PERIODIZATION FOR COMBAT SPORTS

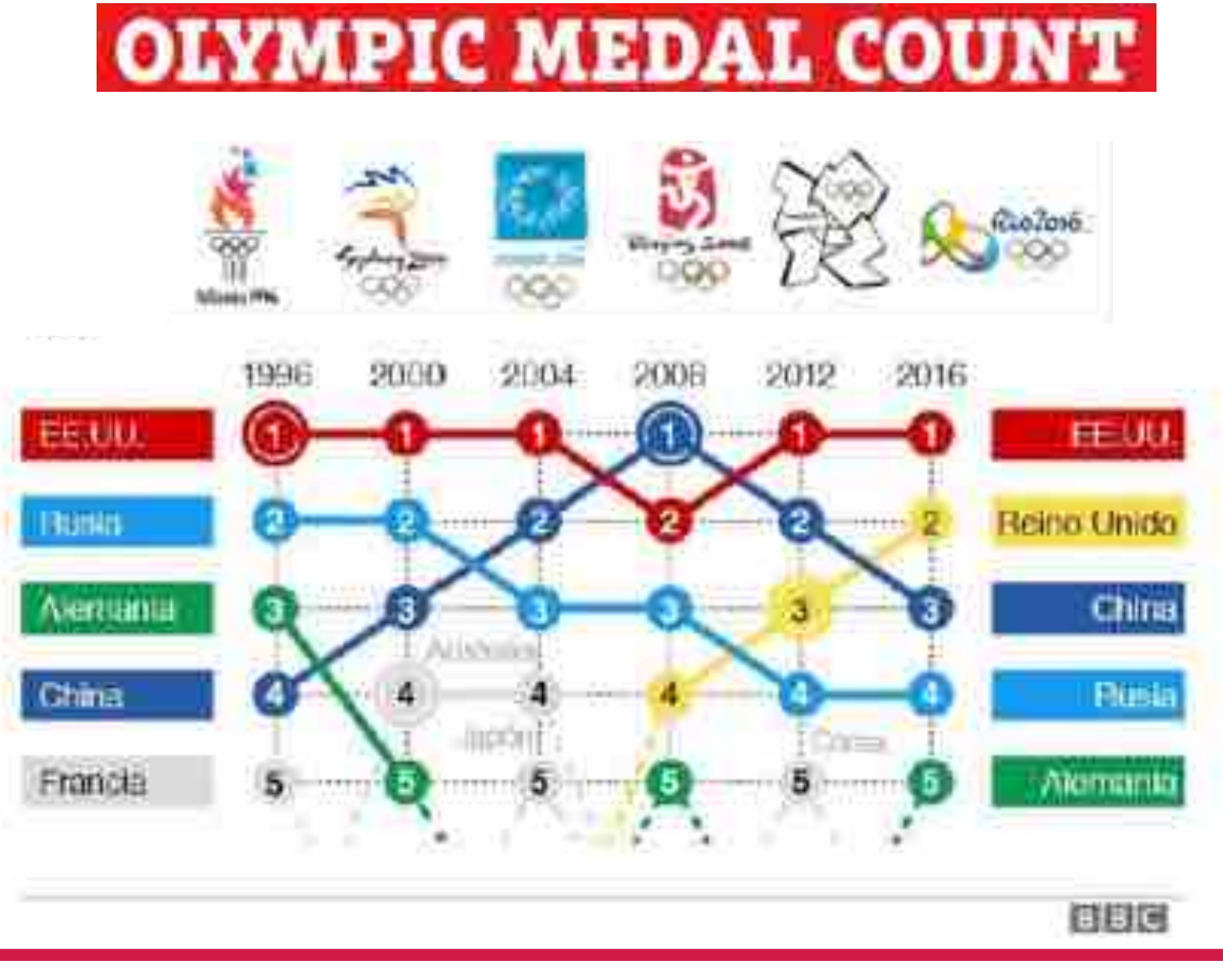
重竞技领域的周期理论

FELIPE SÁNCHEZ LLANES

- Degree in Sport Science (European University of Madrid, Spain)
- Master Degree in High Performance (Spanish Olympic Committee)
- Doctorate in Sports Science (University of Leon, Spain)
- Certified Strength Conditioning Specialist (NSCA)

- Judo Head Coach at Shanghai Elite Sports Center上海柔道队主教练
- Performance coach at Chinese Olympic Committee奥组委备战办体能教练
- Judo Head Coach at University of Oviedo
- Strength & Conditioning coaches in diferent sports (judo, wrestling, football, tennis, volleyball,…)不同项目的体能教练（柔道、摔跤、足球、网球、）

CHINA AT THE OLYMPICS 中国在奥运会上



OLYMPIC MEDAL COUNT
END OF DAY 16

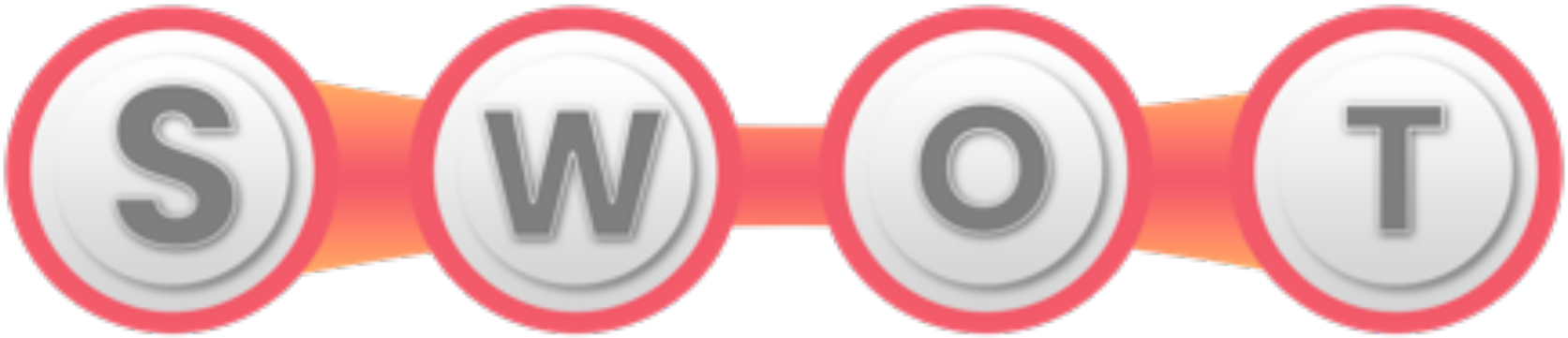
TOP 5

	GOLD	SILVER	BRONZE
USA	39	41	33
CHINA	38	32	18
JAPAN	27	14	17
TEAM GB	22	21	22
ROC	20	28	23

CHINA AT THE OLYMPICS 中国在奥运会上

China didnt win any medal until Los Angeles 1984 Olympic Games

SWOT ANALYSIS 态势分析



STRENGTHS 优势

What do you do well?
What unique resources can you draw on?
What do others see as your strengths?

WEAKNESSES 劣势

What could you improve?
Where do you have fewer resources than others?
What are others likely to see as weaknesses?

OPPORTUNITIES 机会

What opportunities are open to you?
What trends could you take advantage of?
How can you turn your strengths into opportunity.

THREATS 威胁

What threath can harm you?
What is your competitor doing?
What threats do your weaknesses require aspect to pay.

优势

STRENGTHS

What do you do well?
What unique resources can you draw on?
What do others see as your strengths?

STRENGTHS 优势

Discipline and sacrifice capacity of their athletes
运动员的高度自律和吃苦耐劳品质

STRENGTHS 优势

Talent selection: 1393 millon people (2019) 运动员选材基数：超13亿人口

STRENGTHS 优势

STRENGTHS 优势

STRENGTHS 优势

STRENGTHS 优势

STRENGTHS 优势

STRENGTHS 优势

Good investment and support (facilities, human resources,…政府大力帮扶和投资（场馆、人力等）

STRENGTHS 优势

Full time athletes 运动员全职训练

STRENGTHS 优势

Reward system

成熟的绩效奖励制度

STRENGTHS 优势

Reward system

成熟的绩效奖励制度

STRENGTHS 优势

Many high performance training centers in China
很多高水平运动表现中心

High Performance Training Centers in Judo

Xinjiang, Mongolia Interior, Heilongjiang, Liaoning, Jilin, Beijing, Hebei, Tianjin, Henan, Shanxi, Shandong, Shaanxi, Jiangsu, Zhejiang, Shanghai, Fujian, Guangdong, Guanxi, Yunnan, Hunan, Hubei, Chongqing, Sichuan, Gansu, Anhui

新疆，内蒙古，黑龙江，辽宁，吉林，北京，河北，天津，河南，山西，山东，陕西，江苏，浙江，上海，福建，广东，广西，云南，湖南，湖北，重庆，四川，甘肃，

STRENGTHS 优势

Good sport facilities and many technology

完善的训练场馆和科技设备

STRENGTHS 优势

Many staff 很多员工

STRENGTHS 优势

Many athletes很多运动员

STRENGTHS 优势

Many athletes很多运动员

STRENGTHS 优势

Many athletes很多运动员

STRENGTHS 优势

Many athletes很多运动员

劣势

WEAKNESSES

What could you improve?
Where do you have fewer resources than others?
What are others likely to see as weaknesses?

WEAKNESSES 劣势

Lack of motivation/passion 运动员缺乏训练动机和激情

WEAKNESSES 劣势

Lack of long term development model
长期规划不明确

WEAKNESSES 劣势

Long term development model
运动员长期发展模型

激发兴趣 基础 为训练学习 为训练训练 为比赛训练 为获胜训练 积极的生涯

Canada Long Term Athlete Development Model
加拿大运动员长期发展模型

WEAKNESSES 劣势

Long term development model

运动员长期发展模型

WEAKNESSES 劣势

Long term development model

运动员长期发展模型

FUN	L2T		T2T	T2C		T2W	
						U21	SENIOR
					U18	National Centre and Carding	
				U16	Regional / National Center	Tactical / Physical / Technical Training	Tactical / Physical / Technical Training
					Provincial - Regional Center	Tactical / Physical / Technical Training	
			U14	Technical Development	Competition Specific Technical Development	Competition Specific Technical Development	Competition Specific Technical Refinement
		U12	Technical Development	Competition 8-10 x year	Competition 10-12 x year	Competition 10-16 x year	Competition 10-16 x year
	U10	Technical Development	Competition 6-8 x year	Coordination Speed Endurance	Speed Endurance; Strength	Speed Endurance; Strength; Power	Speed Endurance; Strength; Power
U8	Fundamentals	Intro to Competition 5 x year	Coordination and Speed	Intro to Tactical Training	Intro to Tactical Training	Tactical Training	Tactical and Technical Training 2 x week
Fundamentals	Coordination and Speed	Coordination and Speed	Intro to Mental Training	Mental Training	Mental Training	Mental Training	Mental Training 2 x week
Daily Physical Activity	Daily Physical Activity	Daily Physical Activity	Intro to Cross Training	Cross Training 3 x week	Cross Training 3 x week	Cross Training 3-4 x week	Energy System Training 2 x week Strength Training 3 x week
Judo or Any Other Sport	Judo 2 x week	Judo 2-3 x week	Judo 3 x week	Judo 4-5 x week	Judo 4-5 x week	Judo 6-10 x week	Randori Training 5 x week
Healthy Life Style	Healthy Life Style	Healthy Life Style	Healthy Life Style	Healthy Life Style	Healthy Life Style	Healthy Life Style	Healthy Life Style
FUNdamentals	L2T Learn to Train		T2T Train to Train	T2C Train to Compete		T2W Train to Win	

WEAKNESSES 劣势

Not much competitions比赛少

WEAKNESSES 劣势

Low international experience
整体国际比赛经验少

WEAKNESSES 劣势

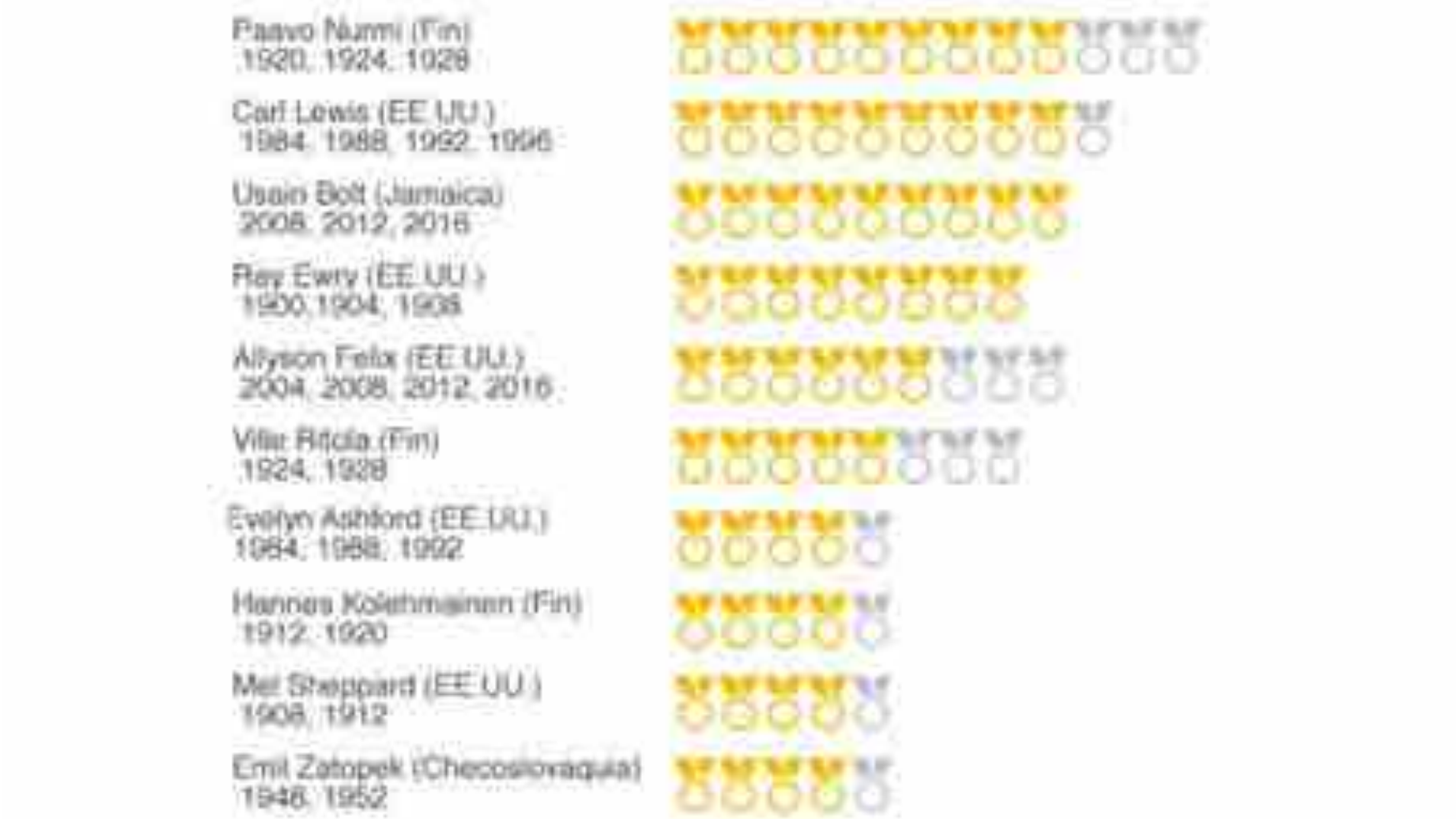
Many injuries 伤病多

WEAKNESSES 劣势

Early retirement退役早

WEAKNESSES 劣势

Athletes in track & field with more olympic medals

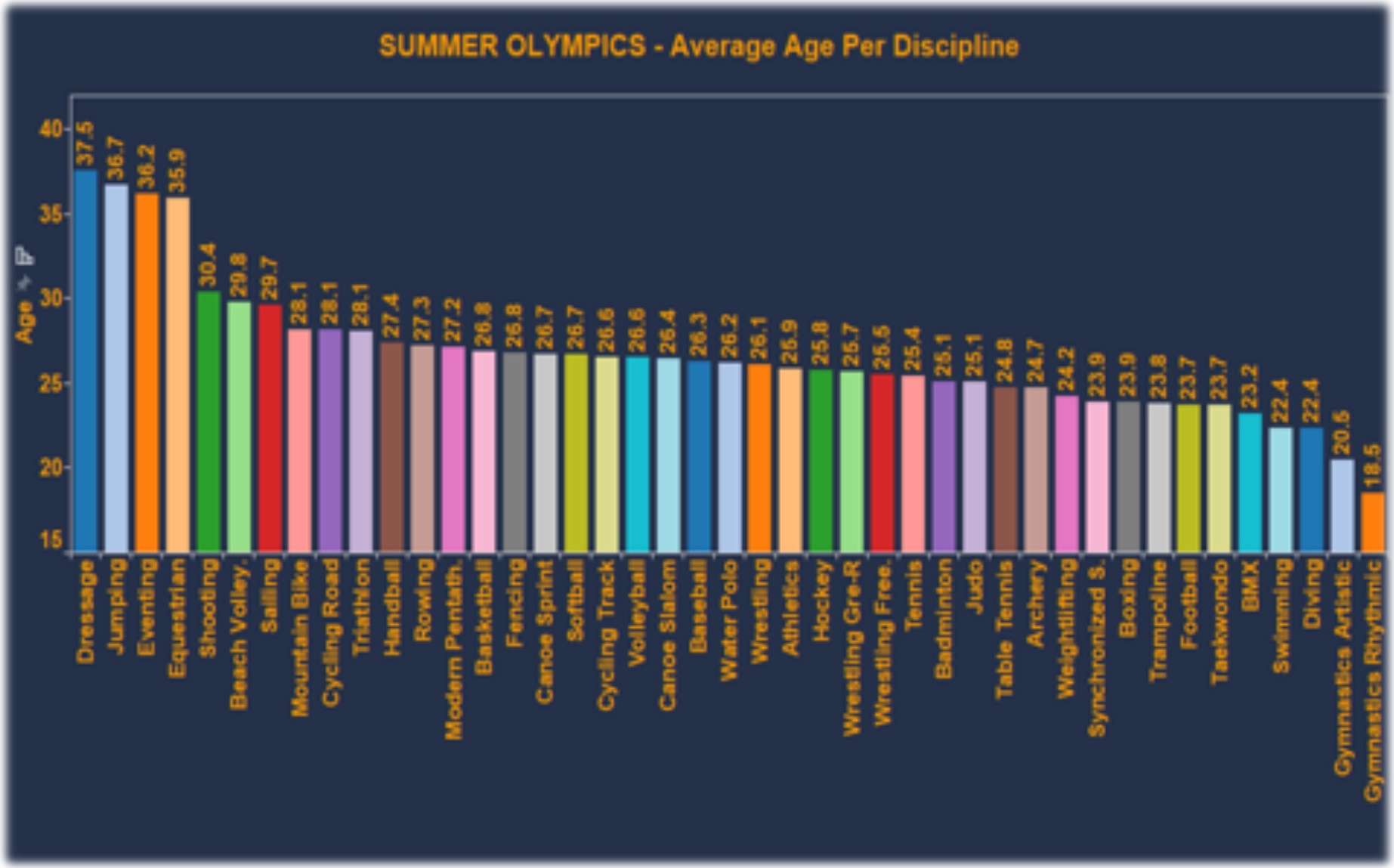


https://www.bbc.com/mundo/noticias-america-latina-37161439

WEAKNESSES 劣势

Athletes with more olympic medals

WEAKNESSES 劣势



WEAKNESSES 劣势

Low coach education

基层教练员文化水平普遍偏低

WEAKNESSES 劣势

Bad relationship between national team and provinces teams国家队和各省队的交流相对匮乏

WEAKNESSES 劣势

Periodization mistakes周期安排的误区

WEAKNESSES 劣势

Invisible training

训练监控的不可视化（睡眠、营养和恢复等）

Invisible training

- Sleep, rest, nutrition, personal higiene habits

WEAKNESSES 劣势

Low technical training 专项训练的局限性

WEAKNESSES 劣势

Low international experience in young athletes

在青少年级别的国际比赛经验欠缺

Daria Bilodid

2017
- 1 Europeans Warsaw
- 3 Grand Prix Hohot
- 1 Grand Prix The Hague
- 1 European Open Prague
- 2 Junior EJCup Paks
- 2 Junior EJCup Kaunas

2018
- Worlds Baku 1
- Grand Slam Paris 1
- Grand Slam Düsseldorf 1
- Grand Prix Tunis 1
- Grand Prix Zagreb 1
- Junior Worlds Nassau 1
- Senior EJCup Celje 1

2016
- 1 Junior Europeans Malaga
- 1 Cadet Europeans Vantaa
- 1 Cadet EJCup Zagreb
- 1 Cadet EJCup Teplice

2019
- European Games 1
- Grand Prix Tbilisi 2

2015
- 1 Cadet Worlds Sarajevo
- 1 Cadet Europeans Sofia
- 1 Cadet EJCup Zagreb
- 1 Cadet EJCup Teplice
- 1 Cadet EJCup Cluj Napoca

2000 2005 2010 2015 2020

Oct 2000 Birth of Daria

2006 started Judo

2020 Olympic Games Tokyo

机会

OPPORTUNITIES

What opportunities are open to you?
What trends could you take advantage of?
How can you turn your strengths into opportunity.

