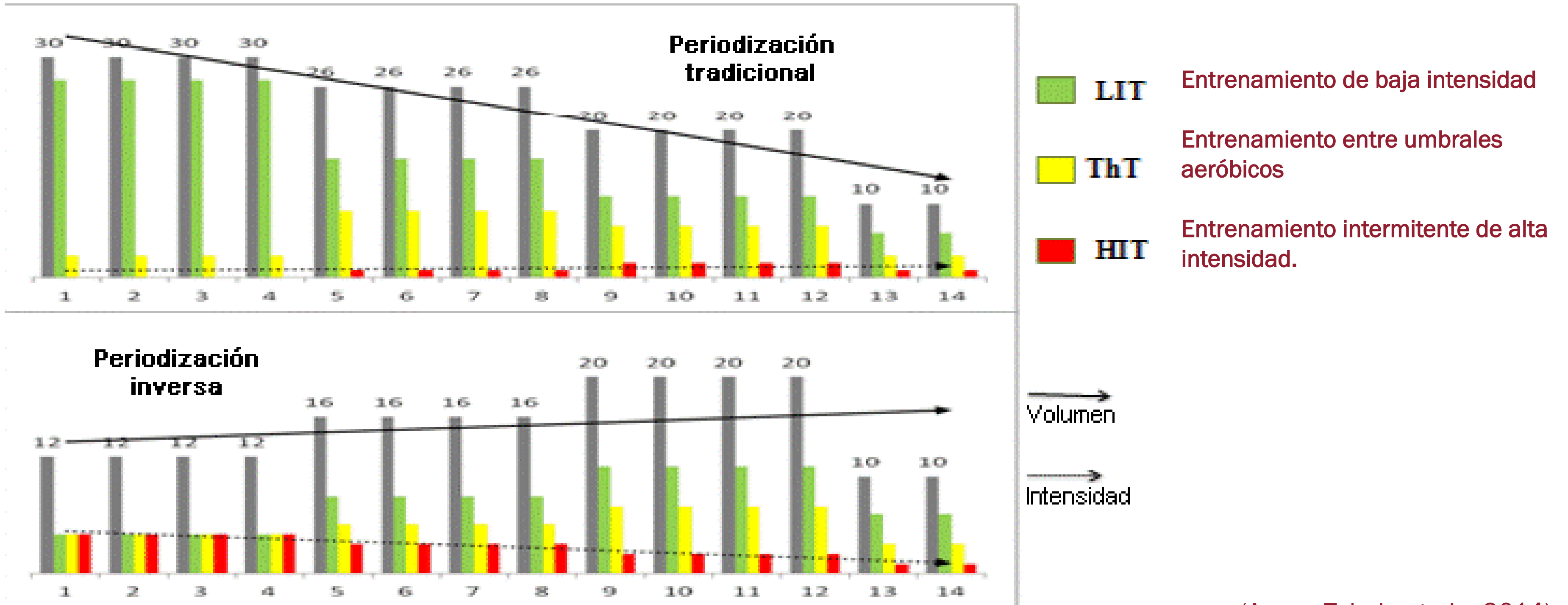
ENTRENAMIENTO POLARIZADO:

- BAJA INTENSIDAD: 75-80%
- MODERADA INTENSIDAD: -10%
- ALTA INTENSIDAD: 15-20%

Rhea et al (2003)

TEMA 3.4. Los modelos emergentes.

3.4.1. La periodización inversa.



(Arroyo-Toledo et al., 2014)

