

#AtleticaViva
ONLINE



**FEDERAZIONE ITALIANA
SPORT INVERNALI**

ATLETICA, BIATHLON, SCI DI FONDO: VOLUMI E INTENSITÀ A CONFRONTO

11 maggio 2020

Renato Pasini

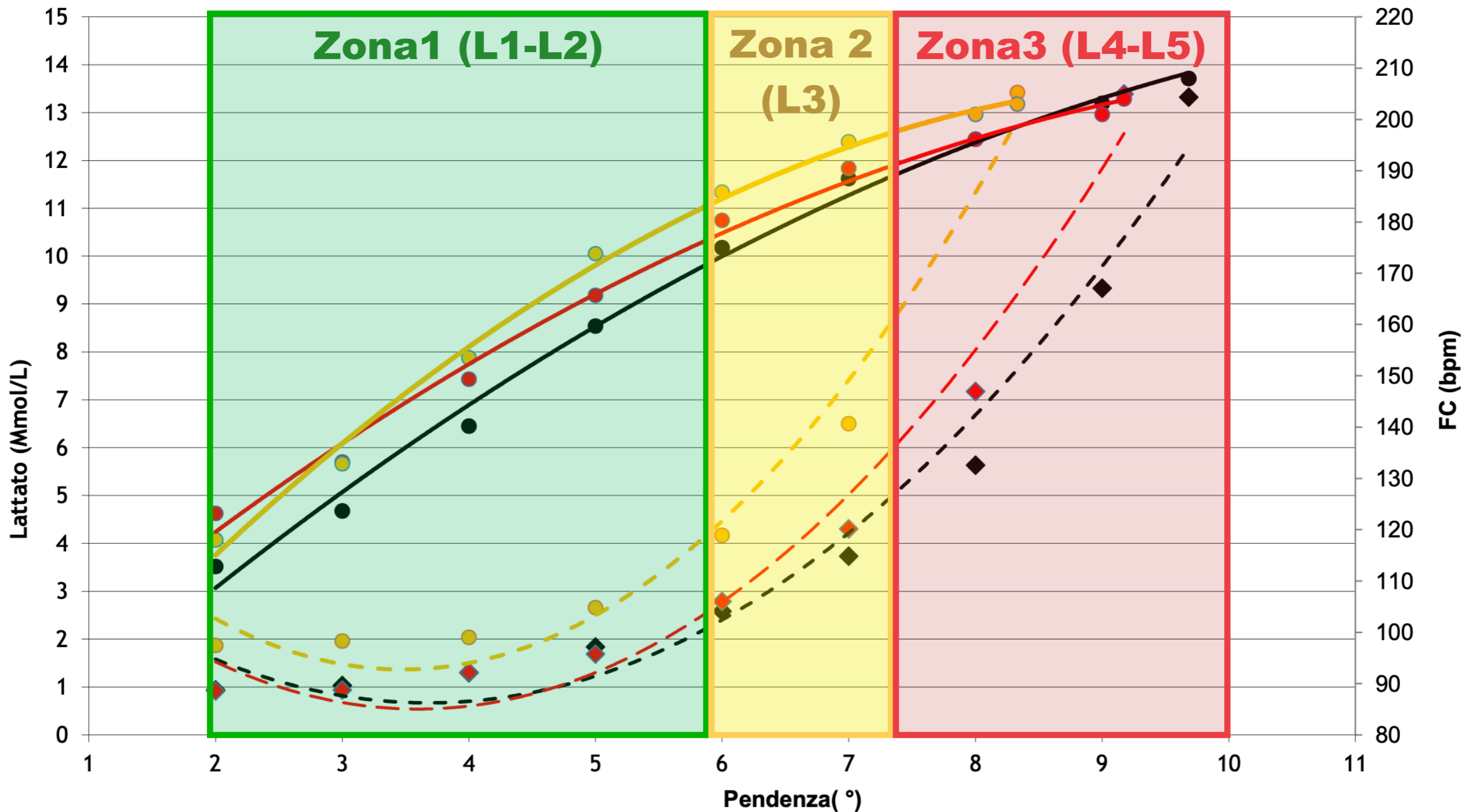


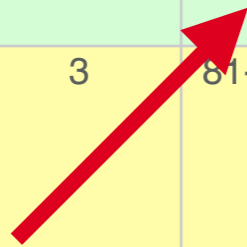
Table 1: A typical five-zone scale to prescribe and monitor training of endurance athletes.