OPPORTUNITIES 机会

- Diversify national teams 国家级运动队的多样化

OPPORTUNITIES 机会

- Talent selection 有天赋的运动员基数大

OPPORTUNITIES 机会

- Talent selection 有天赋的运动员基数大




OPPORTUNITIES 机会

- Establish cooperation/relationship with other countries 和其他国家的专业队建立合作关系

OPPORTUNITIES 机会

- Posibility of hiring foreign staff 聘用外籍专家

OPPORTUNITIES 机会

- Posibility to organize international big events/leages 组织举办国际大赛的可能性

OPPORTUNITIES 机会

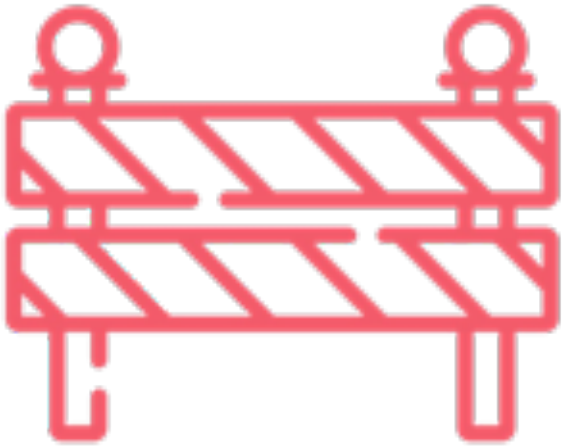
- China MUST be a reference in sports science 体育科研有提高空间

OPPORTUNITIES 机会

- Improve level in certain sports 在一些项目的水平上中还有提高空间

威胁

THREATS



What threath can harm you?
What is your competitor doing?
What threats do your weaknesses require aspect to pay.

THREATS 威胁

- Reduce Budget 经费减少

THREATS 威胁

- In the future less athletes want to sacrifice their lives愿意为体育献身的运动员逐渐减少

THREATS 威胁

- Dont have enough support from province teams

省队的资源有限

THREATS 威胁

- Dont be able to create a long term development model for Chinese Team and just focus in short term goals. 不仅要重视短期目标，更要建立长远发展计划

THREATS 威胁

- Interference with Chinese Olympic Committee requirements 领导的想法影响你的工作

THREATS 威胁

- Current situation with COVID-19 pandemic.

疫情的影响

THREATS 威胁

- Many times head coaches don’t have enough power 很多时候主教练没有足够的权利

发挥优势因素

WORK ON YOUR STRENGTHS

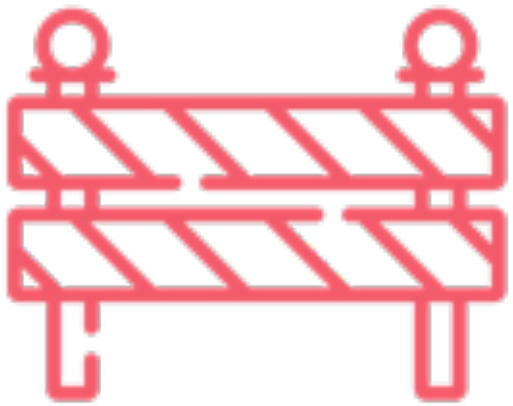
克服弱点因素

IMPROVE YOUR WEAKNESSES

利用机会因素

TAKE ADVANTAGE OF YOURS OPPORTUNITIES

化解威胁因素
KNOWING YOUR THREATS




Agree
Disagree

主要内容：

- *PRINCIPLES OF SPORT TRAINING运动训练原理*
- *PERIODIZATION MODELS: TRADITIONAL VS MODERN PERIODIZATION*
- *周期模型：传统和现代周期模型*
- *TAPERING Y PEAKING减量和最佳运动表现*
- *WEIGHT LOSS IN COMBAT SPORTS重竞技项目中的减重*
- *OTHER IMPORTANT ASPECTS IN OUR PERIODIZATION*
- *周期训练的其他要点*
- *EXAMPLE举例*
- *EXCEL表格*

Sports training:

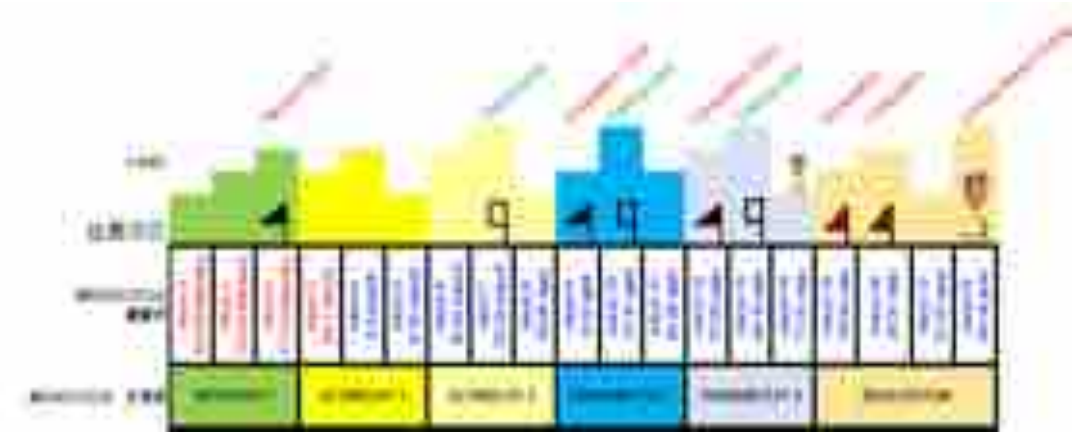
ART or SCIENCE?

运动训练：艺术，还是科学？

“Scientific training doen’t exist. Scientific background can help to not take wrong deccisions and choose better decisions”.

Gregoire Millet

PRINCIPLES OF SPORTS TRAINING 运动训练原理



Periodization training is the deliberate manipulation of training variables to optimize performance for competition, prevent overtraining, and progress performance.

周期训练是熟练使用不同的训练手段，优化和提高运动表现，避免过度训练。

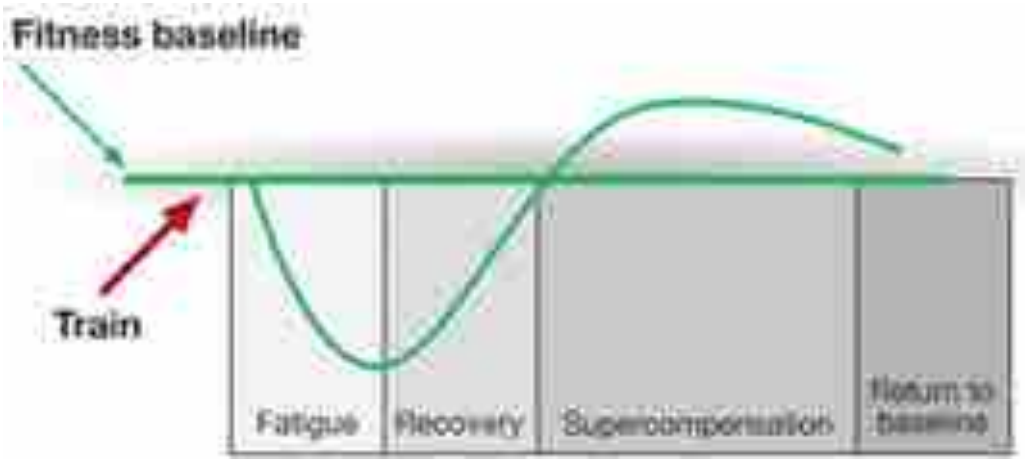
PRINCIPLES OF SPORTS TRAINING 运动训练原理

The principles of training are intended to guide the coach in *preparing*, *implementing* and *reviewing* the training programme.
训练原则旨在指导教练准备、实施和回顾训练计划。
The principles are mainly formulated from the accumulated knowledge and research within *coaching science* and *coaching practice*. 这些原则主要是根据教练科学和教练实践中积累的知识和研究得出的。
The principles, if used appropriately, will ensure that best practice in terms of work and recovery are followed.这些原则如果被合理使用，将确保训练实践和恢复起到最佳效果。

PRINCIPLES OF SPORTS TRAINING 运动训练原理

Adaptation适应

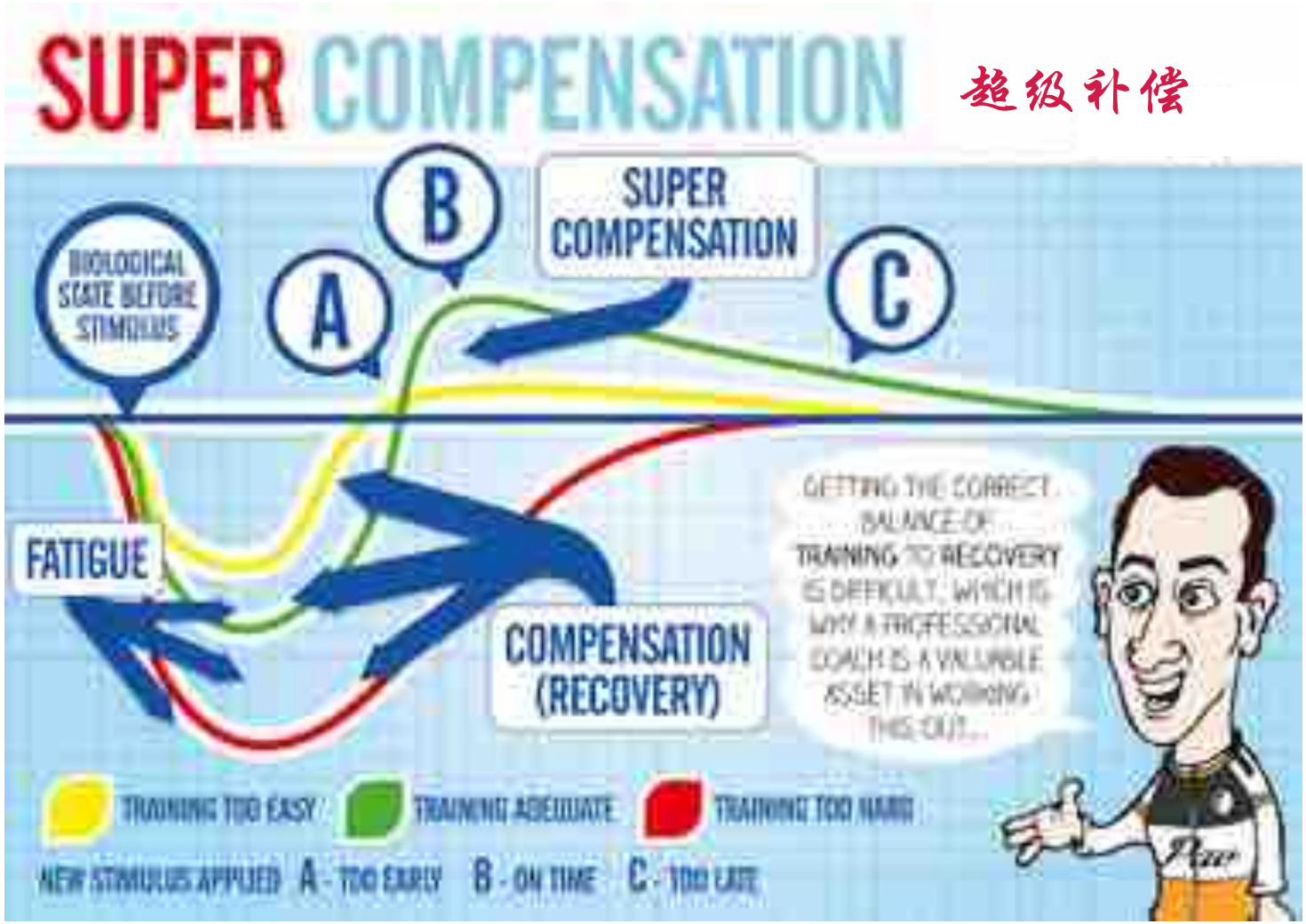
Adaptation is the process of adjusting to a physical or environmental or psychological stress or stimulus. According to this, stress causes a temporary **reduction in performance** or function which is followed by an **adaptation** that improves the body's performance or function. This improved response is often called the '**supercompensation**' theory of training.



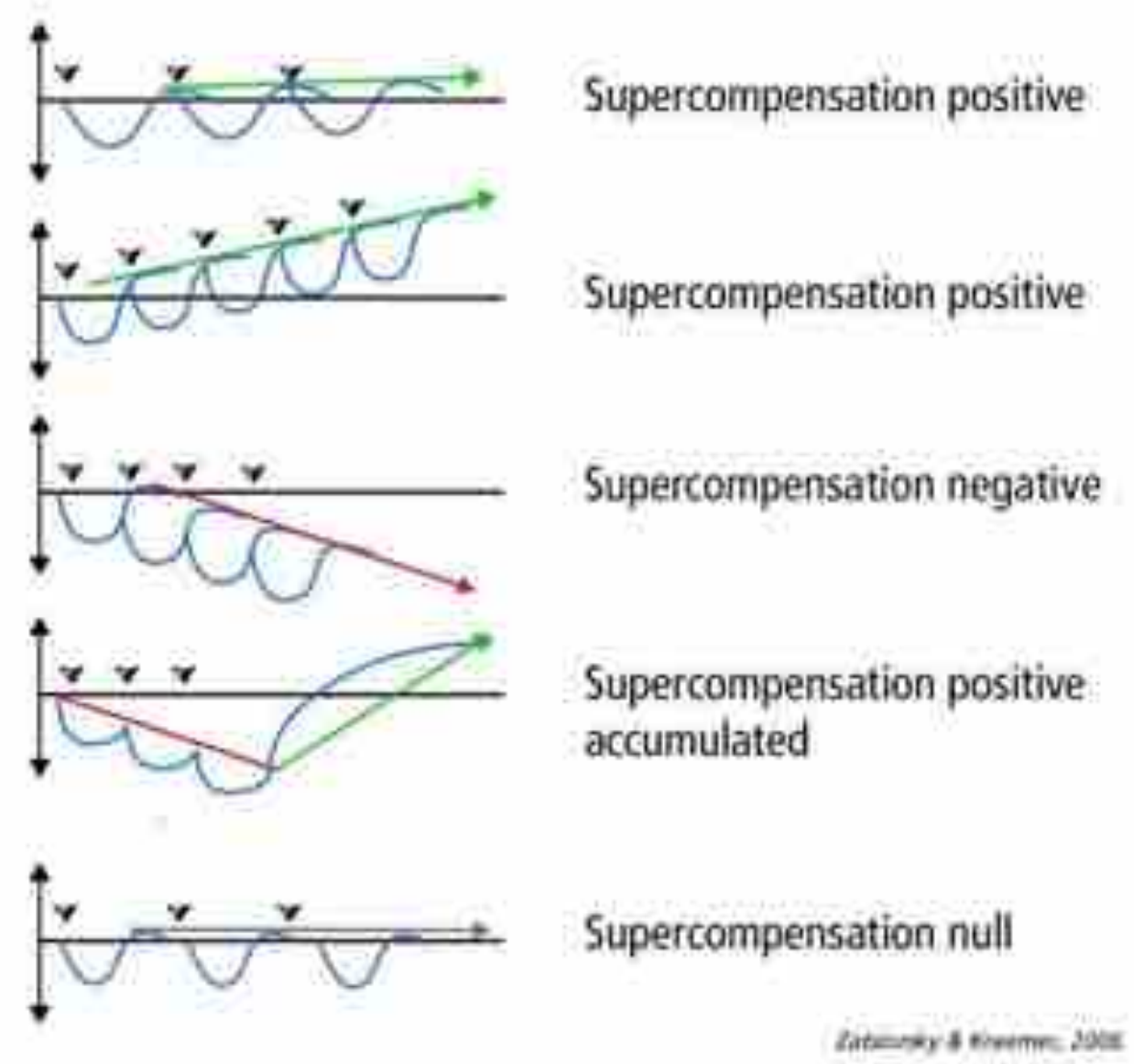
适应是适应生理或环境或心理压力或刺激的过程。根据这一点，压力会导致暂时性的表现或功能下降，然后是表现为身体表现改善现或身体功能的适应。这种改进的反应通常被称为“超量恢复”训练理论。

PRINCIPLES OF SPORTS TRAINING 运动训练原理

Adaptation适应



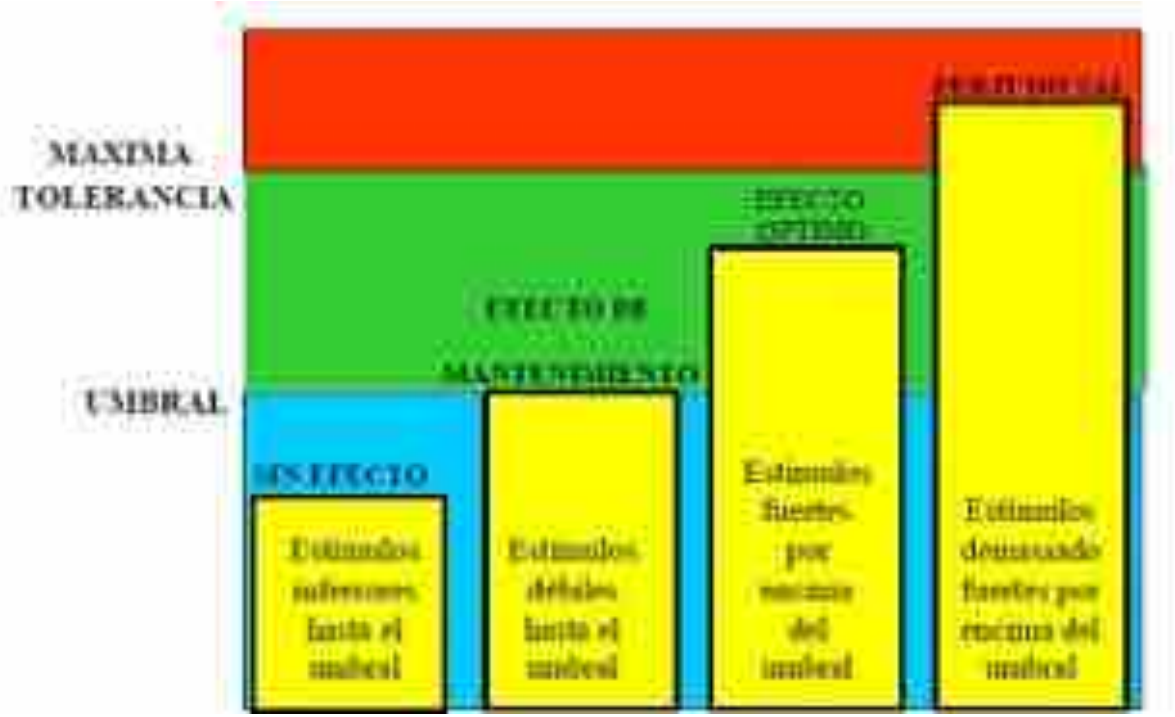
PRINCIPLES OF SPORTS TRAINING 运动训练原理



PRINCIPLES OF SPORTS TRAINING 运动训练原理

Overload

The Overload Principle is a basic sports fitness training concept. It means that in order to improve, athletes must continually work harder as they their bodies adjust to existing workouts。



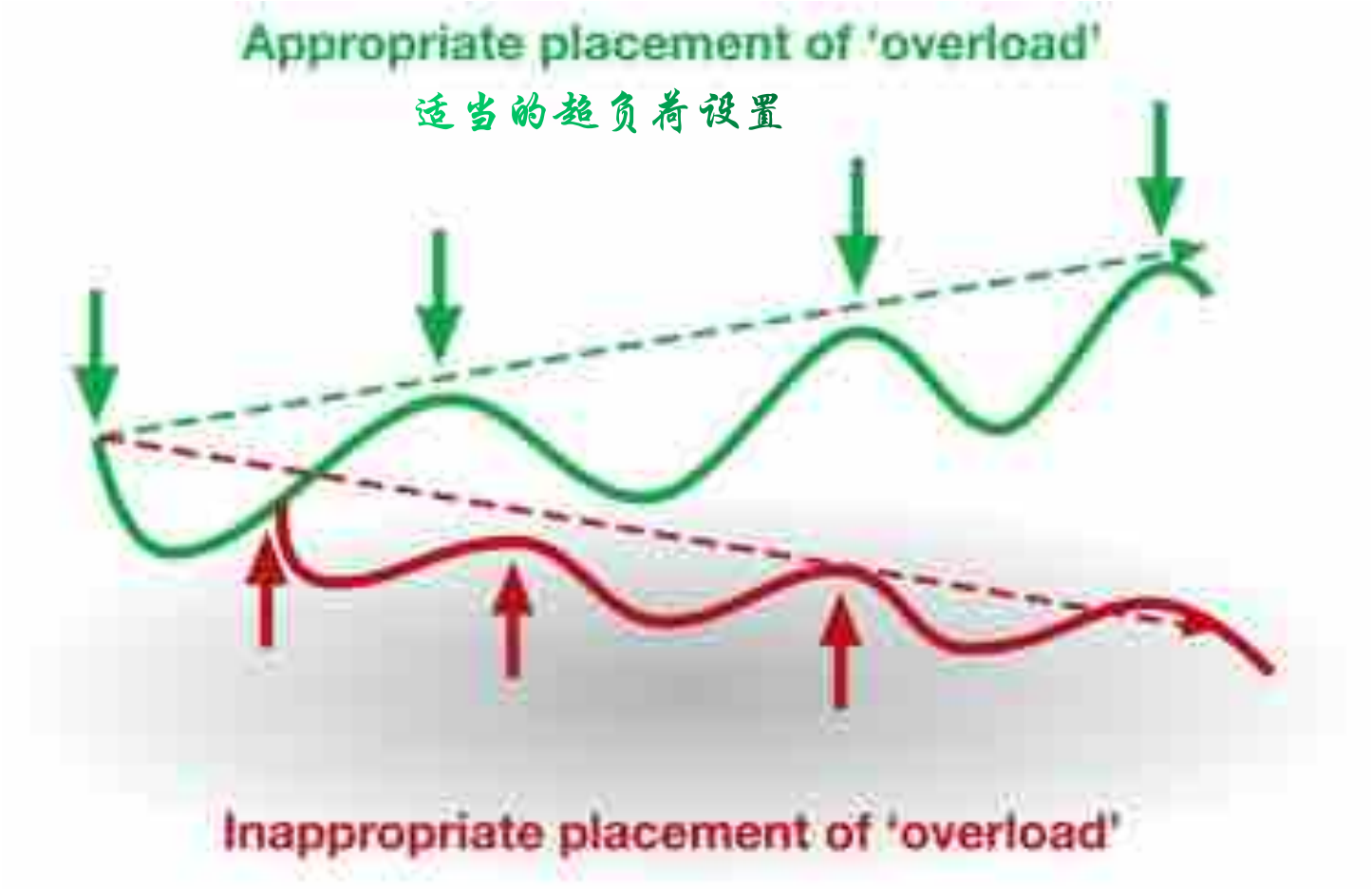
超负荷原则是运动健身训练的基本理念。这意味着，为了提高，运动员必须不断努力训练，使得他们的身体适应现有的训练方式。

PRINCIPLES OF SPORTS TRAINING 运动训练原理

Overload

PRINCIPLES OF SPORTS TRAINING 运动训练原理

Overload



PRINCIPLES OF SPORTS TRAINING 运动训练原理

Progression进展

Over time the body becomes accustomed to exercising at a given level. This adaptation results in improved efficiency, less effort and less muscle breakdown at that level.