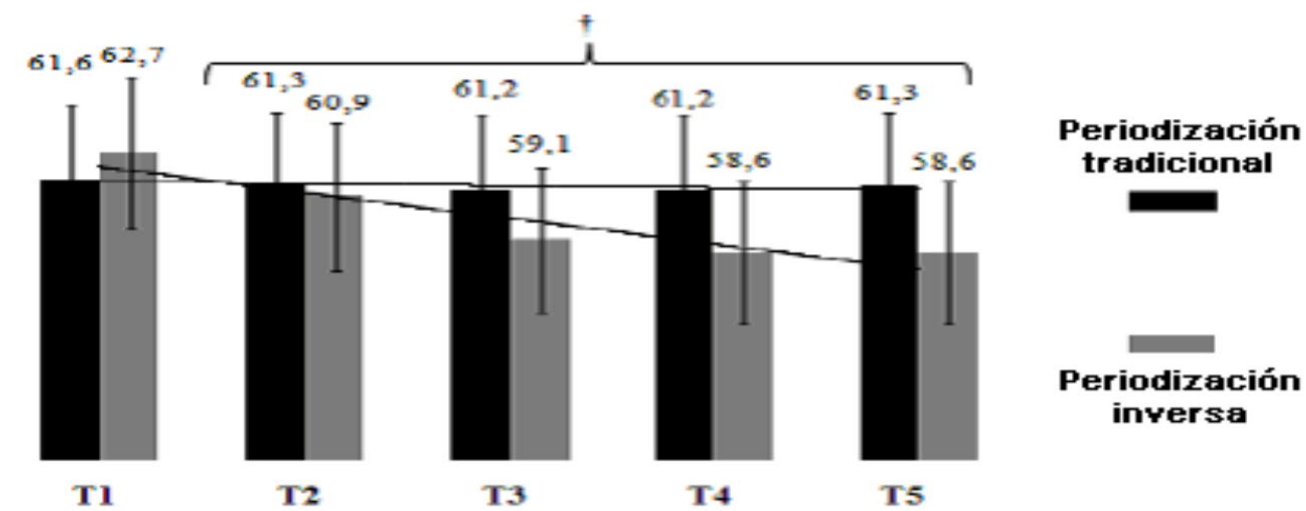


Figura 3. Comparación entre los rendimientos de nado. †=p<0,05 para las comparaciones entre grupos.

| Grupo | Variable | T1 | T2 | T3 | T4 | T5 | % de Cambio T1-T5 |
|-------|-----------|------------|------------|-------------|-------------|---------------|-------------------|
| TP | T100c (s) | 61,6±1,1 | 61,3±1,0 | 61,2±1,0 | 61,2±1,1 | 61,3±1,2 | ↓0,4 |
| | SR (s/m) | 44,78±2,3 | 46,58±2,1 | 46,20±2,6 | 46,26±2,3 | 46,09±2,2 | ↑ 2,9 |
| | DPS (m) | 1,37±0,04 | 1,31 ±0,03 | 1,32 ±0,05 | 1,32 ±0,04 | 1,33±0,04 | ↓3,0 |
| | SSP (w) | 43,2 ±4,7 | 39,2 ±4,2* | 44,8 ±4,4† | 45,4 ±4,1† | 45,7 ±3,9C | ↑5,7 |
| | MDC(Kg) | 49,7 ±4,3 | 47,9 ±4,3 | 49,5 ±4,2 | 50,8 ±4,1 | 51,4±3,7 | ↑3,4 |
| RP | t100c (s) | 62,7±1,5 | 60,9±1,4* | 59,1 ±1,2*† | 58,6 ±1,5*† | 58,6 ±1,3*† ‡ | ↓ 6,9 † |
| | SR (s/m) | 48,71±3,1 | 47,56 ±2,5 | 47,98 ±2,3 | 49,57±2,7* | 46,88 ±2,8 | ↓ 3,9 |
| | DPS (m) | 1,28 ±0,04 | 1,28 ±0,03 | 1,23 ±0,02 | 1,18±0,03* | 1,25 ±0,03 | ↓ 2,4 |
| | SSP (w) | 41,0±3,7 | 40,6±3,1 | 46,0±3,5*† | 47,6 ±4,2*† | 49,6 ±4,7*† | ↑ 20,9† |
| | MDC (Kg) | 45,7 ±3,9 | 46,1 ±3,9 | 49,6 ±4,2 | 49,6 ±3,4* | 50,3 ±3,9*† | ↑ 10,0† |

Tabla 2. Síntesis de las valoraciones obtenidas durante las 14 semanas. *=p<0,05 vs T1; ‡=p<0,05 vs T2; †= p<0,05 vs T3; †=p<0,05 para las comparaciones entre grupos. TP=Periodización tradicional; RP=Periodización inversa; t100c=tiempo de nado en 100 m crol;

SR=frecuencia de brazada; DPS=Distancia por brazada; SSP= Potencia específica de nado; MDC=Carga máxima de arrastre:

T1=Evaluación al inicio del estudio; T2=Evaluación luego de 4 semanas de entrenamiento; T3=Evaluación luego de 8 semanas de entrenamiento; T4= Evaluación luego de 12 semanas de entrenamiento; T5= Evaluación después de 14 semanas de entrenamiento.