Intensity zone	VO2 (%max)	Heart rate (%max)	Lactate (mmol.L ⁻¹)	Duration within zone
1	45-65	55-75	0.8-1.5	1-6 h
2	66-80	75-85	1.5-2.5	1-3 h
3	81-87	85-90	2.5-4	50-90 min
4	88-93	90-95	4-6	30-60 min
5	94-100	95-100	6-10	15-30 min

The heart rate scale is slightly simplified compared to the actual scale used by the Norwegian Olympic Federation, which is based primarily on decades of testing of cross-country skiers, biathletes, and rowers.

Table 6. Typical training sessions performed by highly trained athletes in five intensity zones (Aasen, 2008).

Zone	VO2 (%max)	Examples of training sessions	Manageable duration ^a
1	45-65	<u>Continuous bouts</u>	60-360 min
2	66-80	<u>Continuous bouts</u>	60-180 min
3	81-87	6 x 15 min, 2-min rec 2 x 25 min, 3-min rec 5 x 10 min, 2-min rec 8 x 8 min, 2-min rec LT 40-60 min 50 x 1 min, 20-s rec	50-90 min
4	88-93	10 x 6 min, 2-3-min rec 8 x 5 min, 3-min rec 15 x 3 min, 1-min rec 40 x 1 min, 30-s rec 10 x (5 x 40 s, 20-s rec), 2- to 3-min breaks 30-40 min steady state	30-60 min
5	94-100	6 x 5 min, 3-4-min rec 6 x 4 min, 4-min rec 8 x 3 min, 2-min rec 5 x (5 x 1 min, 30-s rec), 2- to 3-min breaks	24-30 min



Atleta Squadra Nazionale Italiana U23

CATEGORIA	Sen 2 *		Sen 1		U20		U20		U18		U18		U16	
ETÀ	22		21		20		19		18		17		16	
	h	%	h	%	h	%	h	%	h	%	h	%	h	%
ORE	740		630		600		570		500		410		350	
CORSA	170	23,0	140	22,2	120	20,0	90	15,8	65	13,0	60	14,6	50	14,3
SKIROLL	130	17,6	120	19,0	130	21,7	140	24,6	120	24,0	95	23,2	85	24,3
SCI	205	27,7	185	29,4	200	33,3	190	33,3	155	31,0	120	29,3	120	34,3
FORZA	105	14,2	80	12,7	60	10,0	60	10,5	55	11,0	45	11,0	40	11,4
ALTRO **	130	17,6	105	16,7	90	15,0	90	15,8	105	21,0	90	22,0	55	15,7
1 (L1+L2)	590	92,9	500	90,9	502	93,0	474	92,9	420	94,4	340	93,2	285	91,9
2 (L3)	17	2,7	17	3,1	16	3,0	13	2,5	9	2,0	8	2,2	2	0,6
3 (L4+L5)	30	4,7	31	5,6	21	3,9	23	4,5	16	3,6	16	4,4	23	7,4