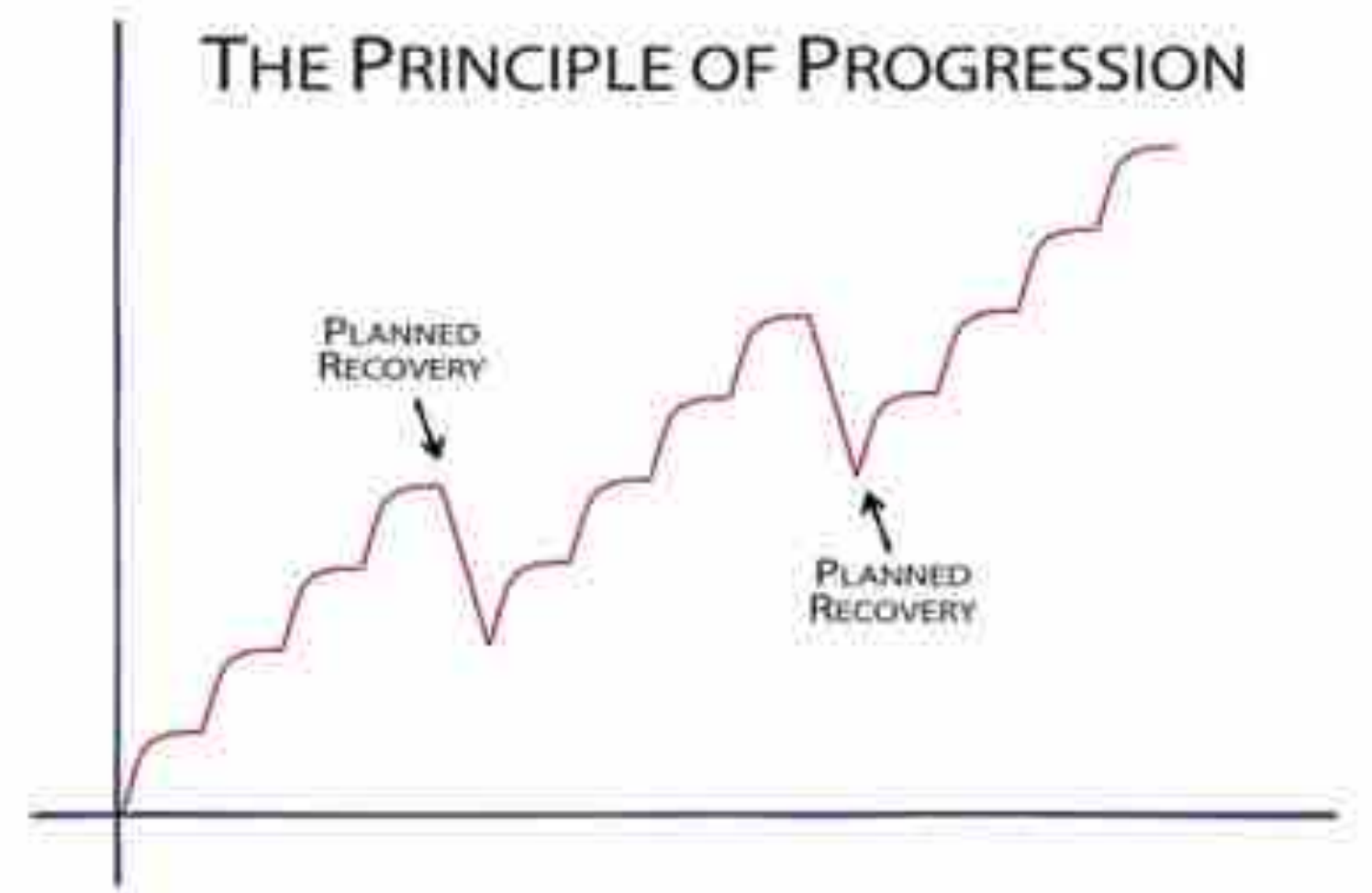
随着时间的推移，身体逐渐习惯于在一定水平（强度）上训练。这种适应的表现就是效率提高，不再那么辛苦以及减少肌肉在这一水平下的崩溃。

PRINCIPLES OF SPORTS TRAINING 运动训练原理

Progression进展

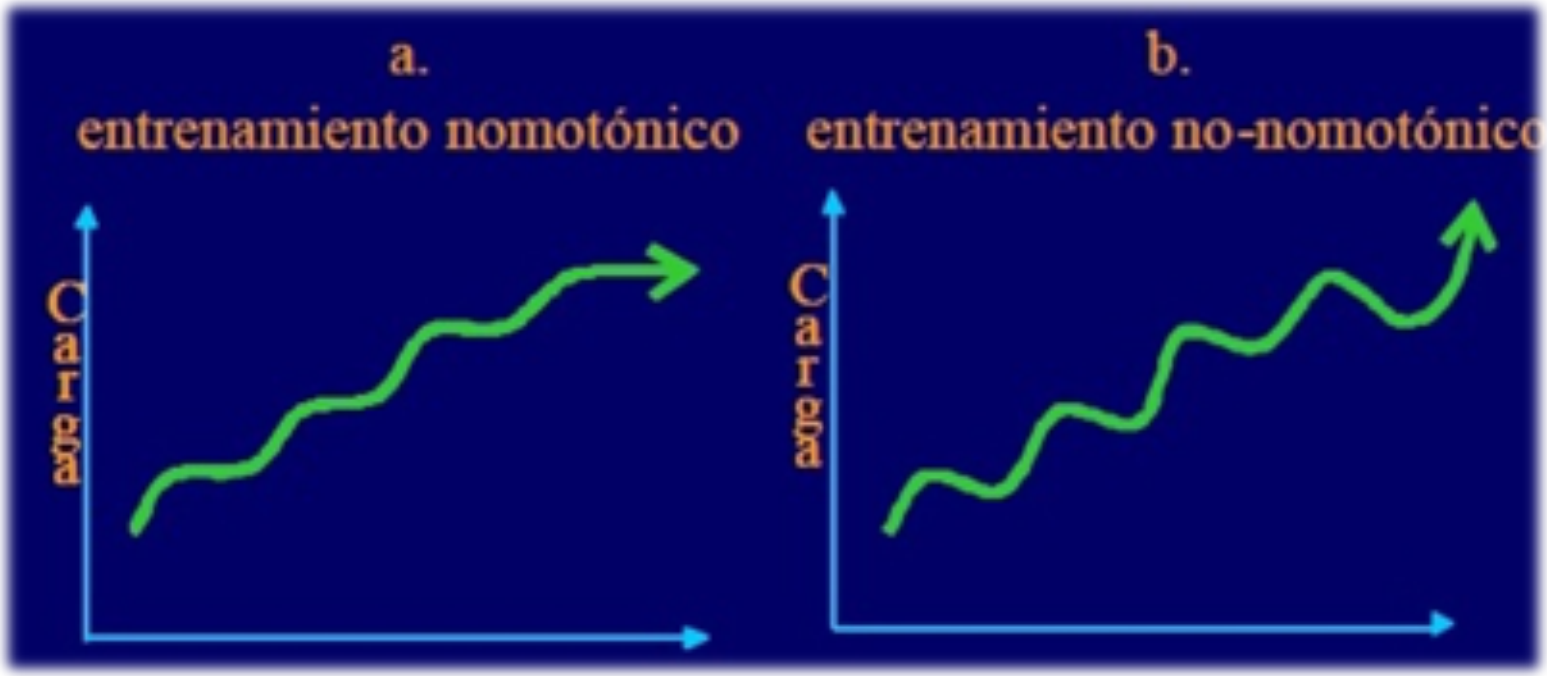
PRINCIPLES OF SPORTS TRAINING 运动训练原理

Progression进展



PRINCIPLES OF SPORTS TRAINING 运动训练原理

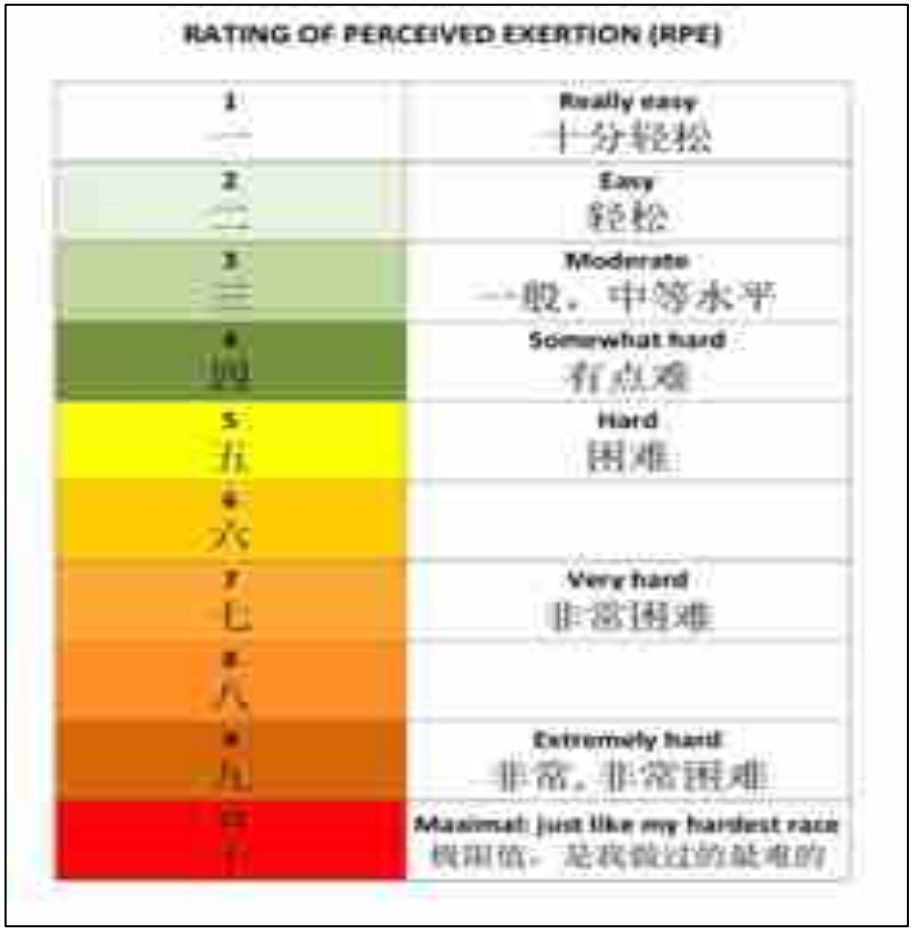
Progression进展



PRINCIPLES OF SPORTS TRAINING 运动训练原理

Progression进展

sesión de desarrollo, **carga extrema**	5 puntos
Sesión de desarrollo, **carga grande**	4 puntos
Sesión de desarrollo, **carga importante**	3 puntos
Sesión de mantenimiento, **carga media**	2 puntos
Sesión de recuperación, **carga baja**	1 punto



PRINCIPLES OF SPORTS TRAINING 运动训练原理

PRINCIPLES OF SPORTS TRAINING 运动训练原理

WEEKLY PLAN SHANGHAI JUDO

PRINCIPLES OF SPORTS TRAINING 运动训练原理

WEEKLY PLAN SHANGHAI JUDO

TEAM 团队: JUDO SHANGHAI SEASON 赛节: 2021

WEEK 周: 29-03 May MICROCYCLE 微周期: 46-Cumular

COACH 教练: LiZhengxia ,WuXuduan/Felipe Sánchez

	星期一	星期二	星期三	星期四	星期五	星期六	星期日
	09.00 JUDO 柔道 Warm up 热身 15' CIRCUIT OREGON 45'	09.00 GYM 健身房 strength training 力量训练 Rowing 10' Uchi komi bands 弹力带打达 x 200	09.00 JUDO 柔道 Warm up 热身 15' CIRCUIT OREGON 45'	09.00 GYM 健身房 strength training 力量训练 Rowing 10' Uchi komi bands 弹力带打达 x 200	09.00 JUDO 柔道 Warm up 热身 15' Uchikomi Yagaku group 5x 1' 流动技打达 Randori TW. 投技实战 6x (2'+2'+1' KaiGeiki)/45" Randori NW 寝技实战 6x3'/30" Conditioning	REST 休息	REST 休息
[illegible]	3	3	3	3	4	0	0
	15.00 JUDO 柔道 Warm up 热身 15' Uchikomi Yagaku group 5x 4'/30" 流动技打达 Randori TW. 投技实战 6x (2'+2'+2' KaiGeiki)/45" Randori NW 寝技实战 6x3'/30"	15.00 JUDO 柔道 Warm up 热身 15' TECHNIQUE 投技技术 ROPE CLIMBINGx 3	15.00 JUDO 柔道 Warm up 热身 15' Uchikomi Yagaku group 5x 4' 流动技打达 Randori TW. 投技实战 2x (4x4/30")/1'30" 4 jacket/4 no jacket Randori NW 寝技实战 6x5'/30" 3 jacket/3 no	15.00 JUDO 柔道 Warm up 热身 15' TECHNIQUE 投技技术 ROPE CLIMBINGx 4	REST 休息	REST 休息	REST 休息
[illegible]	3	2	3	2	0	0	0
[illegible]	6	5	6	5	4	0	0

26

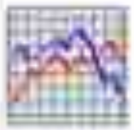
PRINCIPLES OF SPORTS TRAINING 运动训练原理

WEEKLY PLAN SHANGHAI JUDO

TEAM 团队: JUDO SHANGHAI — SEASON 赛季: 2021

WEEK 周: 03-09 May — MICROCYCLE 微周期: 47 cumulat

COACH 教练: Xuhongxia, Wuhuaian, Felipe Sánchez



	星期一	星期二	星期三	星期四	星期五	星期六	星期日	
	09.00 JUDO 柔道 Warm up 热身 15' Running 1 x 6/5/4 laps 1' rest Conditioning	08.30 JUDO 柔道 Warm up 热身 15' Technique 30' Kumikata 20' Nage komi 15' Randori NW 寝技实战 6 x 3'/30" Conditioning	09.00 GYM 健身房 strength training 力量训练 Rowing 2000 m 12' running	REST 休息	09.00 GYM 健身房 strength training 力量训练 Rowing 2000 m 12' running	09.00 JUDO 柔道 Warm-up 热身 15' Yaku soku geiko [illegible] 5 x 5'/30" Nagekomi 投法 5 x 1'+1'/20" Running 25'	REST 休息	
[illegible]	3	4	3	0	4	3	0	
	15.00 JUDO 柔道 Warm up 热身 15' Uchikomi Circuit training 5 x (5x1') Randori 8 x (2'TW+2'NW+2'TW) 4 with judogi 4 without ROPE CLIMBING x 4	EXHIBITION	15.00 JUDO 柔道 Warm up 热身 10' Randori TW. 投技实战 "Mitsu geiko" 10 x 5'/30" # athletes must do all (Nr. of athletes x 7)	15.00 JUDO 柔道 Warm up 热身 15' Technique 30' Kumikata 20' Nage komi 15' Randori NW 寝技实战 20' ippon ROPE CLIMBING x 5	15.00 JUDO 柔道 Warm up 热身 15' Uchikomi Circuit training 5 x (5x1') Randori 8 x (2'TW+2'NW+2'TW) 4 with judogi 4 without (belt)	REST 休息	REST 休息	
[illegible]	4	0	6	4	4	0	0	
[illegible]	7	4	9	4	8	3	0	34

PRINCIPLES OF SPORTS TRAINING 运动训练原理

WEEKLY PLAN SHANGHAI JUDO

TEAM 团队: JUDO SHANGHAI SEASON 季节: 2021

WEEK 周: 16-22 May MACROCYCLE 微循环: 45-cumulat

COACH 教练: Xinhongxia , Weihuaxian,Felipe Sánchez

星期一	星期二	星期三	星期四	星期五	星期六	星期日
REST 休息	09.00 GYM 健身房 Warm up 热身 15' strength training 力量训练 Rowing 2000 m 12' running	09.00 JUDO 柔道 Warm up 热身 15' Running 1 x 6/5/4 laps 3' rest Conditioning ROPE CLIMBING x 5	09.00 GYM 健身房 Warm up 热身 15' WEIGHTLIFTING techn CORE training	09.00 GYM 健身房 Warm up 热身 15' strength training 力量训练 Rowing 2000 m 12' running	09.00 GYM 健身房 Warm up 热身 15' UC Sands 沙力可打沙 x 300 Running 30' Rowing 2000 m Conditioning	REST 休息
强度	3	4	3	3	4	3	0
14.15 JUDO 柔道 Warm up 热身 15' Uchikomi Circuit training 5 x (5+1') Randori 10 x (2'TW+2 NW+2'TW) 5 with judogi 4 without ROPE CLIMBING x 4	JUDO 柔道 group 1- 14.30' group 2- 16.00 Warm up 热身 15' Technique 30' Kumikata 20' Nage komi 10' Randori NW 随意实战 15'	15.00 JUDO 柔道 Warm up 热身 10' Randori TW: 按技实战 "Moto-gashi" 10 x 5'/30'' 6 athletes mum-pio-sil plus of athletes x 0	JUDO 柔道 group 1- 14.30' group 2- 16.00 Warm up 热身 15' Technique 30' Kumikata 20' Nage komi 10' Randori NW 随意实战 15'	REST 休息	REST 休息	REST 休息
强度	5	4	6	4	0	0	0
强度	5	8	9	7	4	4	0 33

PRINCIPLES OF SPORTS TRAINING 运动训练原理

WEEKLY PLAN SHANGHAI JUDO

TEAM 团队: JUDO SHANGHAI SEASON 季节: 2021

WEEK 周: 17-23 May MICROCYCLE 微循环: 48-striking

COACH 教练: Irshongara ,Wuhuaian/FelipeSánchez

星期一	星期二	星期三	星期四	星期五	星期六	星期日
REST 休息	09.00 JUDO 柔道 Warm up 热身 15' strength training 力量训练 Rowing 2000 m	09.00 JUDO 柔道 Warm up 热身 15' Running 1 x 6/5/4 laps 2' rest Constitutning ROPE CLIMBING x 6	09.00 GYM 健身房 Warm up 热身 15' strength training 力量训练	09.00 JUDO 柔道 Warm up 热身 15' Yoko sutu geiko 侧对侧打法 5 x 5' /20" Nagekomi 投法 5 x 1'+1'/20" ROPE CLIMBING x 5	09.00 GYM 健身房 Warm up 热身 15' strength training 力量训练 Rowing 2000 m	REST 休息
5	5	3	3	2	5	0
15.00 JUDO 柔道 Running 跑步 25' Circuit training 3 x (8x1' Randori III x (2'TW+2'NW+2'TW) 5 with judogi 4 without ROPE CLIMBING x 4	JUDO 柔道 group 1 - 14.30 group 2 - 16.00 Warm up 热身 15' Tecnique 30' Kumikata 20' Nage komi 15' Randori NW 随意乱练 15'	15.00 JUDO 柔道 Warm up 热身 30' Randori TW 随意乱练 "Moto gachi" 10 x 5' /30" 6 athletes must do all (Mezuji athletes x 7)	JUDO 柔道 group 1 - 14.30 group 2 - 15.45 Warm up 热身 15' Tecnique 30' Kumikata 20' Nage komi 10' Randori NW 随意乱练 15'	15.00 JUDO 柔道 Running 跑步 25' Circuit training 3 x (8x1 Randori 8 x (2'TW+2'NW+2'TW) 4 with judogi 4 one with judogi either without	REST 休息	REST 休息
4	4	4	4	4	0	0
9	9	7	7	6	5	0

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PRINCIPLES OF SPORTS TRAINING 运动训练原理

XieYadong	90	MALE	0	0
	2021-04-19	270		270
	2021-04-20	330		330
	2021-04-21	740		740
	2021-04-22	690		690
	2021-04-23	880		630
	2021-04-24	270		270
	2021-04-25	0		-
WEEK LOAD	% DIF WK			AVG WL CAT
3180	#¡DIV/0!			1915

XieYadong	90	MALE	0	0
	2021-05-10	575		603
	2021-05-11	1140		985
	2021-05-12	1450		1355
	2021-05-13	640		635
	2021-05-14	440		495
	2021-05-15	240		180
	2021-05-16	0		-
WEEK LOAD	% DIF WK			AVG WL CAT
4485	-4,98%			4253

XieYadong	90	MALE	0	0
	2021-04-26	600		660
	2021-04-27	1350		1290
	2021-04-28	880		915
	2021-04-29	1040		860
	2021-04-30	600		600
	2021-05-01	0		-
	2021-05-02	0		-
WEEK LOAD	% DIF WK			AVG WL CAT
4470	645,00%			4325

XieYadong	90	MALE	0	0
	2021-05-03	1000		940
	2021-05-04	720		660
	2021-05-05	1020		1080
	2021-05-06	360		420
	2021-05-07	1020		930
	2021-05-08	600		450
	2021-05-09	0		-
WEEK LOAD	% DIF WK			AVG WL CAT
4720	5,59%			4480

PRINCIPLES OF SPORTS TRAINING 运动训练原理

Recovery恢复

The Recovery Principle dictates that athletes need adequate time to recuperate from training and competition. Many believe that an athlete's ability to recover from workouts is just as important as the workout itself.