Los valores se presentan en forma de Media ± error estándar de la media.

TEMA 3.4. Los modelos emergentes.

3.4.2. Modelos “day-to-day”..



ESTABLECER LÍNEAS BASALES

Training Prescription Guided by Heart-Rate Variability in Cycling

Alejandro Javaloyes, Jose Manuel Sarabia, Robert Patrick Lamberts, and Manuel Moya-Ramon

Purpose: Road cycling is a sport with extreme physiological demands. Therefore, there is a need to find new strategies to improve performance. Heart-rate variability (HRV) has been suggested as an effective alternative for prescribing training load against predefined training programs. The purpose of this study was to examine the effect of training prescription based on HRV in road cycling performance. **Methods:** Seventeen well-trained cyclists participated in this study. After an initial evaluation week, cyclists performed 4 baseline weeks of standardized training to establish their resting HRV. Then, cyclists were divided into 2 groups, an HRV-guided group and a traditional periodization group, and they carried out 8 training weeks. Cyclists performed 2 evaluation weeks, after and before a training week. During the evaluation weeks, cyclists performed a graded exercise test to assess maximal oxygen uptake, peak power output, and ventilatory thresholds with their corresponding power output (VT1, VT2, WVT1, and WVT2, respectively) and a 40-min simulated time trial. **Results:** The HRV-guided group improved peak power output (5.1% [4.5%]; $P = .024$), WVT2 (13.9% [8.8%]; $P = .004$), and 40-min all-out time trial (7.3% [4.5%]; $P = .005$). Maximal oxygen uptake and WVT1 remained similar. The traditional periodization group did not improve significantly after the training week. There were no differences between groups. However, magnitude-based inference analysis showed likely beneficial and possibly beneficial effects for the HRV-guided group instead of the traditional periodization group in 40-min all-out time trial and peak power output, respectively. **Conclusion:** Daily training prescription based on HRV could result in a better performance enhancement than a traditional periodization in well-trained cyclists.

Keywords: HRV, road cycling, periodization, endurance training, exercise performance