* covid-19

** camminata-bici-preat-altri sport

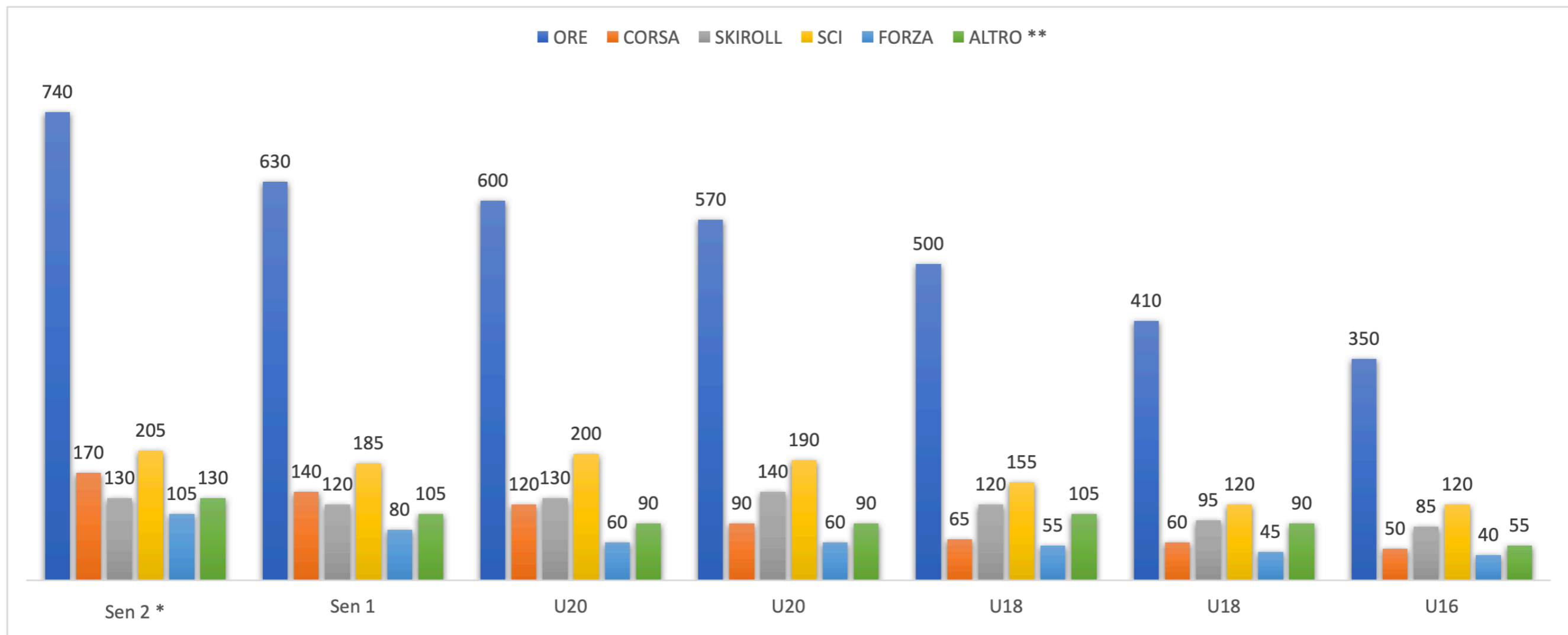
#AtleticaViva
ONLINE

atletica
italiana



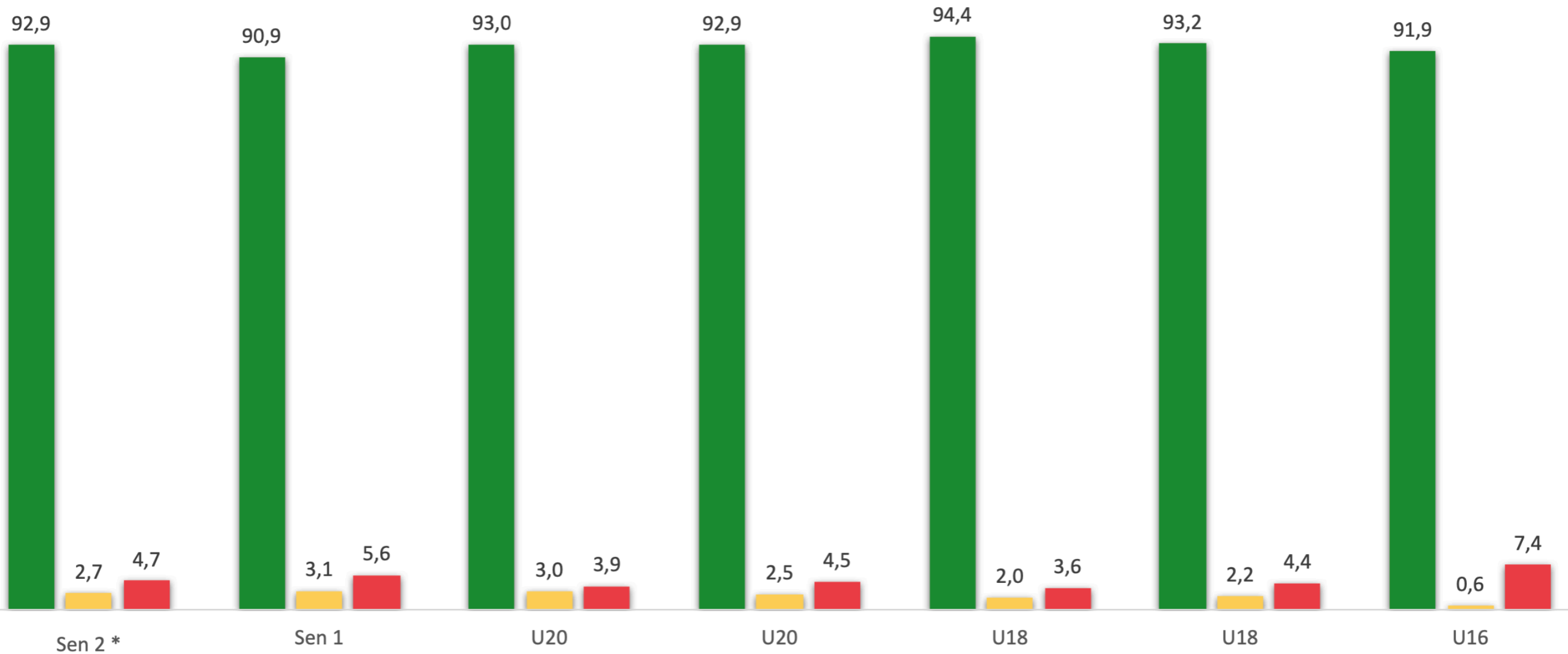
FEDERAZIONE ITALIANA
SPORT INVERNALI

Totale ore e mezzi di allenamento

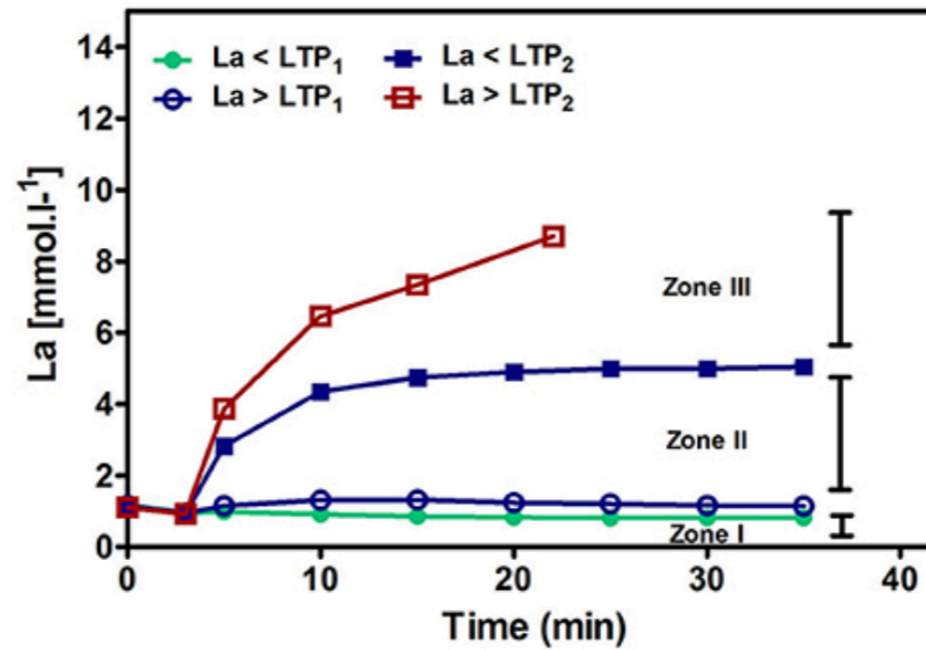
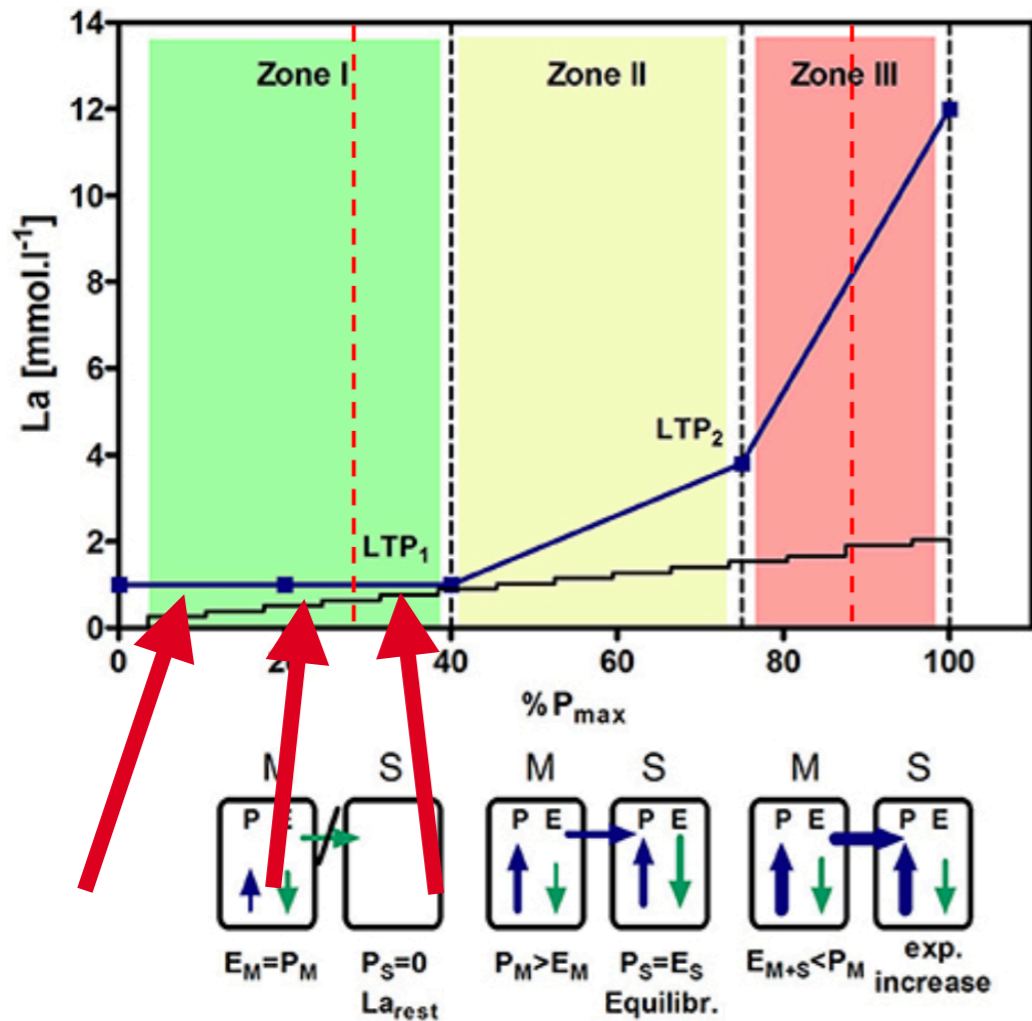


Percentuale intensità nelle zone

■ 1 (L1+L2) ■ 2 (L3) ■ 3 (L4+L5)



Modello a 5 zone



Hofmann & Tschakert, 2017

Intensity zone	Lactate ^a (mmol/L)	Heart rate (% max)	3-zone model	Binary model
5	6.0–10.0	92–97	Zone 3	high-intensity training
4	4.0–6.0	87–92	Zone 3	high-intensity training
3	2.5–4.0	82–87	Zone 2	high-intensity training
2	1.5–2.5	72–82	Zone 1	low-intensity training
1	0.8–1.5	55–72	Zone 1	low-intensity training

Sylta et al., 2014

Luca Filipas 4maggio 2020

**... i ritmi nella
zona 1 sono da
rivalutare?**

**... con la varietà di mezzi
di allenamento, variare
anche l'intensità del lento
in funzione degli stessi
mezzi?**



**... ritornare a
ragionare anche in
km insieme alle ore?**


**... i nostri giovani fondisti
sanno distinguere il
“lento di recupero” dal
“lento di costruzione” ?**

Grazie a tutti.

#AtleticaViva
ONLINE

 **atletica
italiana**

croket@tiscali.it

 [renatopasini](https://www.instagram.com/renatopasini)



**FEDERAZIONE ITALIANA
SPORT INVERNALI**