恢复原则规定运动员需要足够的时间从训练和比赛中恢复。许多人认为，运动员从训练中恢复的能力和训练本身一样重要。

It is during rest periods that athletes' bodies adapt to the stress placed upon them during intense workout sessions and competitions. Rest also provides time for a mental preparation and reflection.

正是在休息期间，运动员的身体适应了在紧张的训练和比赛中施加在他们身上的压力。休息同时也为心理准备和反思提供了时间。

The Recovery Principle applies both to immediate rest needed between bouts of exercise, as well as to longer time intervals of several hours to about two days.

恢复原则既适用于运动间歇所需的立即休息，也适用于几小时到两天左右的较长时间间隔。

PRINCIPLES OF SPORTS TRAINING 运动训练原理

Specificity 专项性

The Specificity Principle is key to developing effective fitness training programs for sports. Specificity also underlies how athletes learn sport skills. However, the principle is sometimes misinterpreted.
Specificity refers to the type of changes the body makes in response to sports training. **Very simply, *what you do is what you get.***

专项性原则是制定有效的运动健身训练方案的关键。专项性也构成了运动员学习运动技能的基础方式。然而，这一原则有时被曲解。
专项性是指身体对运动训练做出的改变的类型。简单地说，你所做的就是你所得到的。

PRINCIPLES OF SPORTS TRAINING 运动训练原理

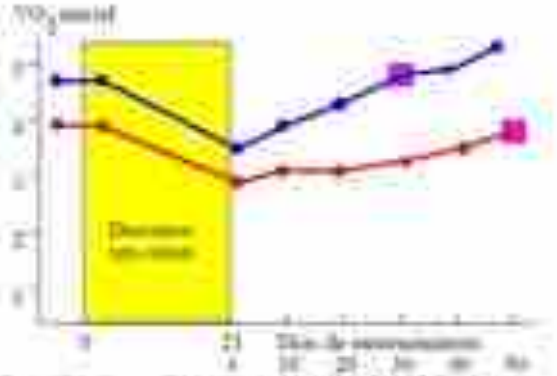
Reversibility可逆性

Reversibility means that an athlete can lose the effects of training when they stop, and can gain the effects when they begin to train again.

可逆性是指运动员在停止训练时可能失去训练效果，而在重新开始训练时获得训练效果。

Detraining occurs within a relatively short time period after an athlete ceases to train. Performance reductions may occur in as little as two weeks or sooner.

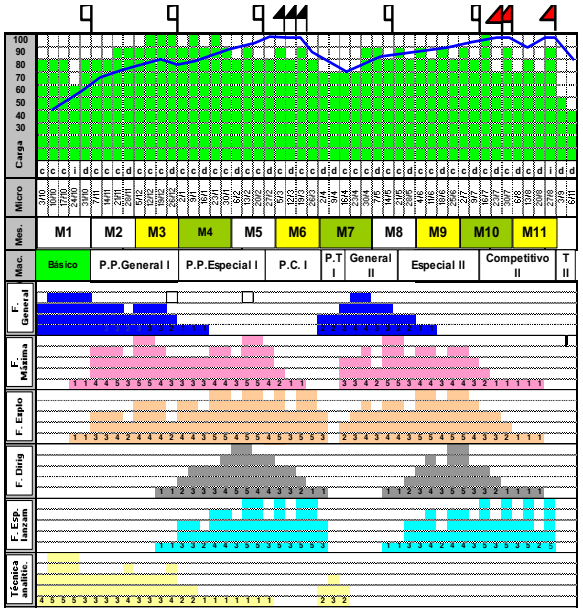
运动员停止训练后，在相对较短的时间内就会出现能力降低的情况。能力降低可能在两周内或更短的时间内发生。

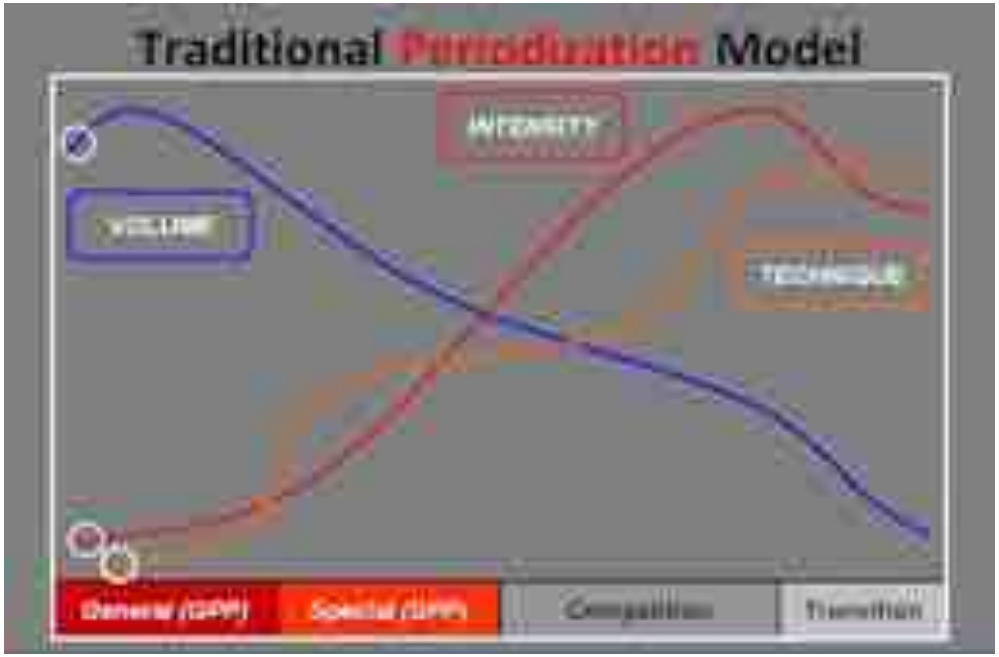


PRINCIPLES OF SPORTS TRAINING 运动训练原理

Cyclic Character of the Training Process

训练过程的循环特性





PRINCIPLES OF SPORTS TRAINING 运动训练原理

Individualization个性化

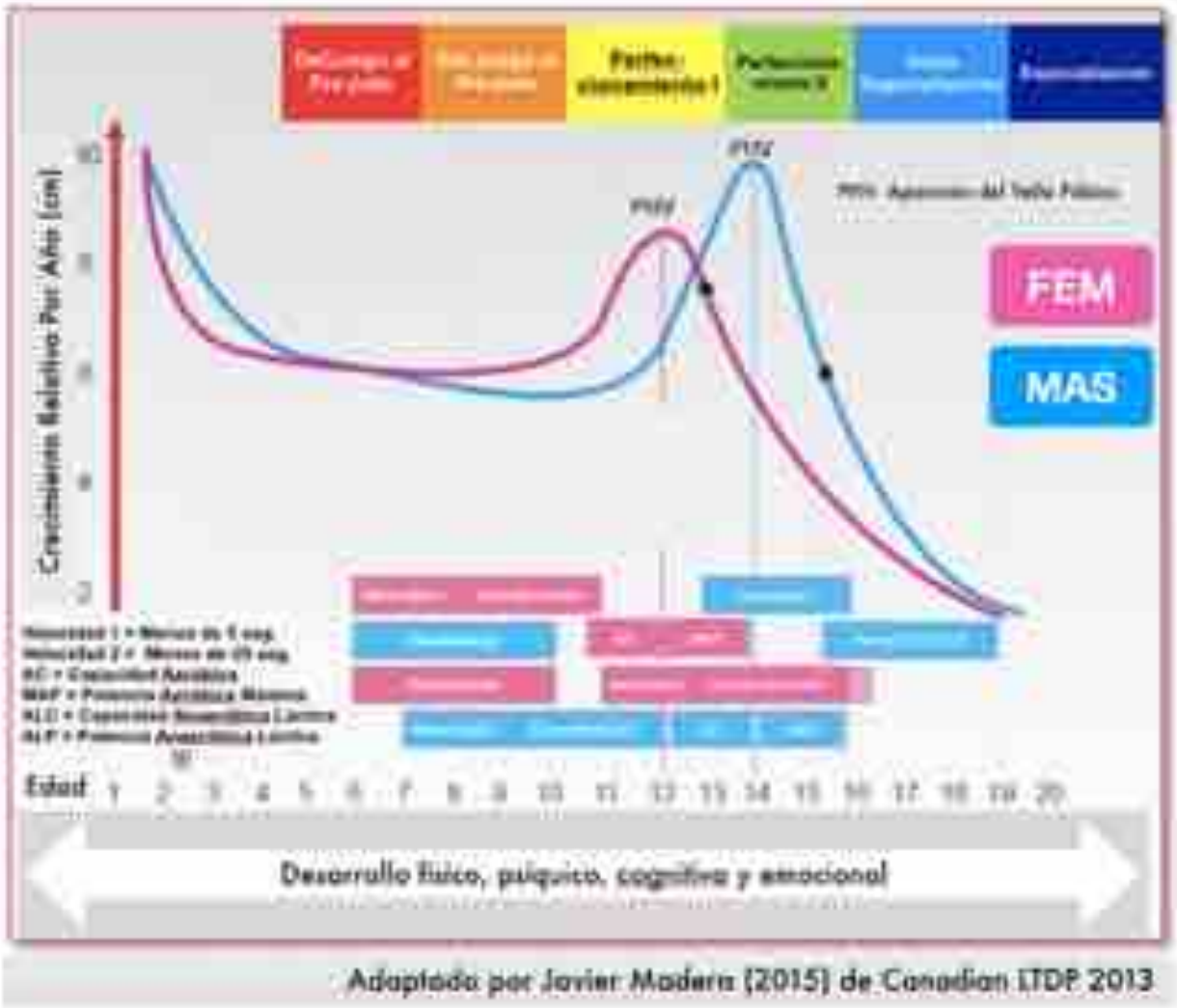
The Individualization Principle dictates that sports training should be adjusted according to each athlete's characteristics and needs, such as age, gender, rate of progress, and previous experience. The goal of individualization is to capitalize on each athlete's strengths, exploit their genetic potential, and strengthen their weaknesses.

个性化原则要求应根据每个运动员的特征和需求（例如年龄，性别，进步速度和以前的经验）来调整运动训练。个性化的目标是发挥每位运动员的长处，发挥其遗传潜能，并增强其弱点。

PRINCIPLES OF SPORTS TRAINING 运动训练原理

PRINCIPLES OF SPORTS TRAINING 运动训练原理

- Gender differences
  性别差异



PRINCIPLES OF SPORTS TRAINING 运动训练原理

- Biological age vs chronological age

PRINCIPLES OF SPORTS TRAINING 运动训练原理

- Individualize training loads训练负荷个性化

PRINCIPLES OF SPORTS TRAINING 运动训练原理

Variability变化

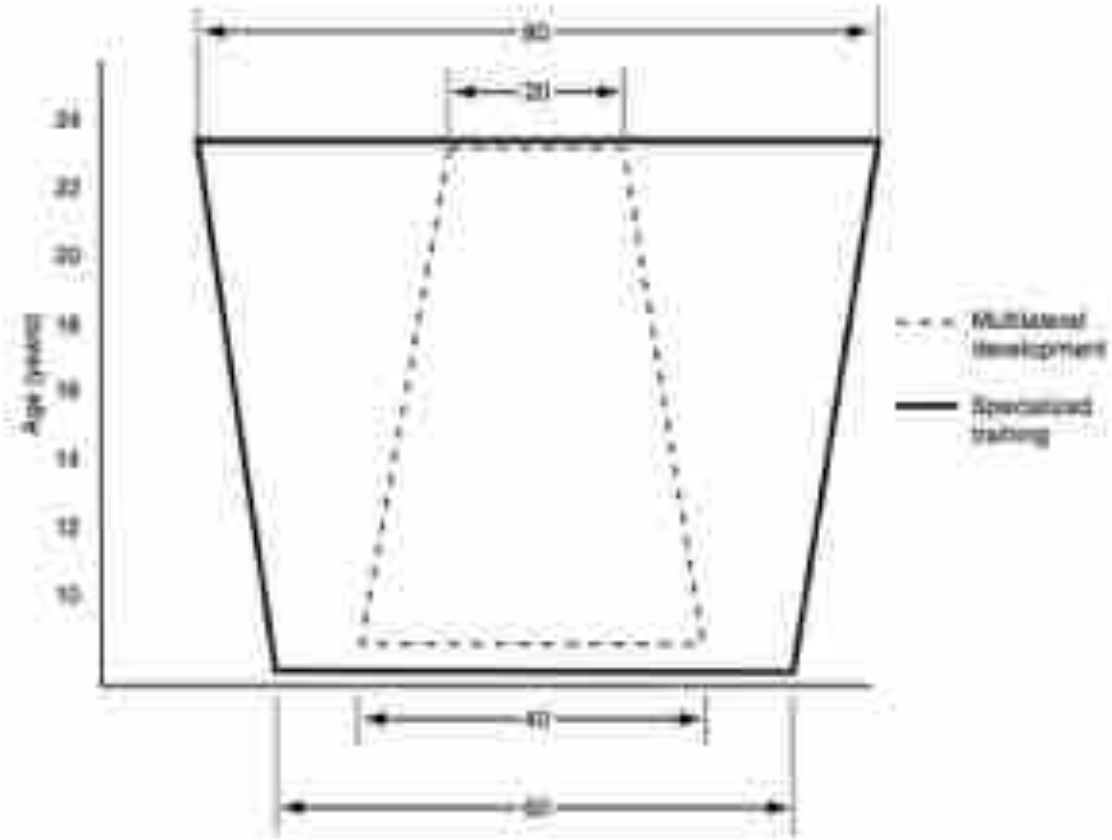
The Variation Principle suggests that minor changes in training regimens yield more consistent gains in sport performance. Training programs for virtually every sport include variations in ***intensity***, ***duration***, ***volume,*** and other ***important aspects*** of practice.

变化原理表明，训练方案的微小变化会使运动成绩获得更持续的提高。几乎每项运动的训练计划都包括强度、持久、训练量和其他重要练习方面的变化。

PRINCIPLES OF SPORTS TRAINING 运动训练原理

Multilateral development vs specialization

多元化和专项化



PRINCIPLES OF SPORTS TRAINING 运动训练原理

Multilateral development vs specialization

多元化和专项化

COMPARISON BETWEEN EARLY SPECIALIZATION AND MULTILATERAL DEVELOPMENT

Early Specialization	Multilateral Development
• Quick performance improvement	• Slower performance improvement
• Best performances achieved at 15 to 16 years of age because of quick adaptation	• Best performances at age 18 or older when the athlete has reached physiological and psychological maturation
• Inconsistent performance in competition	• Consistent and progressive performance in competition
• High incidence of burnout and quitting sport by age 18	• Longer athletic career
• Increased risk of injury because of forced adaptation and lack of physiological development	• Fewer injuries as a result of more progressive loading patterns and overall physiological development

Based on Harre 1982 (46).

PRINCIPLES OF SPORTS TRAINING 运动训练原理

Multilateral development vs specialization

多元化和专项化

13-YEAR-OLD DARIA BILODID BECAME THE YOUNGEST WORLD JUDO CHAMPION IN HISTORY

Daria Bilodid

2017
- 1 Europeans Warsaw
- 3 Grand Prix Hohot
- 1 Grand Prix The Hague
- 1 European Open Prague
- 2 Junior EJCup Paks
- 2 Junior EJCup Kaunas

2018
- Worlds Baku 1
- Grand Slam Paris 1
- Grand Slam Düsseldorf 1
- Grand Prix Tunis 1
- Grand Prix Zagreb 1
- Junior Worlds Nassau 1
- Senior EJCup Celje 1

2016
- 1 Junior Europeans Malaga
- 1 Cadet Europeans Vantaa
- 1 Cadet EJCup Zagreb
- 1 Cadet EJCup Teplice

2019
- European Games 1
- Grand Prix Tbilisi 2

2015
- 1 Cadet Worlds Sarajevo
- 1 Cadet Europeans Sofia
- 1 Cadet EJCup Zagreb
- 1 Cadet EJCup Teplice
- 1 Cadet EJCup Cluj Napoca

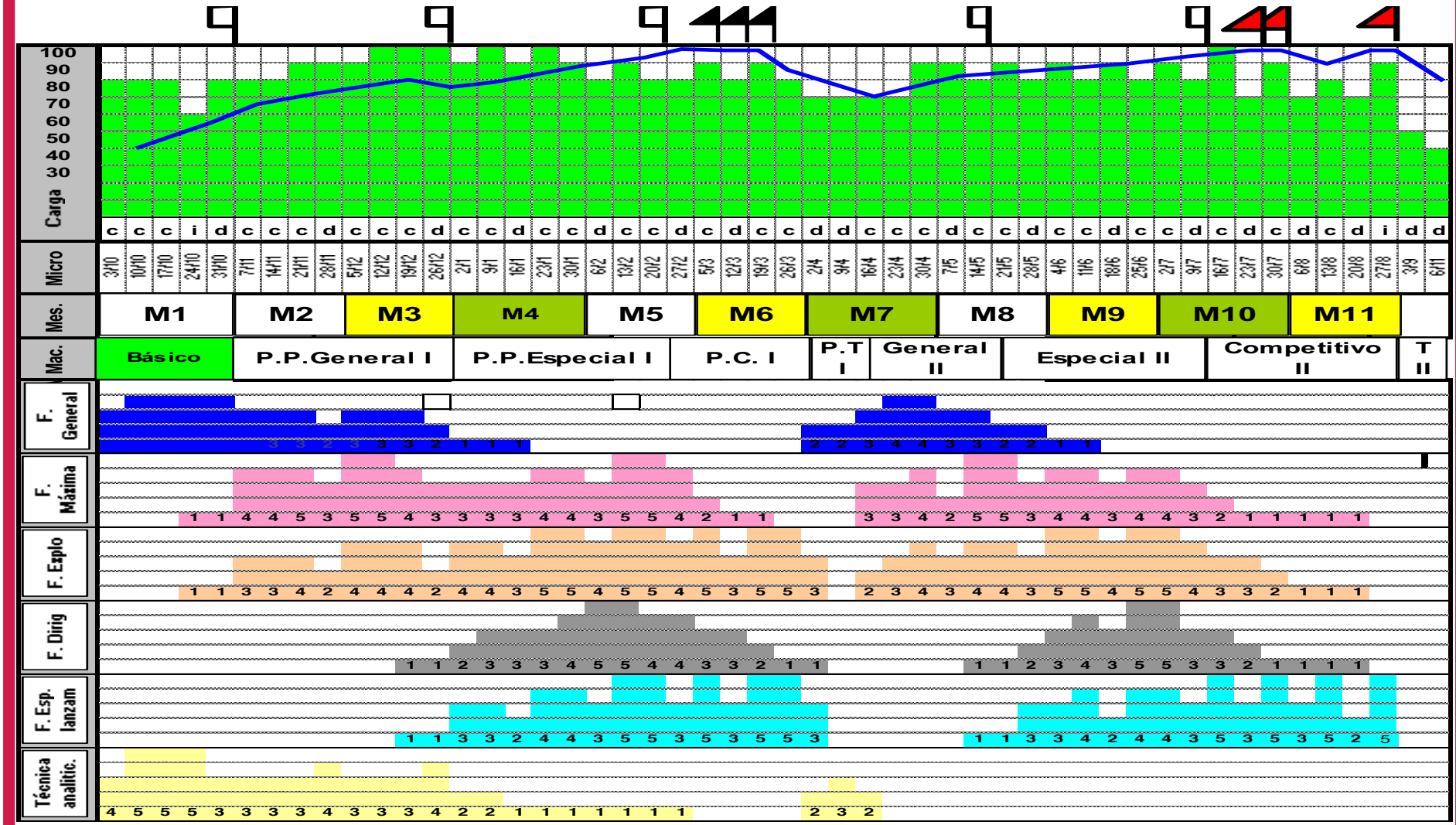
2000 2005 2010 2015 2020

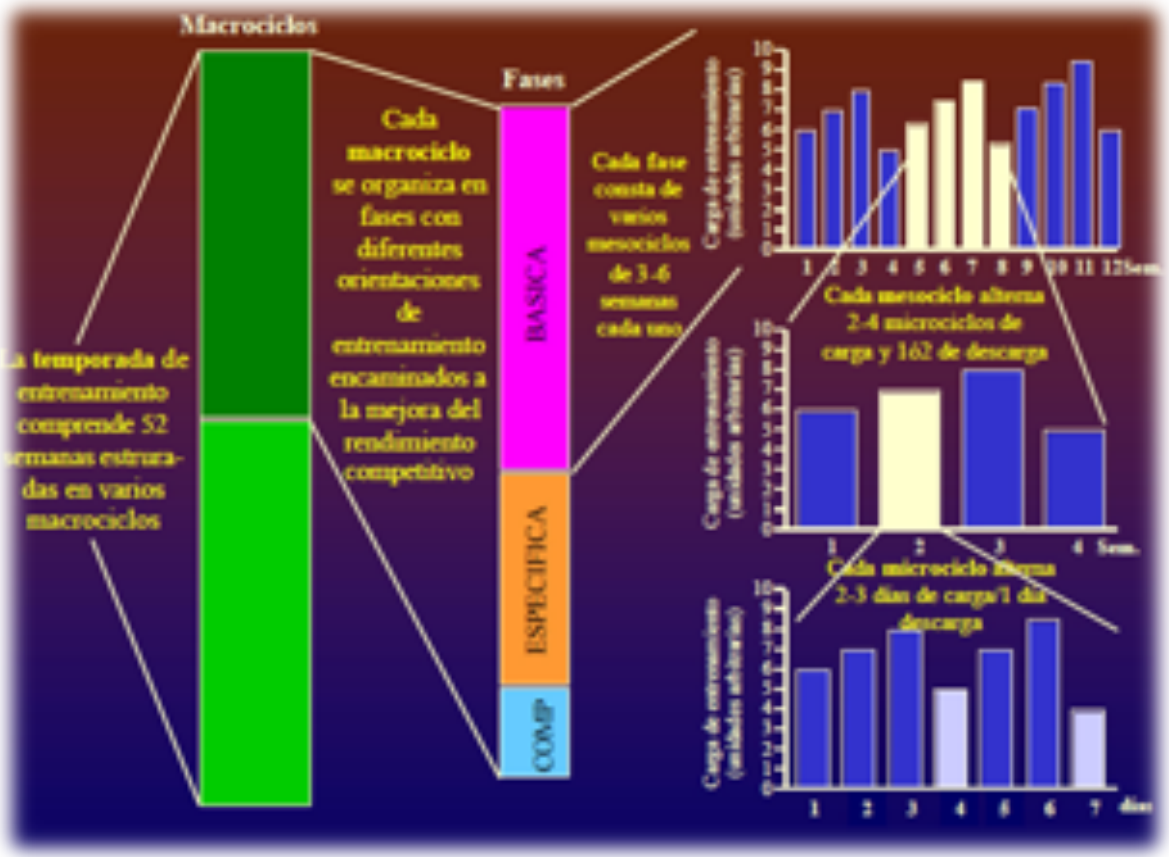
Oct 2000 Birth of Daria

2006 started Judo

2020 Olympic Games Tokyo

PERIODIZATION





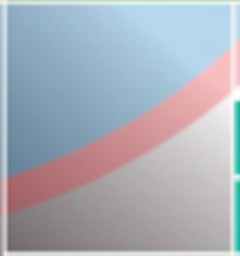
Periodization usually involve 52 training weeks a year distributed in 1 to 5 competition cycles called macrocycles. These macorcycles are structured in smaller units of periodization (periods, phases, mesocycles, microcycles) according the different peridization models applied.