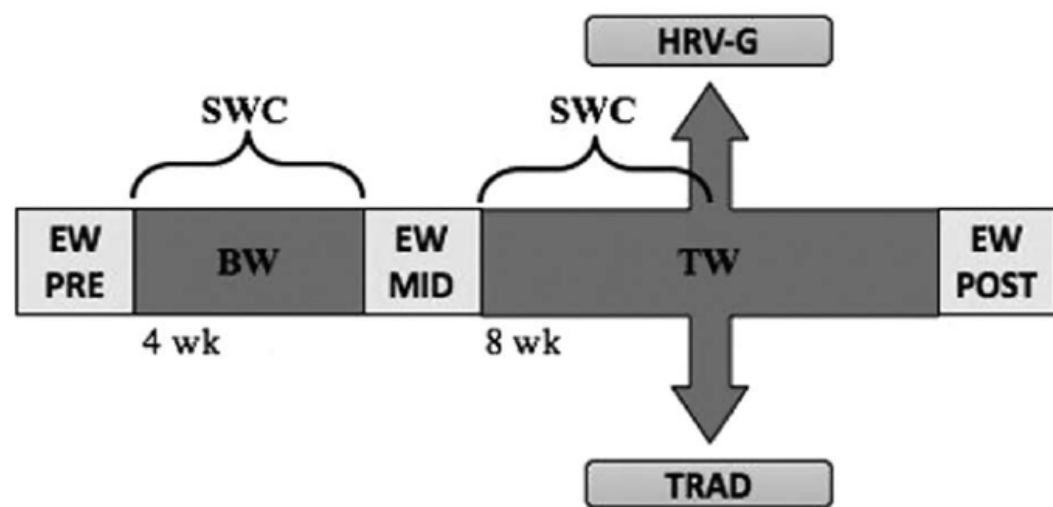
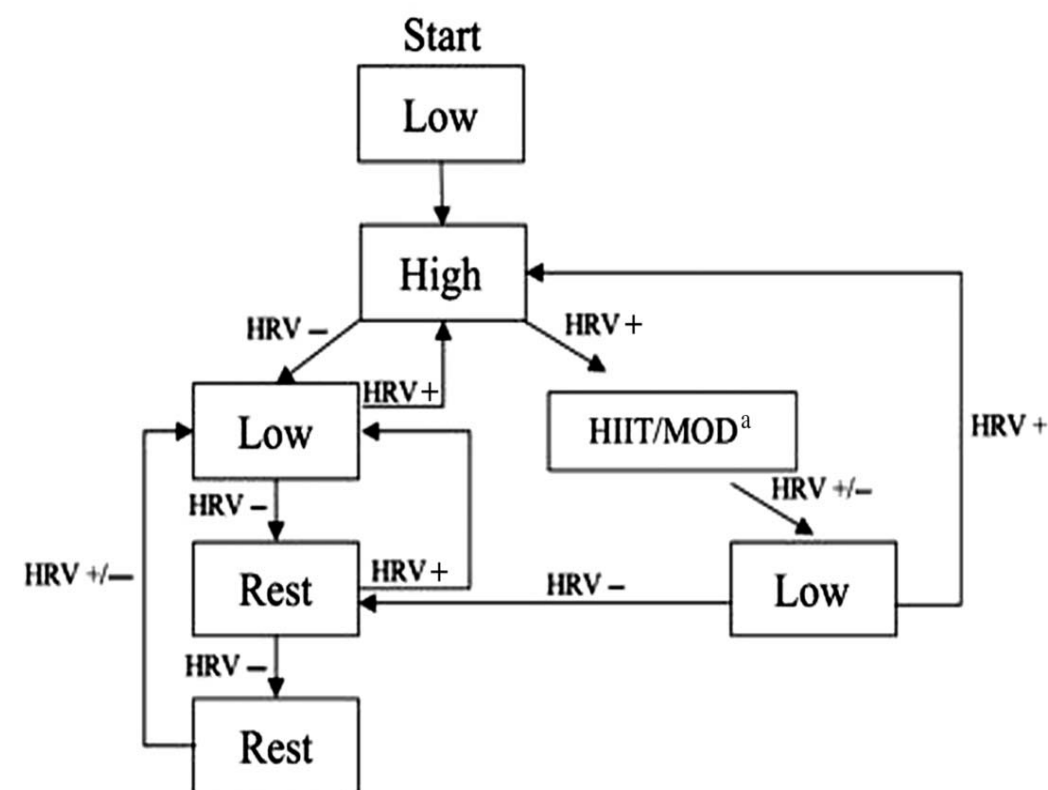
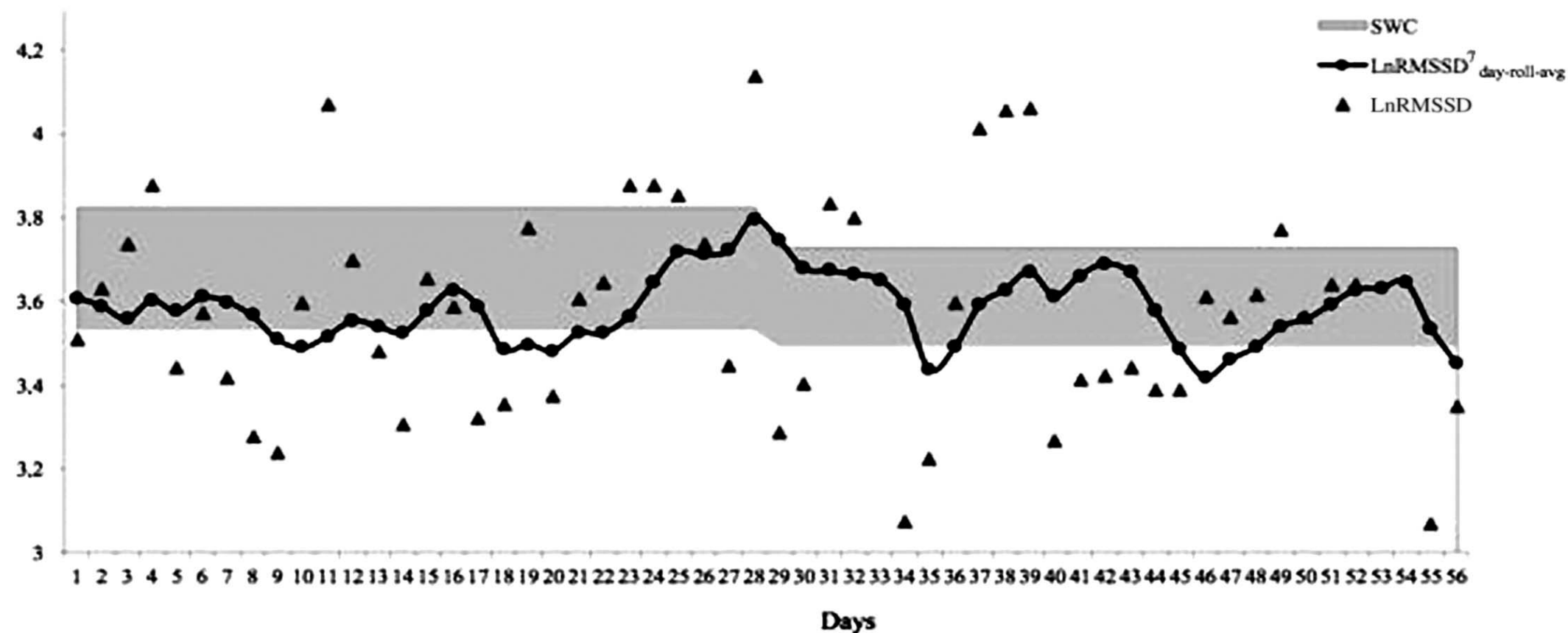