LTAD-LONG TERM ATHLETE DEVELOPMENT MODEL
运动员长期发展模型

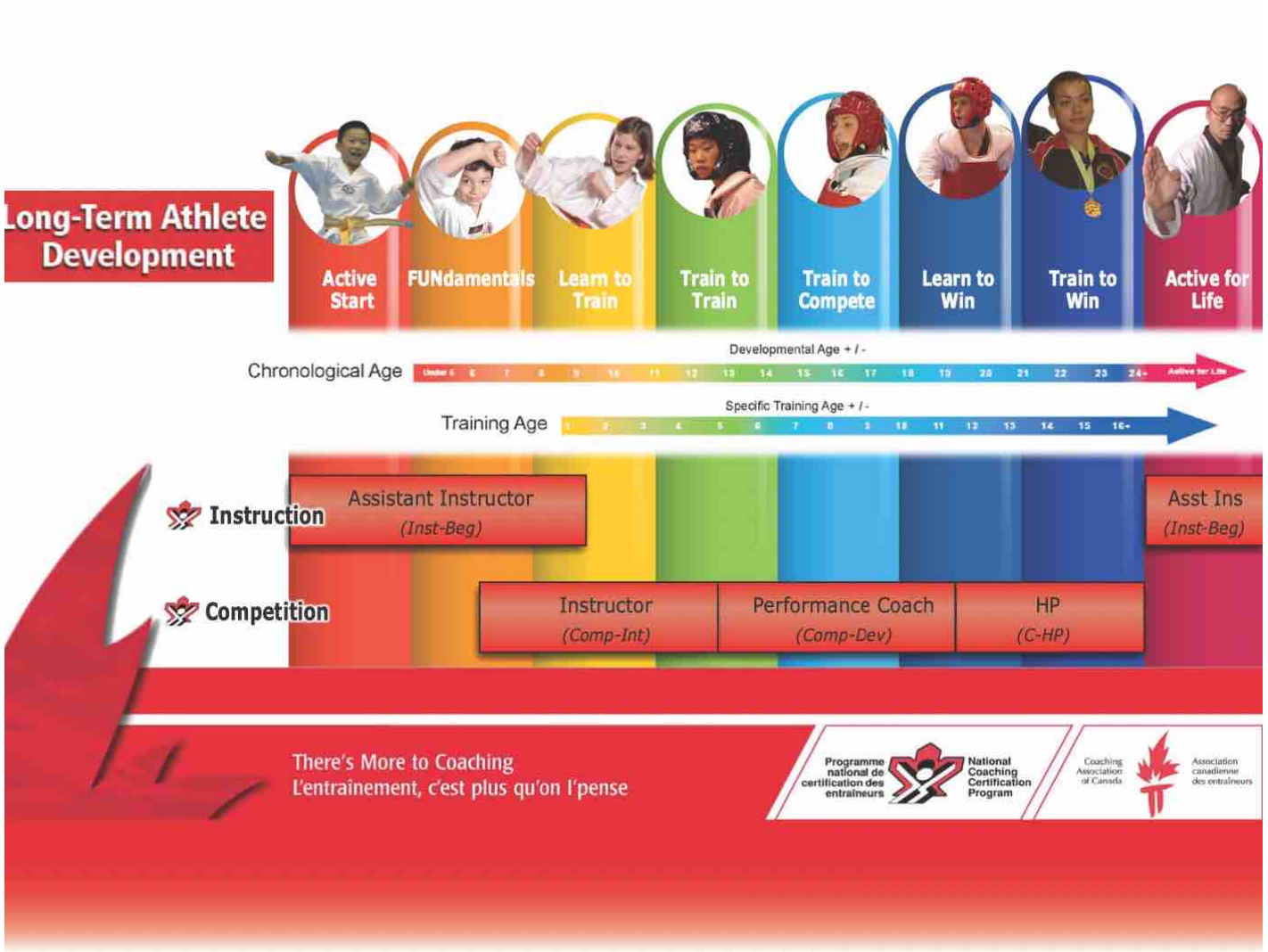
Canada Long Term Athlete Development Model

LTAD-LONG TERM ATHLETE DEVELOPMENT MODEL
运动员长期发展模型

LTAD-LONG TERM ATHLETE DEVELOPMENT MODEL
运动员长期发展模型

FUN	L2T		T2T	T2C		T2W	
						U21	SENIOR
					U18	National Centre and Carding	
				U16	Regional / National Center	Tactical / Physical / Technical Training	Tactical / Physical / Technical Training
				Provincial - Regional Center	Tactical / Physical / Technical Training		
			U14	Technical Development	Competition Specific Technical Development	Competition Specific Technical Development	Competition Specific Technical Refinement
		U12	Technical Development	Competition 8–10 x year	Competition 10–12 x year	Competition 10–16 x year	Competition 10–16 x year
	U10	Technical Development	Competition 6–8 x year	Coordination Speed Endurance	Speed Endurance; Strength	Speed Endurance; Strength; Power	Speed Endurance; Strength; Power
U8	Fundamentals	Intro to Competition 5 x year	Coordination and Speed	Intro to Tactical Training	Intro to Tactical Training	Tactical Training	Tactical and Technical Training 2 x week
Fundamentals	Coordination and Speed	Coordination and Speed	Intro to Mental Training	Mental Training	Mental Training	Mental Training	Mental Training 2 x week
Daily Physical Activity	Daily Physical Activity	Daily Physical Activity	Intro to Cross Training	Cross Training 3 x week	Cross Training 3 x week	Cross Training 3–4 x week	Energy System Training 2 x week Strength Training 3 x week
Judo or Any Other Sport	Judo 2 x week	Judo 2–3 x week	Judo 3 x week	Judo 4–5 x week	Judo 4–5 x week	Judo 6–10 x week	Random Training 5 x week
Healthy Life Style	Healthy Life Style	Healthy Life Style	Healthy Life Style	Healthy Life Style	Healthy Life Style	Healthy Life Style	Healthy Life Style
FUNdamentals	L2T Learn to Train		T2T Train to Train	T2C Train to Compete		T2W Train to Win	

LTAD-LONG TERM ATHLETE DEVELOPMENT MODEL
运动员长期发展模型



LTAD-LONG TERM ATHLETE DEVELOPMENT MODEL
运动员长期发展模型

Taekwondo System Matrix

Stage	Active Start			Fundamentals				Learn to Train			Train to Train				Train to Compete		Learn to Win	Train to Win	Active For Life
Male Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18+	18 -21+	> 21	All Ages
Female Age		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17+	17 – 21+	> 19	
Training Age (Years in Taekwondo)	0-3 Years			0-4 Years				2-6 Years			4-8 Years				6-12 Years		8-14 Yrs	10-18 Yrs	Varies
NCCP Contexts	Assistant Instructor Instructor – Beginners							Instructor Competition Introduction							Performance Coach – Comp-Dev Olympic Coach - Comp - HP				
Benchmarks	Colour belt			Colour Belt				Black Belt / 1st poom			Top 20% Provincial Championships				Top 20% National Championships		Top 20% International	Podium	Personal Best
Emphasis	Fun activity			Fun and Discipline				Learning the game			Playing the Game				Competing		Performing	Defeating	Fun and Learning
Philosophy	Start dreaming			Dream to have fun				Dream to Learn			Dream to Train				Dream to compete		Dream to win	Realize Dreams	Dream for life
Behavior	Simple dojang rules Introduce good etiquette			Safety Learn to Listen				Safety Self Control and respect			Self confidence and respect				Hard work, self-discipline and commitment		Believe in ability	Perform on demand	Commitment and Self control
Technical Emphasis	Basic / Stances / Punches / Kick			Basic Stances / Punches / Kicks				Defensive Skills: Safe / Block / Counter Attacking Skills: Targeting (Single and Multiple)			Consolidate skills and develop advanced skills				Expand repertoire of all combative techniques		Refine basic and advanced technique.	Refine all techniques	Varies
Tactical Emphasis	None			Simple attack and defense strategies				Timing and Distance Strategies for attack and defense			Game Management Develop individual style				Expand repertoire of Strategies Enhance individual styles		Specialization in attack and defense strategies	Refine winning strategies	Varies
Physical Emphasis	Motor Skill (ABC's) Movement Skills (Run / Jump)			Motor Skills – ABC - Reaction time. Movement Skills (Twist / Run / Jump)				Flexibility Introduce Speed ? Stamina ? Monitor Growth			Speed Stamina (? & ?) Introduce Strength Monitor Growth				Optimize Fitness Strength		Optimize	Optimize	
Windows of Trainability				←←Suppleness→→ ←Speed 1→				←←Skills→→ ←Speed 2 ? →			←←Stamina→→ ←Speed 2 ? →				←←Strength→→→→		←←Optimize / Refine→→		
Mental Emphasis	Listen			Focus Understand rules of dojang				Concentration Understand rules of game			Develop basic mental skills				Emphasize mental skills		Develop mental toughness	Mental confidence	Concentrate
Competition Level	None			Club				Club and Regional			Regional and Provincial				National		International	International	Club, regional, National

LTAD-LONG TERM ATHLETE DEVELOPMENT MODEL
运动员长期发展模型

Competition Structure

Stage	Active Start			Fundamentals				Learn to Train			Train to Train			Train to Compete			Learn to Win	Train to Win	Active For Life
Male Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18+	18 -21+	> 21	All Ages
Female Age		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17+	17 – 21+	> 19	
Training Age (Years in Taekwondo)	0-3 Years			0-4 Years				2-6 Years			4-8 Years			6-12 Years			8-14 Yrs	10-18 Yrs	Varies
NCCP Contexts	Assistant Instructor Instructor – Beginners							Instructor Competition Introduction						Performance Coach – Comp-Dev Olympic Coach - Comp - HP					Instructor Comp-Int

Performance Stream

	Active Start	Fundamentals	Learn to Train	Train to Train	Train to Compete	Learn to Win / Train to Win	Active For Life
Divisions	None	Poom D	Poom C	Poom B	Poom A	Senior	See Recreation Stream
Age Range		10 and Under	11 – 12	13 – 14	15 – 17	15 and over	
Birthdate		Dec 31	Dec 31	Dec 31	Dec 31	Dec 31	
Minimum Belt		Black	Black	Black	Black	Black	
Rounds		3	3	3	3	3	
Duration (sec)		45	60	90	120	120	
Rest (sec)		45	60	60	60	60	
Equipment		Instep Footpads	Instep Footpads	Instep Footpads			
Head Contact		None	None	WTF Rules "One Point Head"	WTF Rules	WTF Rules	
Tournament Format		Round Robin	Round Robin Double elimination		Single or Double Elimination	Single or Double Elimination	
Max. Level		Regional / Provincial	Eastern / Western	National	Junior International	Senior International	

Recreation Steam

	Active Start	Fundamentals	Learn to Train	Train to Train	Train to Compete		Learn to Win / Train to Win	Active For Life		
Divisions	None	Division D	Division C	Division B	Division A		Performance Stream Only	Senior		
Age Range		10 and Under	11 – 12	13 – 14	15 – 17			18+	18+	40+
Birthdate		Dec 31	Dec 31	Dec 31	Dec 31			Dec 31		
Minimum Belt		Coloured	Coloured	Coloured	Coloured	Red Up		<Red	>Red	>Red
Rounds		2	2	2	2	2		2	2	2
Duration (sec)		45	60	90	90	90		90	90	90
Rest (sec)		45	60	60	60	60		60	60	60
Equipment		Instep Footpads	Instep Footpads	Instep Footpads	Instep Footpads			Instep Footpads		
Head Contact		None	None	None	None	WTF		None	WTF	None
Tournament Format		Round Robin	Round Robin Double elimination		Single or Double Elimination			All types		
Max Level		Regional	Regional	Provincial	Provincial			National		

Weight Classes

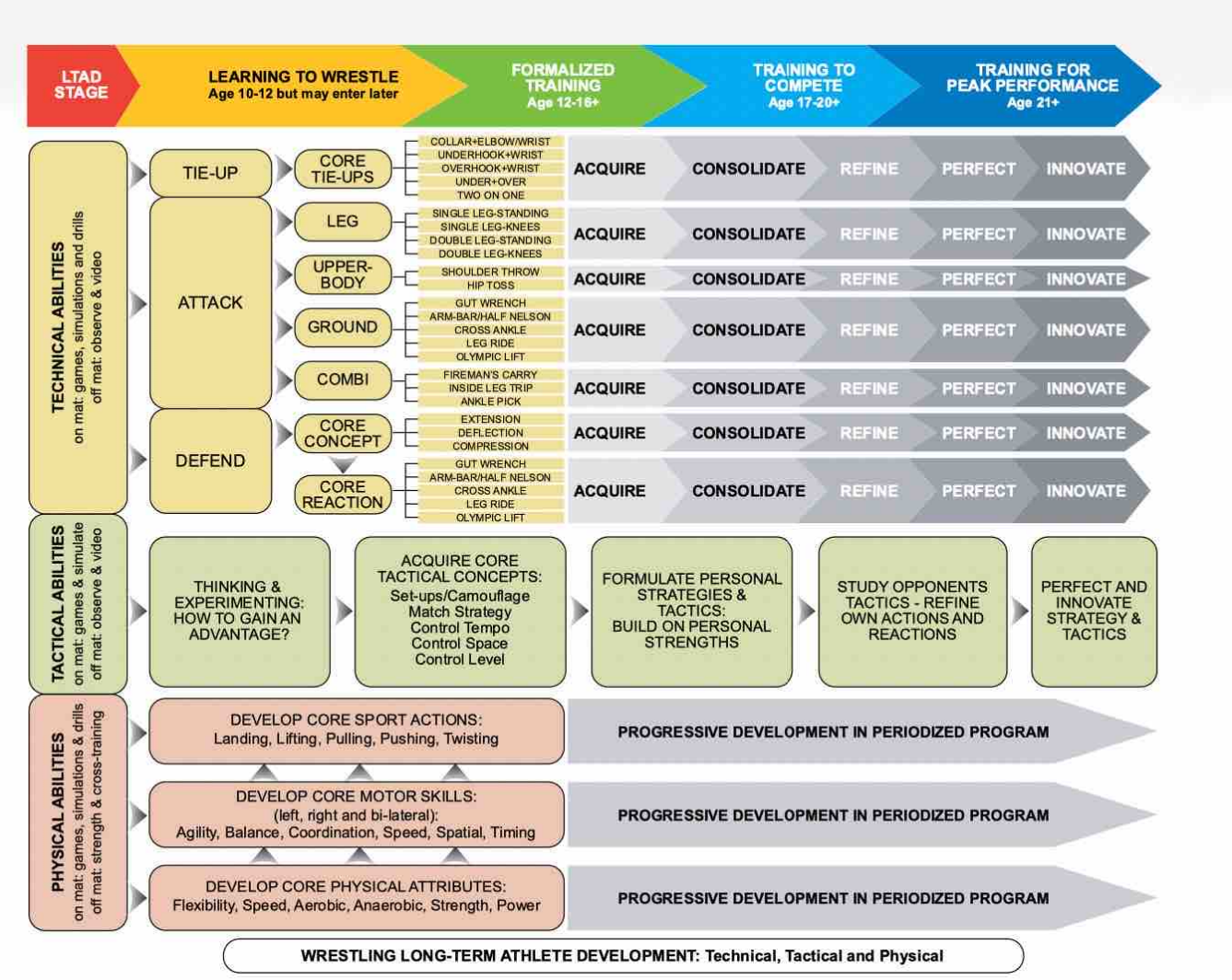
Division	Active Start	Poom D		Poom C		Poom B		Poom A		Olympic		Senior	
Sex	None	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Fin		<20 kg	<18 kg	<27 kg	<30kg	<39 kg	<38 kg	<45 kg	<42 kg	<58 kg	<49 kg	<54 kg	<47 kg
Fly		20-24	18-22	27-31	30-33	39-43	38-42	45-48	42-44			54-58	47-51
Bantam		24-28	22-26	31-35	33-36	43-47	42-46	48-51	44-46	58-68	49-57	58-62	51-55
Feather		28-32	26-30	35-39	36-40	47-51	46-50	51-55	46-49			62-67	55-59
Light		32-35	30-33	39-42	40-44	51-54	50-53	55-59	49-52	68-80	57-67	67-72	59-63
Welter		35-38	33-36	42-45	44-48	54-57	53-56	59-63	52-55			72-78	63-67
Light Middle		38-42	36-40	45-49	48-52	57-61	56-60	63-68	55-59				
Middle		42-46	40-44	49-53	52-57	61-65	60-64	68-73	59-63	>80	>67	78-84	67-72
Light Heavy		46-50	44-48	53-57	57-62	65-69	64-68	73-78	63-68				
Heavy		>50	>48	>57	>62	>69	>68	>78	>68			>84	>72

LTAD-LONG TERM ATHLETE DEVELOPMENT MODEL
运动员长期发展模型

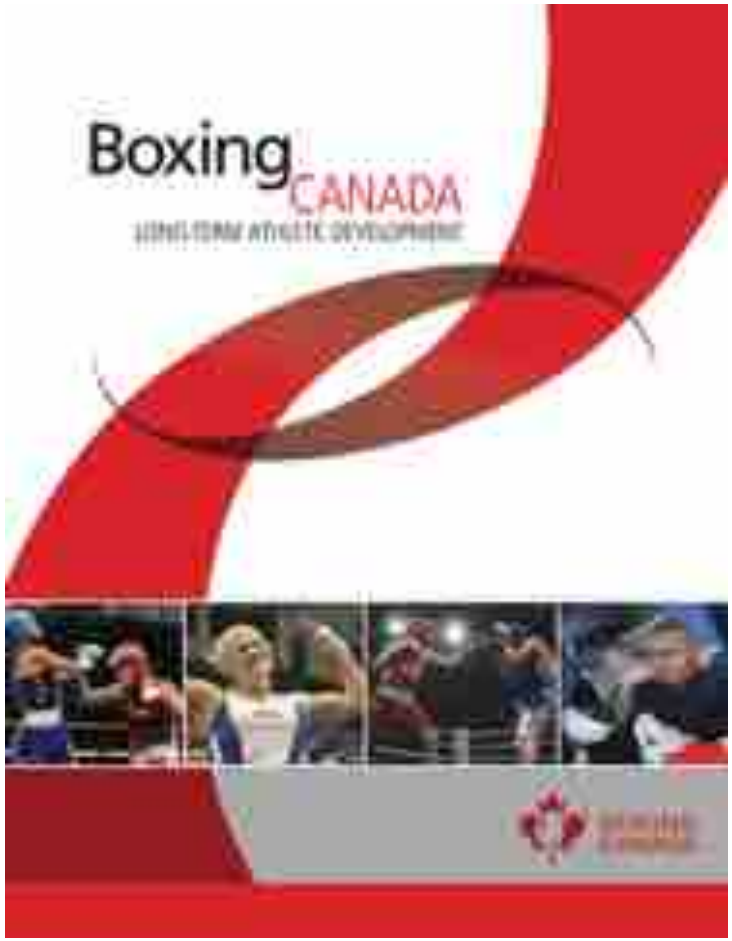
Planning Considerations

Stage	Active Start			Fundamentals				Learn to Train			Train to Train			Train to Compete			Learn to Win	Train to Win	Active For Life
Male Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18+	18 -21+	> 21	All Ages
Female Age		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17+	17 – 21+	> 19	
Training Age (Years in Taekwondo)	0-3 Years			0-4 Years				2-6 Years			4-8 Years			6-12 Years			8-14 Yrs	10-18 Yrs	Varies
NCCP Contexts	Assistant Instructor Instructor – Beginners							Instructor Competition Introduction						Performance Coach – Comp-Dev Olympic Coach - Comp - HP					Instructor Comp-Int
TKD Sport %	10			25				55			80			90			95	95	15
TKD Martial Art %	90			75				45			20			10			5	5	85
Emphasis: Skill %	35							40			30			35			30	30	30
Emphasis: Stamina %	10							10			20			20			20	20	15
Emphasis: Speed %	15							15			20			15			20	25	10
Emphasis: Strength %	10							10			20			20			20	20	15
Emphasis: Suppleness %	30							25			10			10			10	5	30
Skill Emphasis: ABC %	35							20			10			5			5	5	20
Skill Emphasis: Stances/Steps	15							15			15			15			15	15	20
Skill Emphasis: Blocking %	10							10			5			5			5	5	10
Skill Emphasis: Hand Strikes %	10							5			5			5			5	5	10
Skill Emphasis: Foot Strikes %	20							30			40			30			25	20	25
Skill Emphasis: Attack & Defense %	10							20			25			40			45	50	15
Practices / week – TKD specific	1 – 2			2 - 3				2 – 3			3 - 4			4 – 6			6 - 8	8 - 10	2 – 3
Practice Length TKD Specific	30 - 45 minutes			45 - 60 minutes				60 - 75 minutes			75 - 100 minutes			90 – 120 minutes			100-150 minutes	100-150 minutes	75-100 minutes
Practices / week Str & Cd / other	Engage in a variety of other activities for enjoyment 3-5 times / week										1-2 + other activity			2-3			3-4	3-4	Other activities for enjoyment
Practice Length Str & Cd / other	30-75 minutes										<90 min + other activity			<90 min			<90 min	<90 min	
Volume / Week TKD	40-75 minutes			1.5 - 3 Hours				2 - 3.75 Hours			3.75 – 6.6 Hours			6 – 12 Hours			10-20 Hours	13.3-25 Hours	2.5 – 5 Hours
Avg Total Volume / week (all activity)	4.5 hrs			6 hours				7.5 hours			10 hours			12.5 hours			19 hours	23 hours	9 hours
Fights / Year	0-6			6-10				8-15			10-20			15-25			20-30	26-36	0-15
Physical Testing																			
Belt Testing																			

LTAD-LONG TERM ATHLETE DEVELOPMENT MODEL
运动员长期发展模型

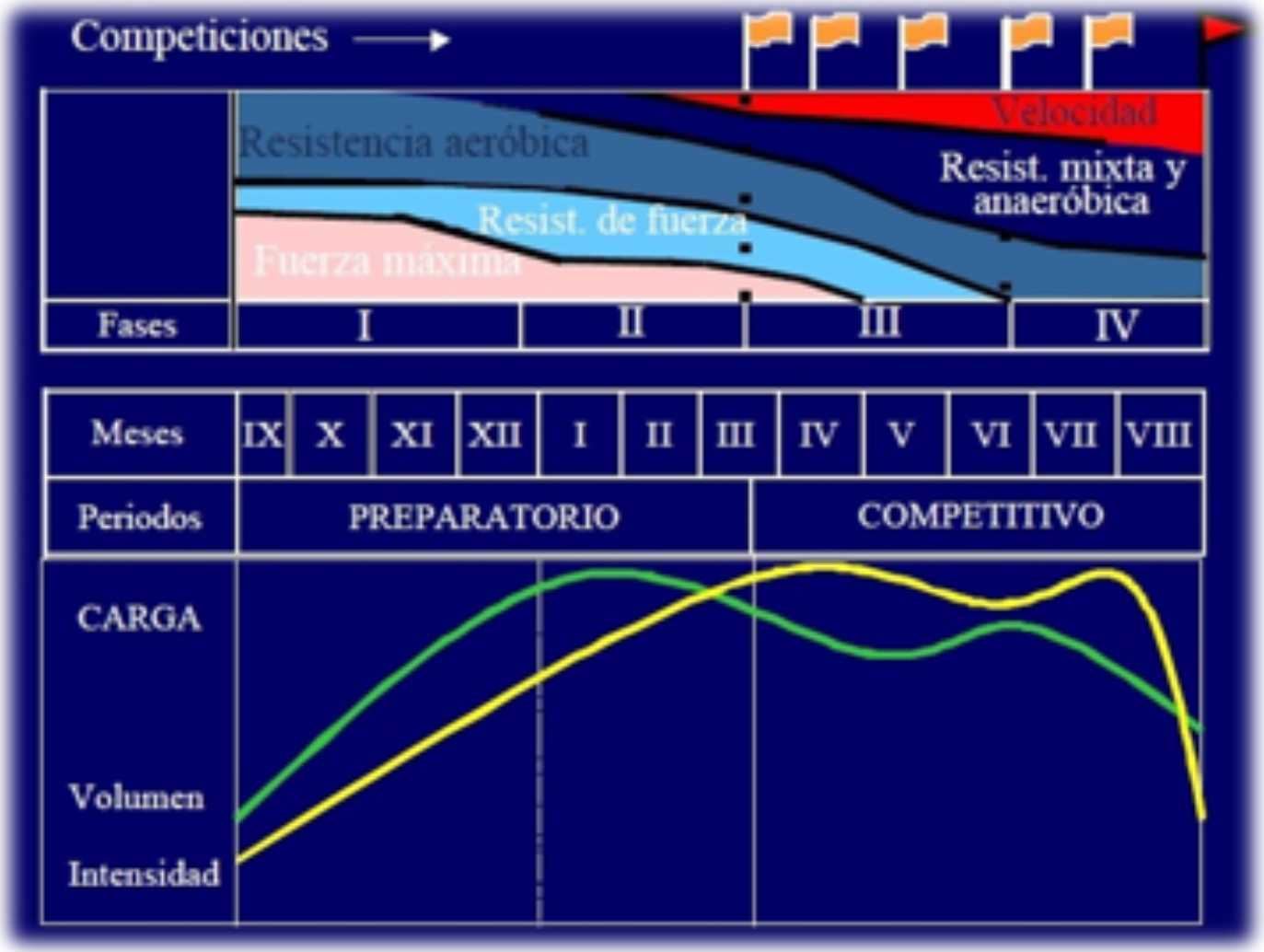


LTAD-LONG TERM ATHLETE DEVELOPMENT MODEL
运动员长期发展模型

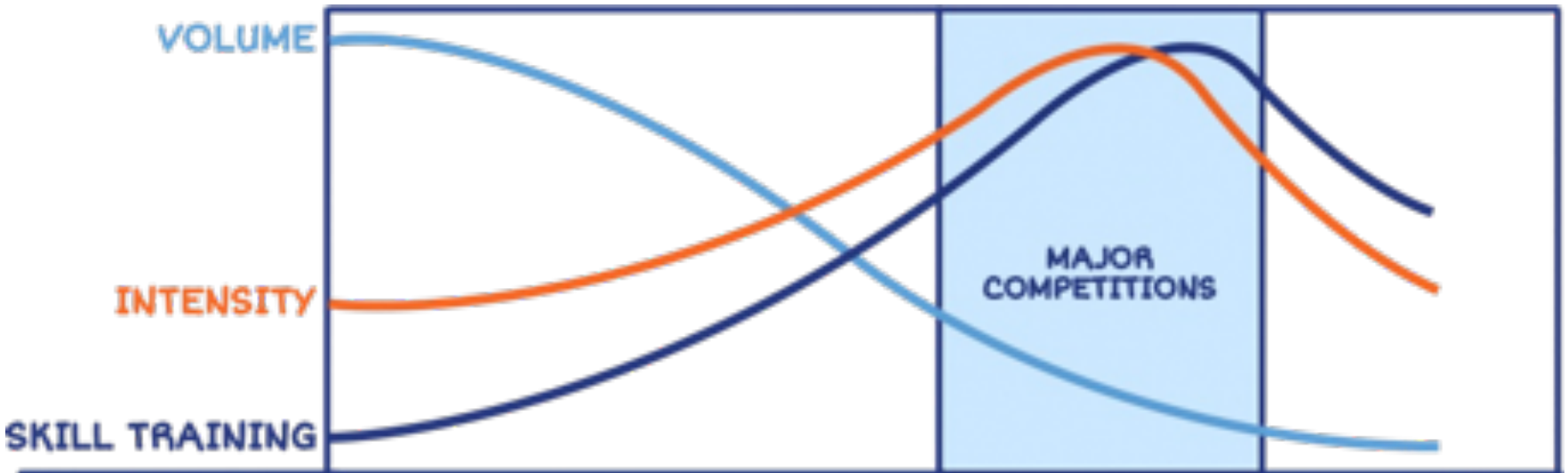


- Competitions schedule
- Long-term strategy
- Different adaptation

TRADITIONAL PERIODIZATION 传统周期



TRADITIONAL PERIODIZATION 传统周期

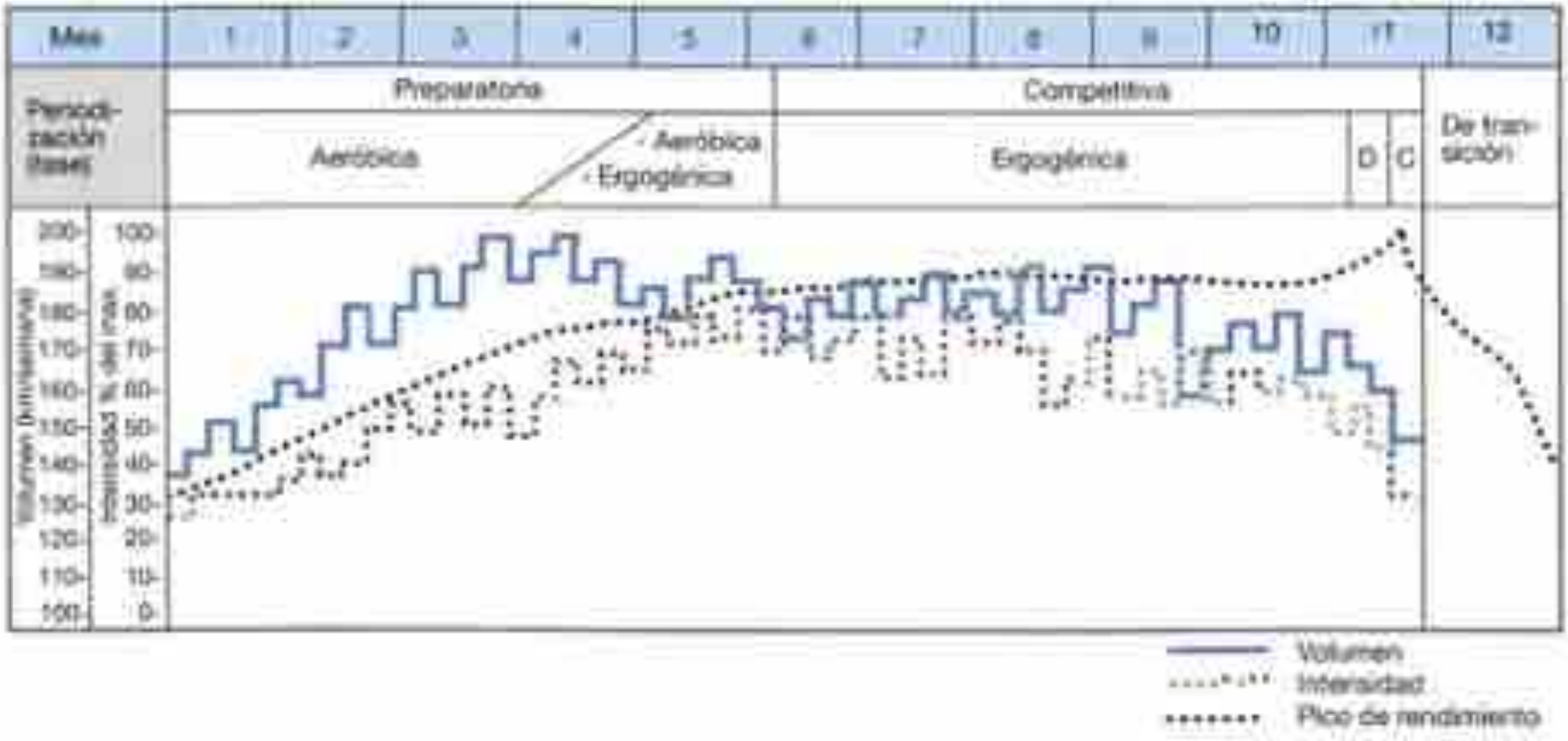


European Terminology	Preparation phase	Competition phase	Season transition (active rest)
Traditional American Terminology	Pre-season	In-season	Off-season
American strength /power terminology	Hypertrophy Strength/Power	Peaking	Active Rest

TRADITIONAL PERIODIZATION 传统周期

➡ **Annual plan based on a monocycle**

CHINA CHAMPIONSHIP

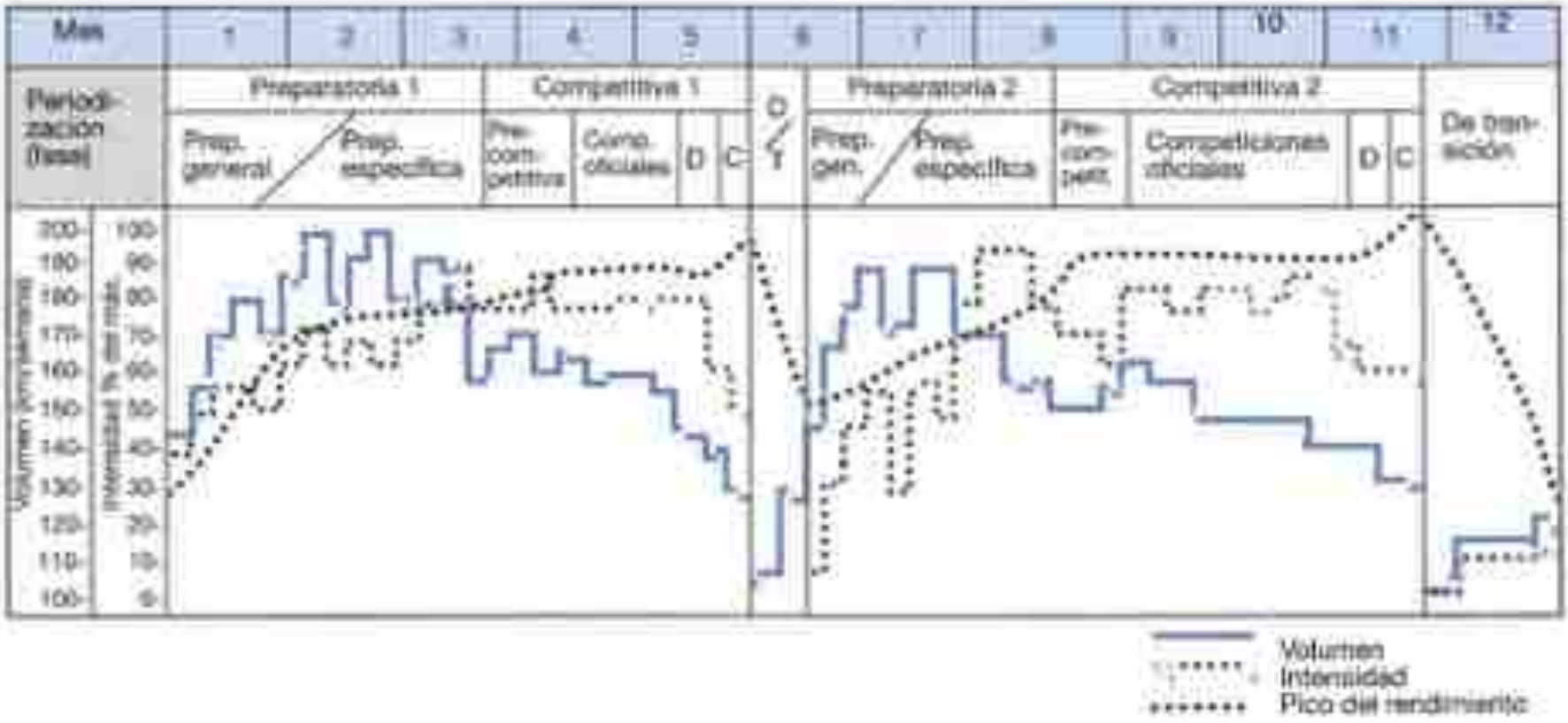


TRADITIONAL PERIODIZATION 传统周期

➡ **By-cycle plan**

CHINA CHAMPIONSHIP

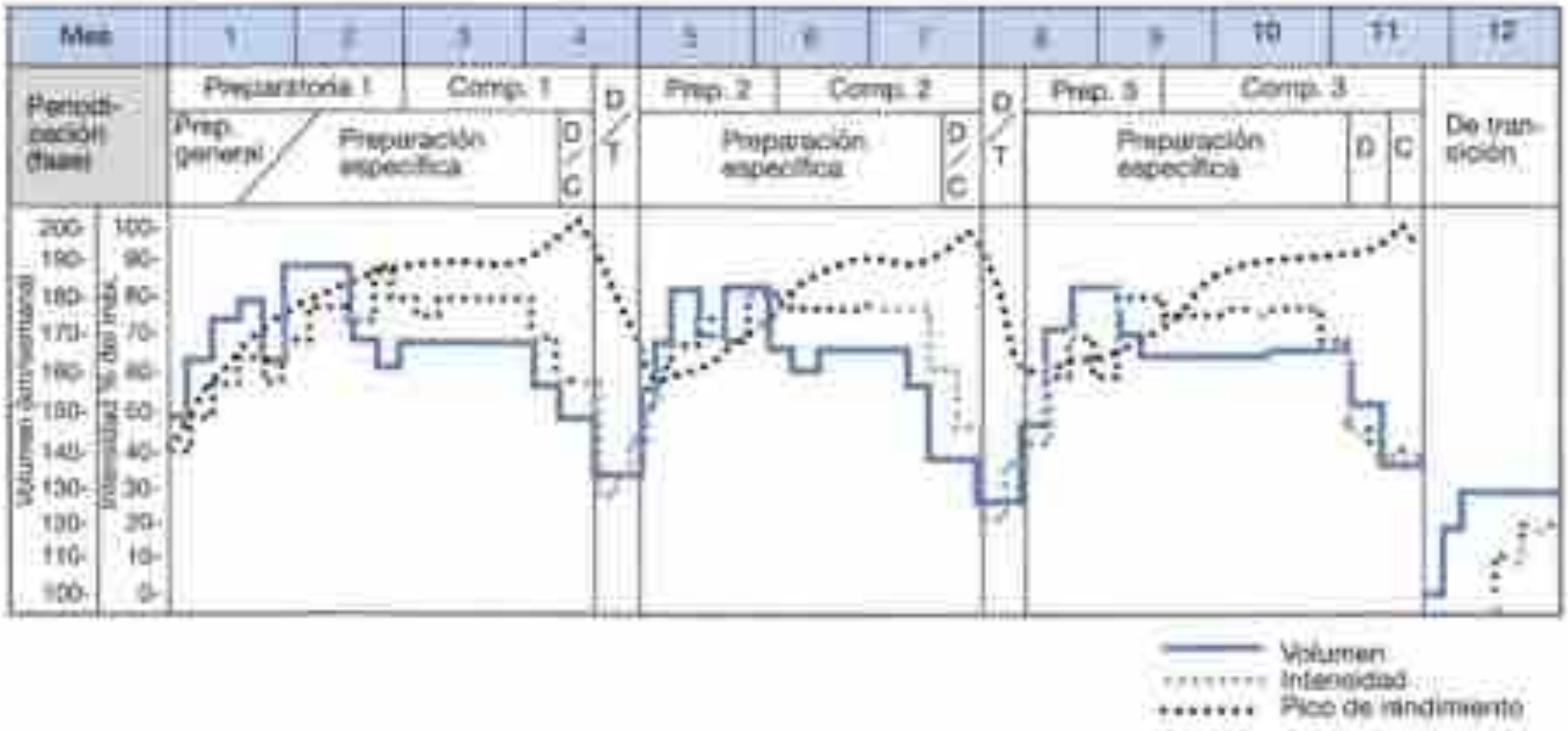
ASIAN GAMES



TRADITIONAL PERIODIZATION 传统周期

Annual training plan with tri-cycle structure

CHINA CHAMPIONSHIP ASIAN GAMES WORLD CHAMPIONSHIP



TRADITIONAL PERIODIZATION 传统周期

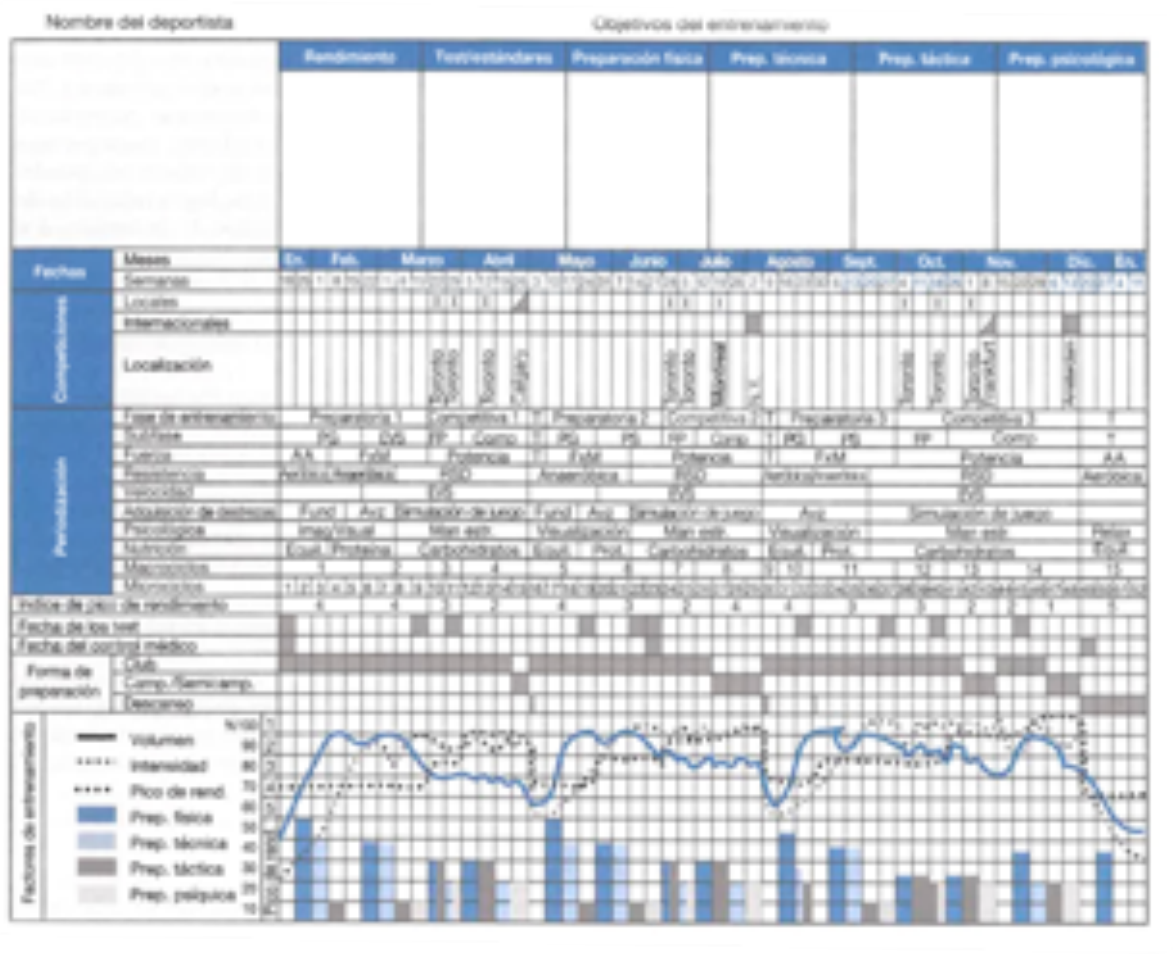
➡ **Divisions of an annual plan into phases and cycles of training.**