Figure 1 — Experimental design. BW indicates baseline week; EW MID, evaluation week between BW and TW; EW PRE, evaluation week before BW; EW POST, evaluation week after TW; HRV-G, heart-rate-variability-guided training group; SWC, smallest worthwhile change; TRAD, traditional training group; TW, training week.

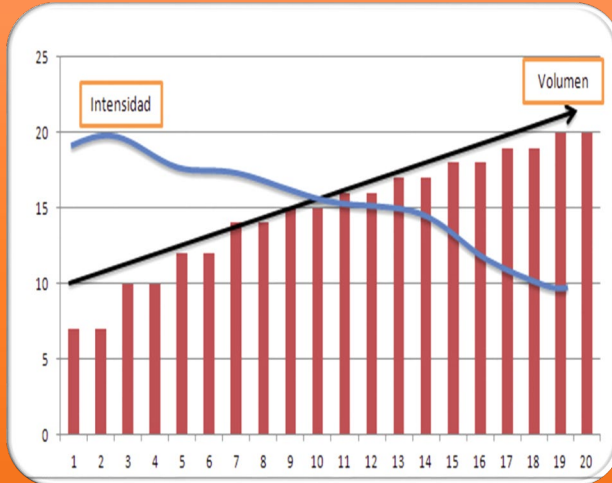


LnRMSSD

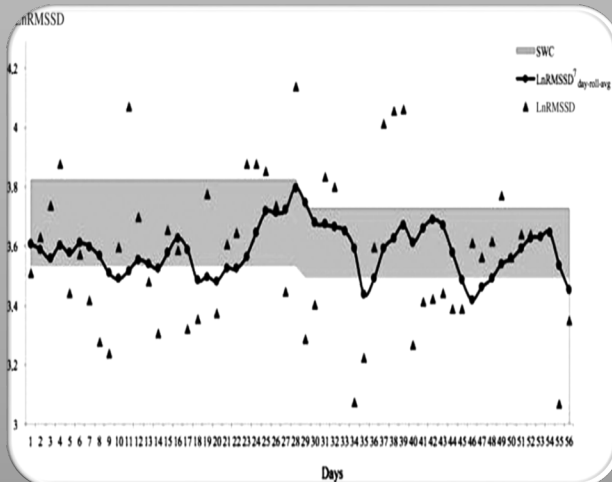


Resumen final de la unidad didáctica

Características de la Periodización Inversa



Los Modelos “day-to-day”





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