Tipo: Entrenador:

	Meses	Junio	Julio	Agosto	Septiembre	Octubre	Noviembre	Diciembre	Enero	Febrero	Marzo	Abril	Mayo
Fechas	Semanas												
Competición	Local												
	Internacional												
	Localización												
Periodización	Fases de entrenamiento	Preparatoria				Competitiva							Transición
	Fuerza	AA		FxM	P	Mantenimiento							
	Resistencia	Resistencia aeróbica		Ergogénesis									
	Velocidad	Velocidad general		Velocidad específica									
	Nutrición												
Datos de los test													
Datos del control médico													

TRADITIONAL PERIODIZATION 传统周期

➡ **Graphic design**ón gráfica

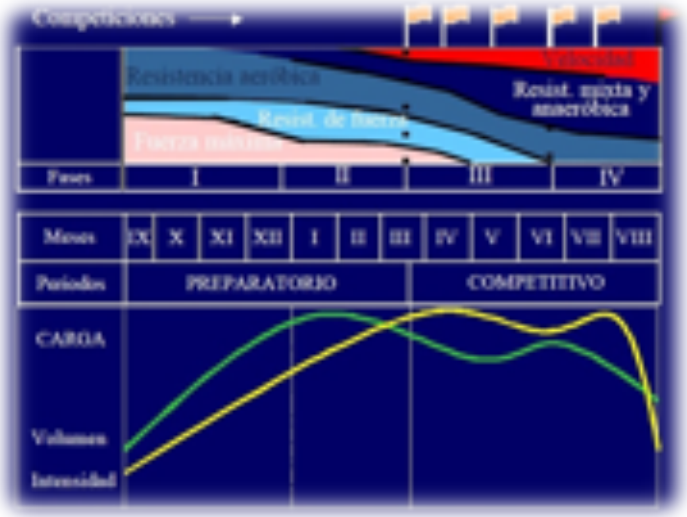


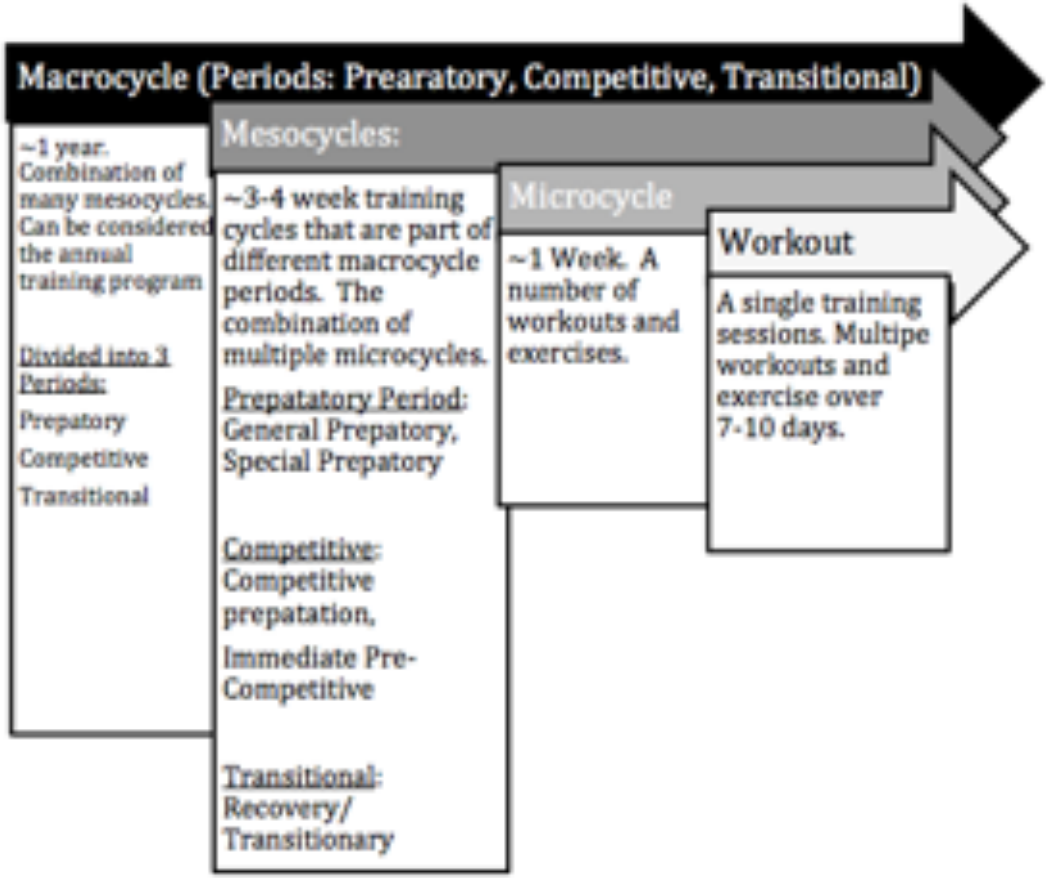
TRADITIONAL PERIODIZATION 传统周期

MACROCICLE

Concept

Long training cycle(3-12 months) that include one competition phase





TRADITIONAL PERIODIZATION 传统周期

PREPARATORY PHASE: GENERAL PREPARATORY SUB-PHASE

The general preparatory subphase is used to elevate the athlete's working capacity, increase general physical preparation, improve technical elements, and enhance basic tactical abilities. The primary emphasis of this subphase is to establish a high level of physical conditioning, which will improve the athlete's physiological and psychological capacity to tolerate the demands of both training and competition.

TRADITIONAL PERIODIZATION 传统周期

PREPARATORY PHASE: SPECIFIC PREPARATORY SUB-PHASE

The specific preparatory subphase, or the second part of the preparatory phase, represents a transition from an emphasis on physical development to an emphasis on competition. Like the general preparatory subphase, the specific preparatory subphase has the objective of increasing the athlete's working capacity. However, in this subphase the emphasis in training is on sport-specific activities. Although the volume of work is high during this subphase, the primary emphasis (70-80% of total work) is on specific exercises related to the skills or technical elements of the sport.

TRADITIONAL PERIODIZATION 传统周期

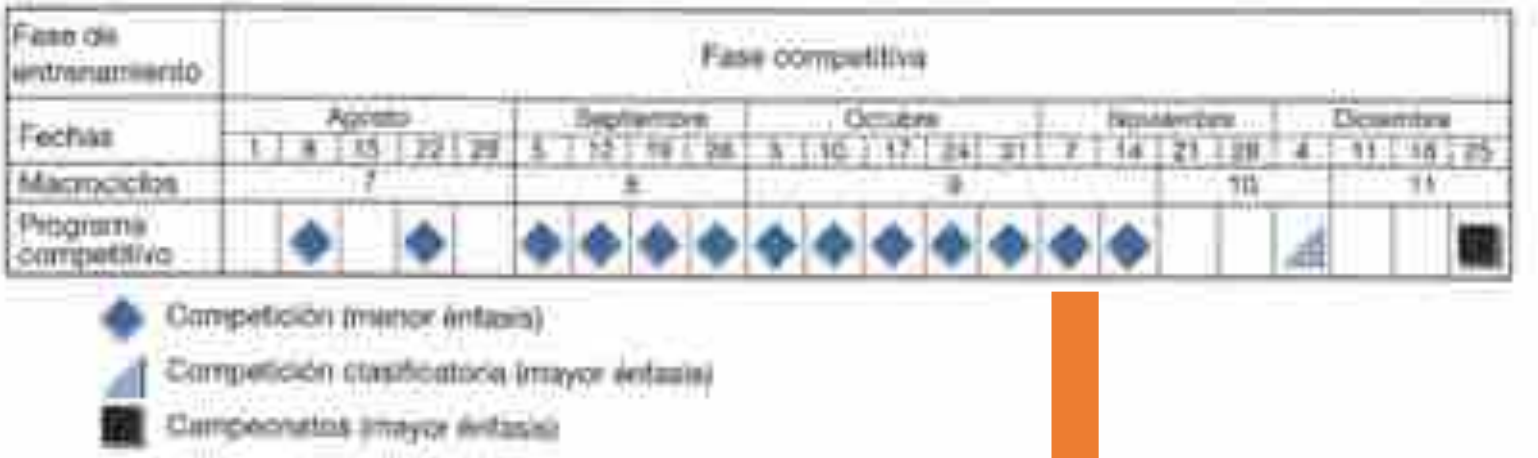
COMPETITIVE PHASE

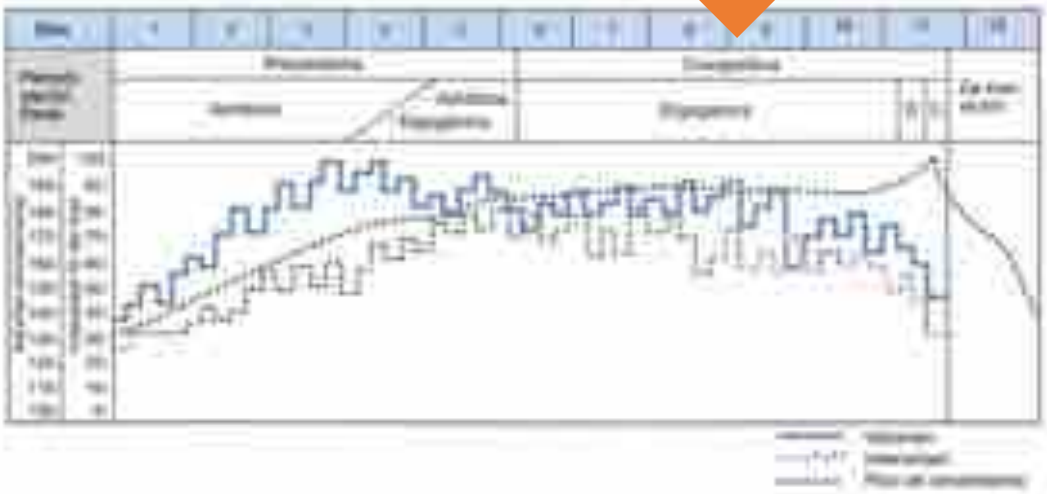
Among the main tasks of the competitive phase is the perfection of all training fac- tors, which enables the athlete to compete successfully in the main competitions or championships targeted by the annual training plan. Several general objectives are addressed during the competitive phase, regardless of the sport:

- Continued improvement or maintenance of sport-specific biomotor abilities
- Enhancing psychological traits
- Perfecting and consolidating technique
- Elevating performance to the highest level
- Dissipating fatigue and elevating preparedness • Perfecting technical and tactical maneuvers
- Gaining competitive experience
- Maintaining sport-specific fitness

TRADITIONAL PERIODIZATION 传统周期

COMPETITIVE PHASE





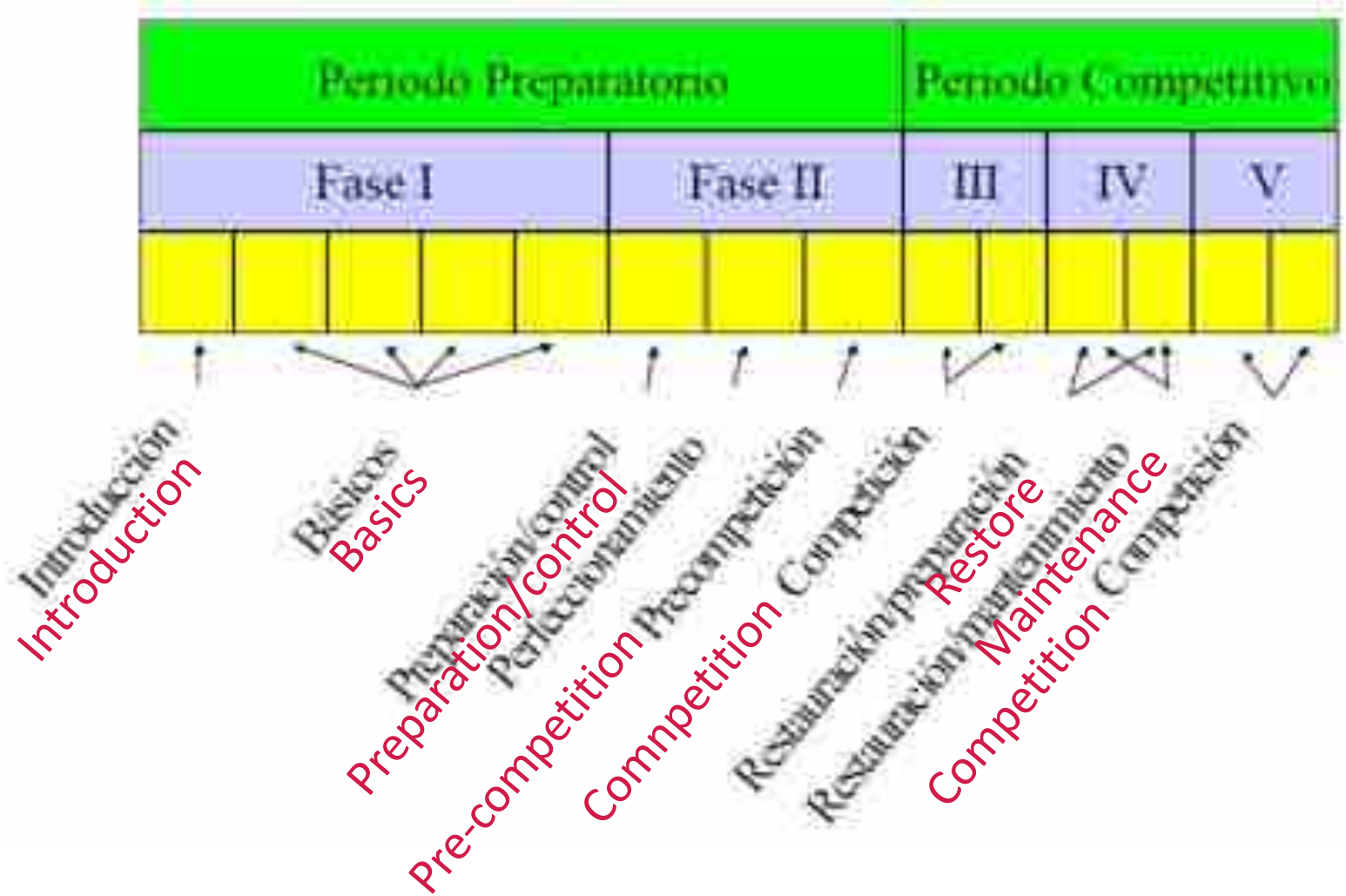
TRADITIONAL PERIODIZATION 传统周期

TRANSITION PHASE

After long periods of preparation, hard work, and stressful competitions, in which both physiological and psychological fatigue can accumulate, a transition period should be used to link annual training plans or preparation for another major competition, as in the case of the bi-cycle, tri-cycle, and multicycle annual training plan. The transition phase serves an important role in preparing the athlete for the next training cycle. The athlete should start the new preparatory phase only when fully recovered from the previous competitive season.

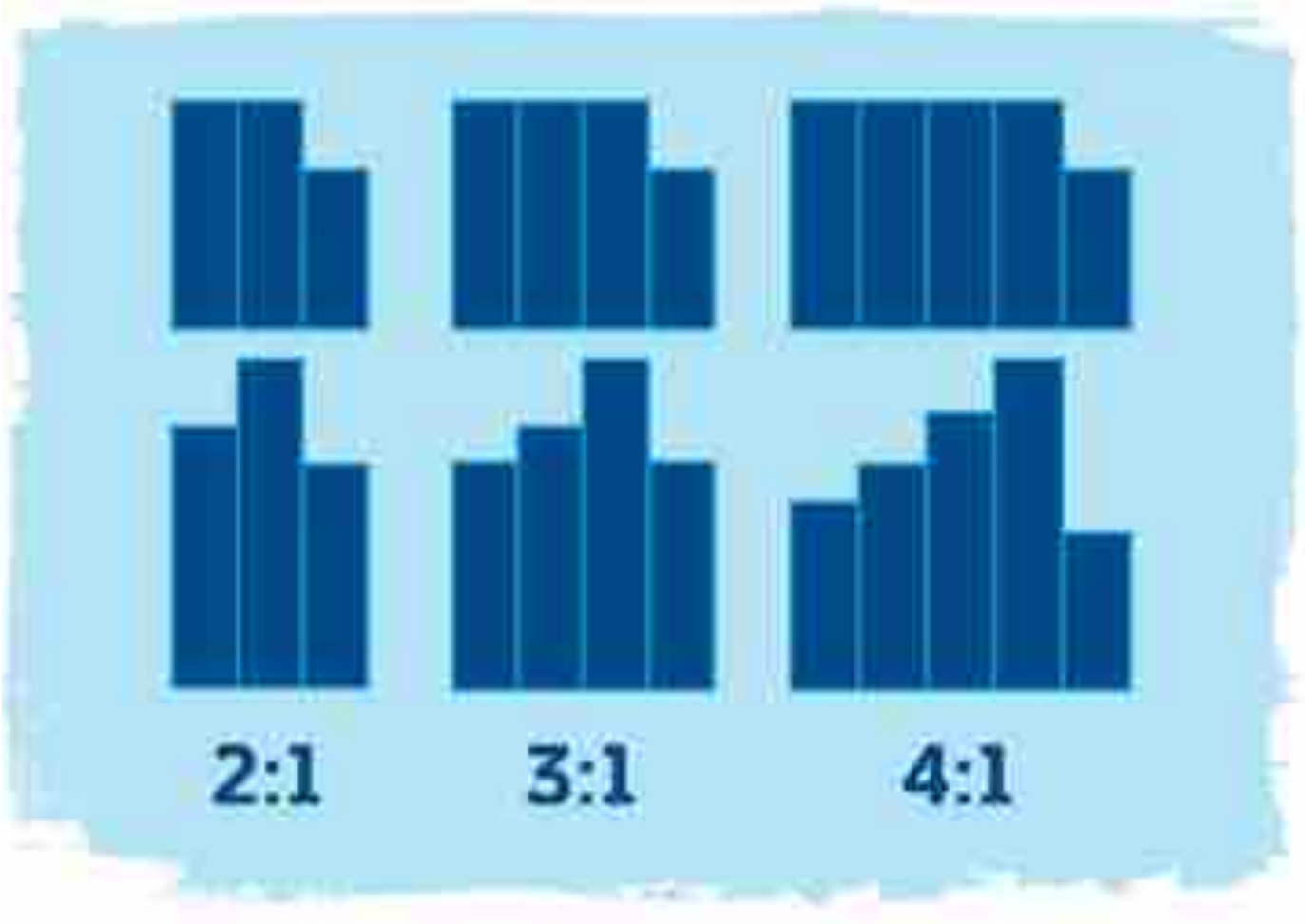
TRADITIONAL PERIODIZATION 传统周期

MESOCYCLES



TRADITIONAL PERIODIZATION 传统周期

MESOCYCLES



TRADITIONAL PERIODIZATION 传统周期

MICROCYCLES

TYPES:

- ADJUST (4-7 days)
- CUMULATIVE/DEVELOPMENT (1 week)
- SHOCK/STRIKKING (1 week)
- PRE-COMPETITION (3-7 days)
- COMPETITION (3-9 days)
- RECOVERY (3-7 days)

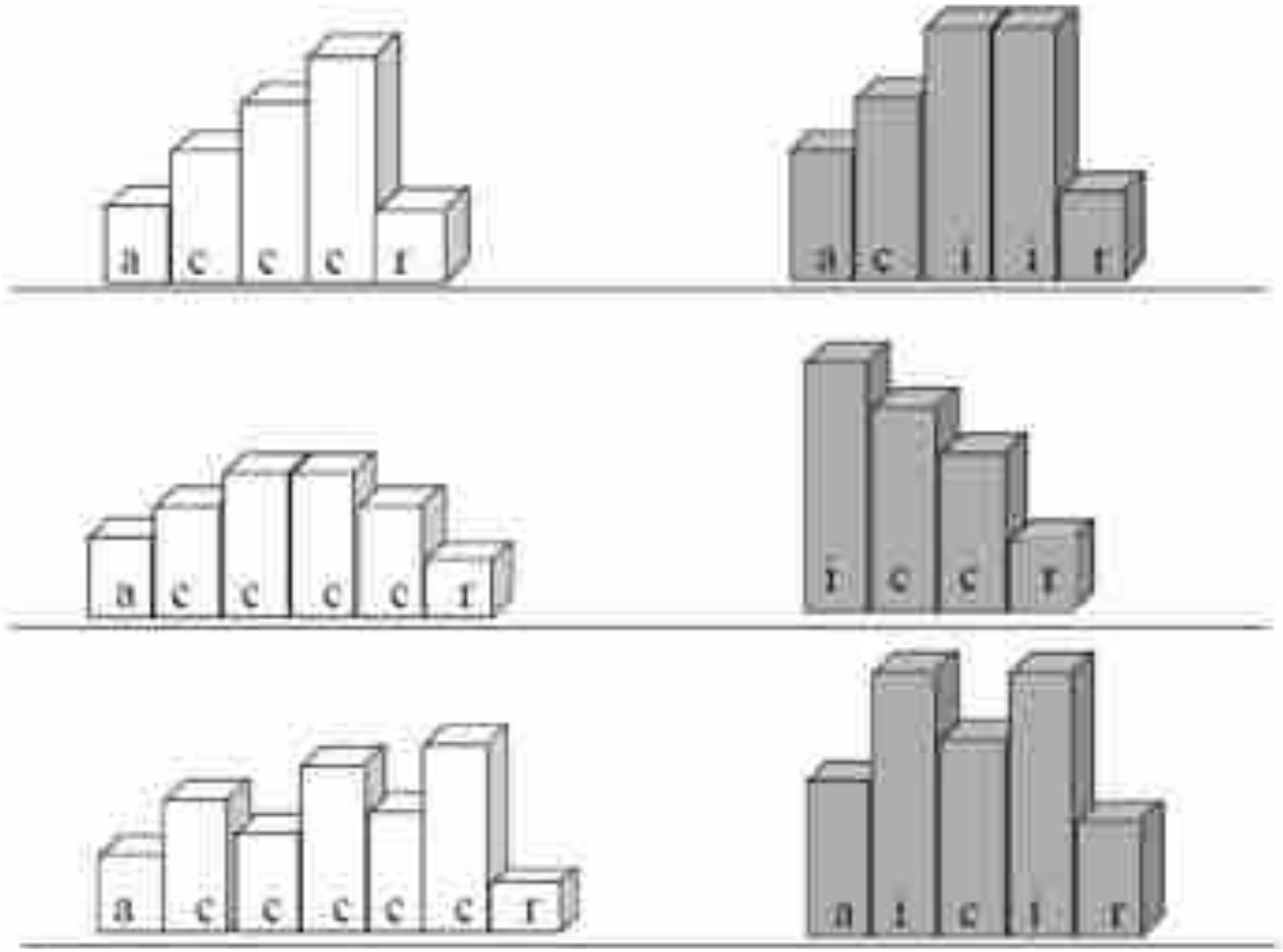
TRADITIONAL PERIODIZATION 传统周期

MICROCYCLES

ADJUST **DEVELOPMENT SHOCK** **PRECOMPETITION COMPETITION** **RECOVERY**

TRADITIONAL PERIODIZATION 传统周期

MICROCYCLES



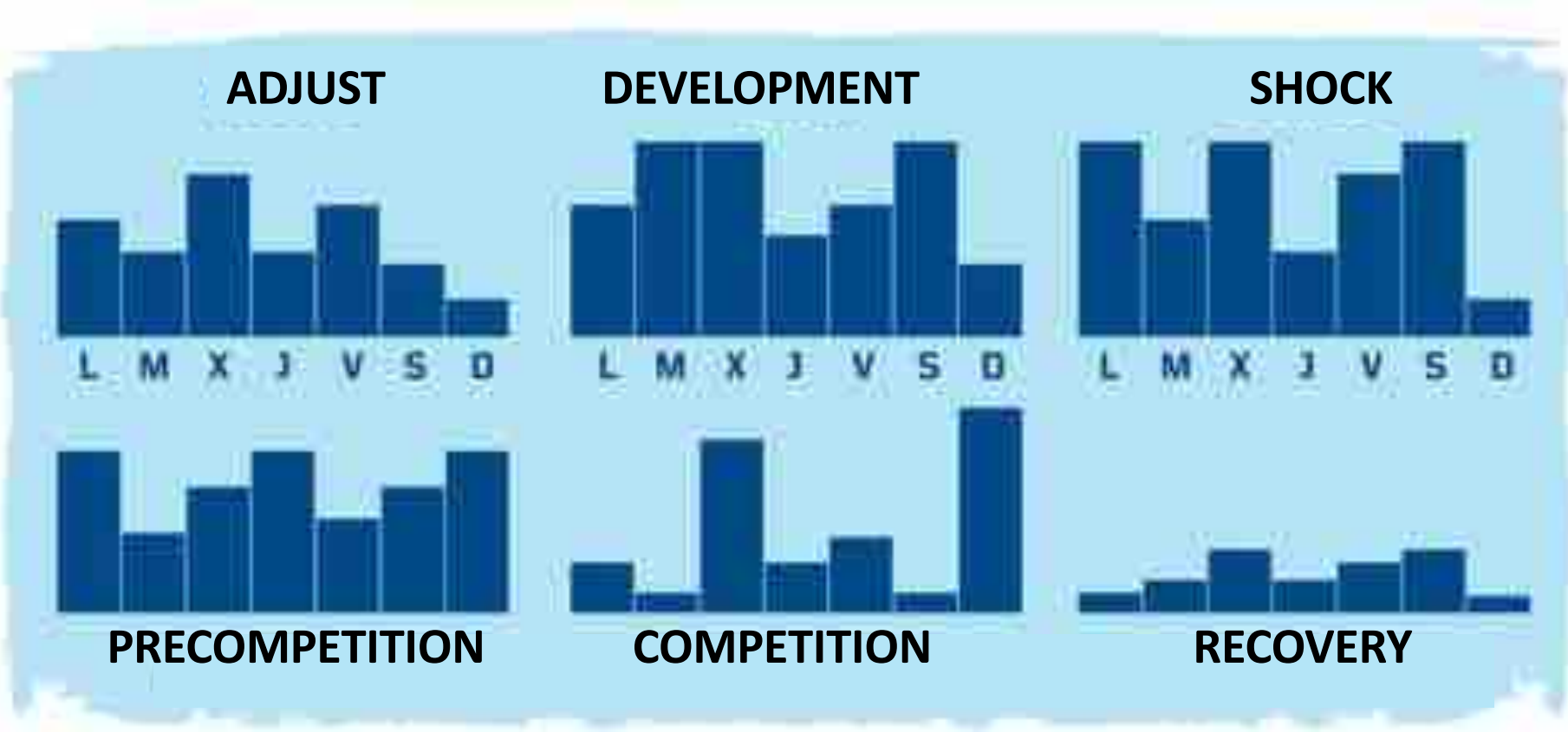
TRADITIONAL PERIODIZATION

MICROCYCLES

Tipo de microciclo	Numero de microciclos	Número de dias	Porcentaje de dias
ADJUST	5 - 7	25 - 35	8 - 10
DEVELOPMENT	19 - 21	133 - 147	40 - 46
SHOCK	7 - 10	49 - 70	15 - 21
PRECOMPETITION	5 - 7	25 - 35	8 - 12
COMPETITION	7 - 8	30 - 38	9 - 13
RECOVERY	4 - 6	20 - 28	8 - 12
Total	52 - 56	315 - 335	100

TRADITIONAL PERIODIZATION 传统周期

MICROCYCLES



TRADITIONAL PERIODIZATION 传统周期

MICROCYCLES

Session time	DAY						
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
a.m.							
p.m.	Training		Training		Training		

Session time	DAY						
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
a.m.							
p.m.	Training	Training		Training		Training	

Session time	DAY						
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
a.m.							
p.m.	Training	Training		Training	Training	Training	

Session time	DAY						
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
a.m.	Training	Training		Training		Training	
p.m.	Training	Training		Training		Training	

TRADITIONAL PERIODIZATION 传统周期

MICROCYCLES

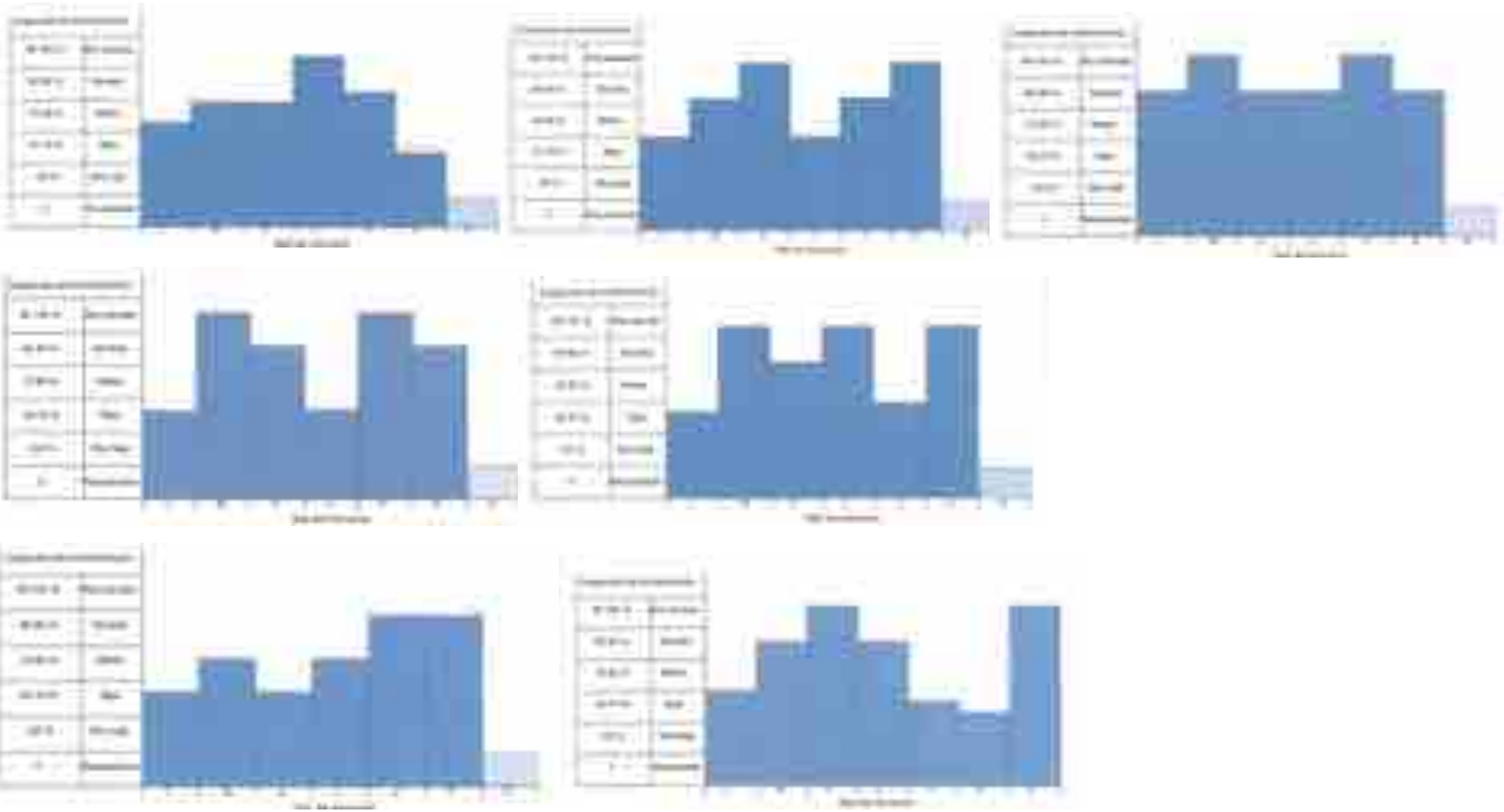
Session time	DAY						
	Mooday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
a.m.	Training	Training	Training	Training	Training	Training	
p.m.	Training		Training		Training		

Session time	DAY						
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
a.m.	Training	Training	Training	Training	Training	Training	
p.m.	Training	Training		Training	Training		

Session time	DAY						
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
a.m.	Training	Training	Training	Training	Training	Training	Training
p.m.	Training	Training		Training	Training		

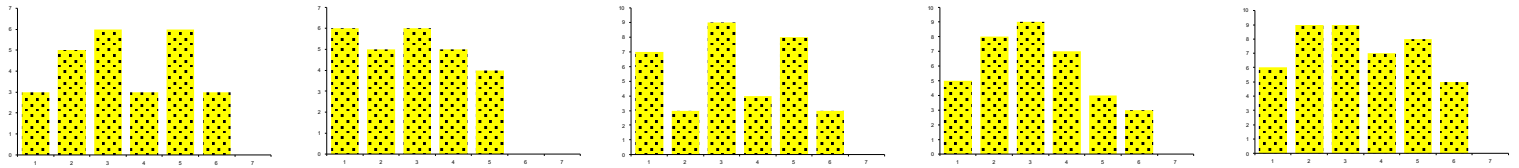
TRADITIONAL PERIODIZATION 传统周期

MICROCYCLES



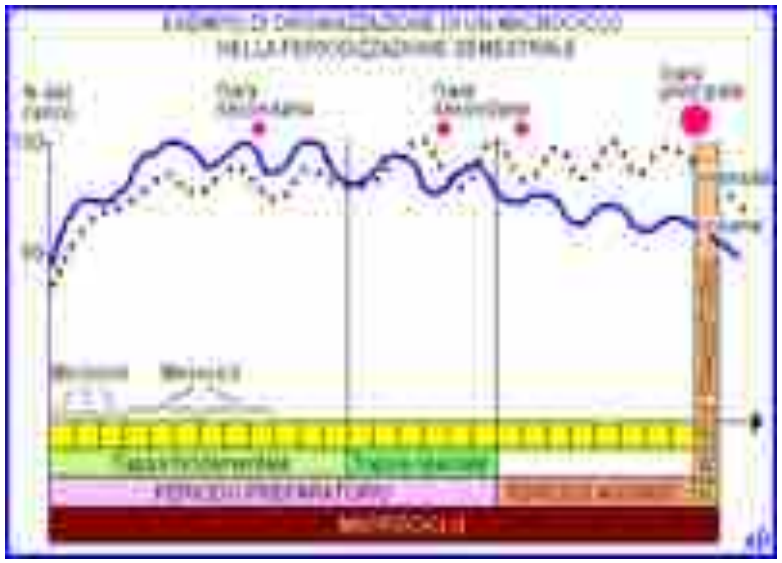
TRADITIONAL PERIODIZATION 传统周期

MICROCYCLES



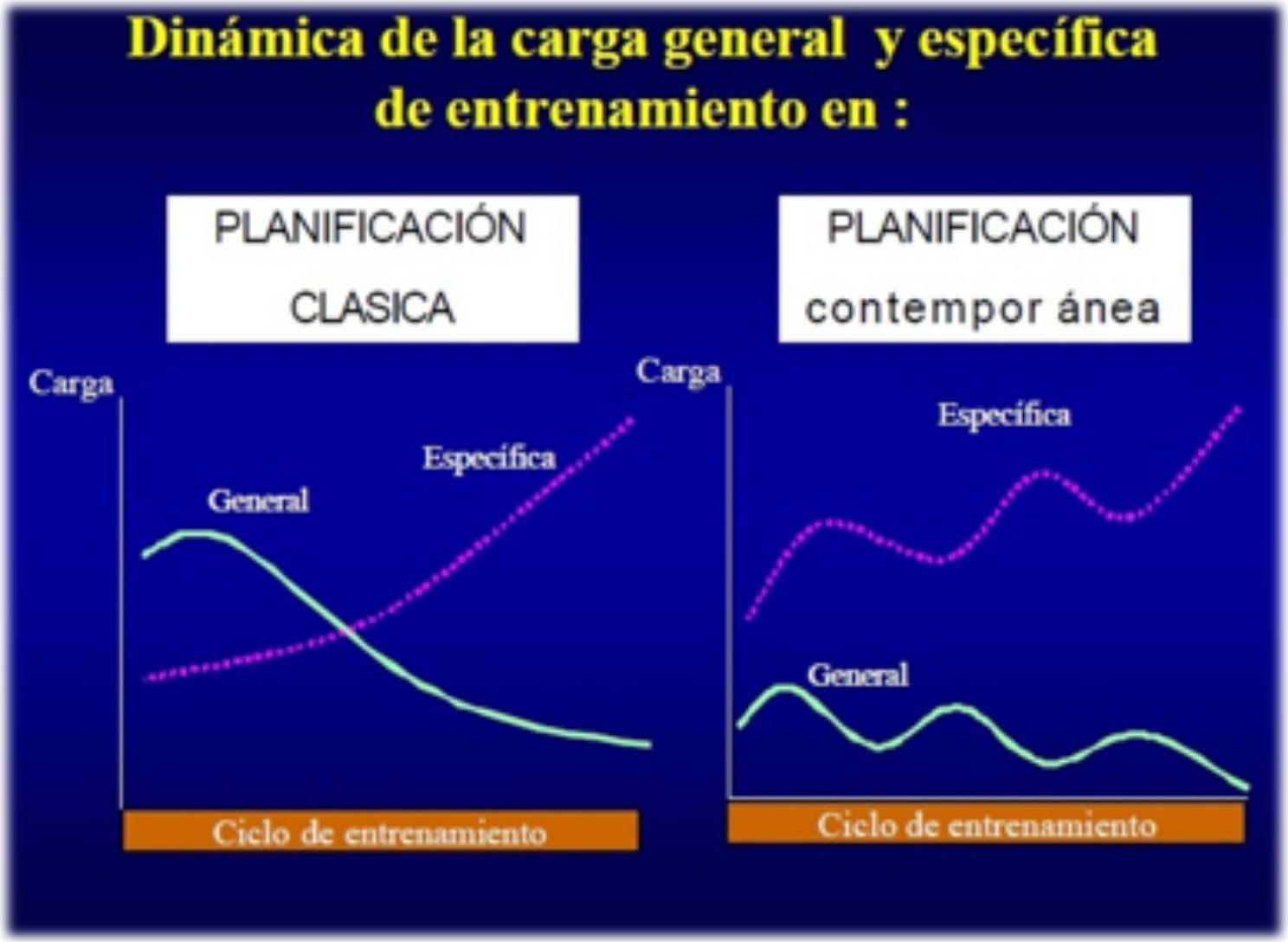
ADJUST CUMULATIVE CUMULATIVE STRIKKING RECOVERY

DISADVANTAGES OF TRADITIONAL PERIODIZATION



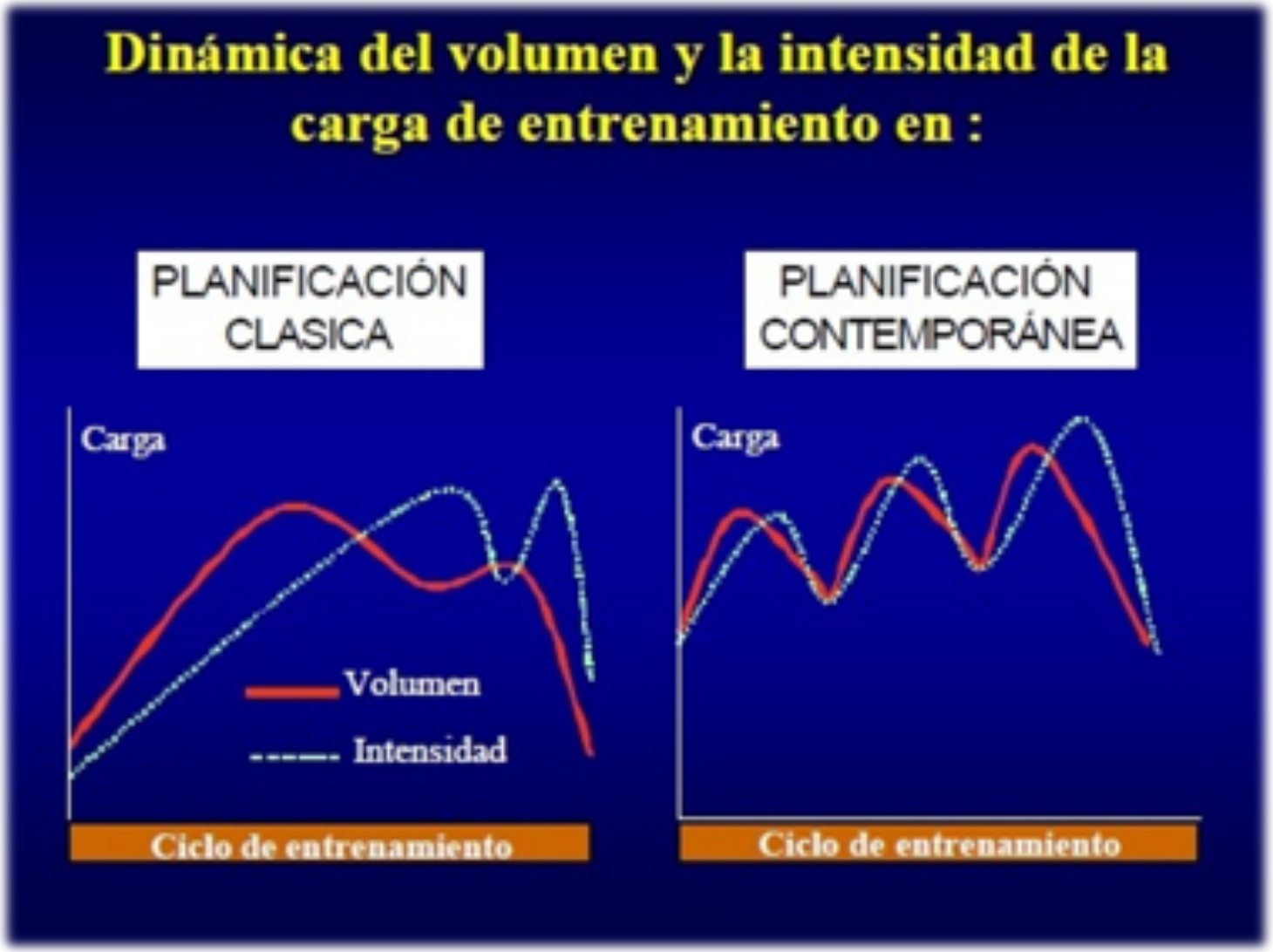
- Develop many capacities at the same time
- Long periods with same training structure, monotiny and not much motivating.
- Few opportunities to work on specific capacities during general period
- Limitations to join competition during long part of the season
- Excessive worload
- Acumulate fatifgue
- Conflicting physiological responses
- Risk of overtraining

TRADITIONAL PERIODIZATION VS MODERN PERIODIZATION
传统周期和现代周期

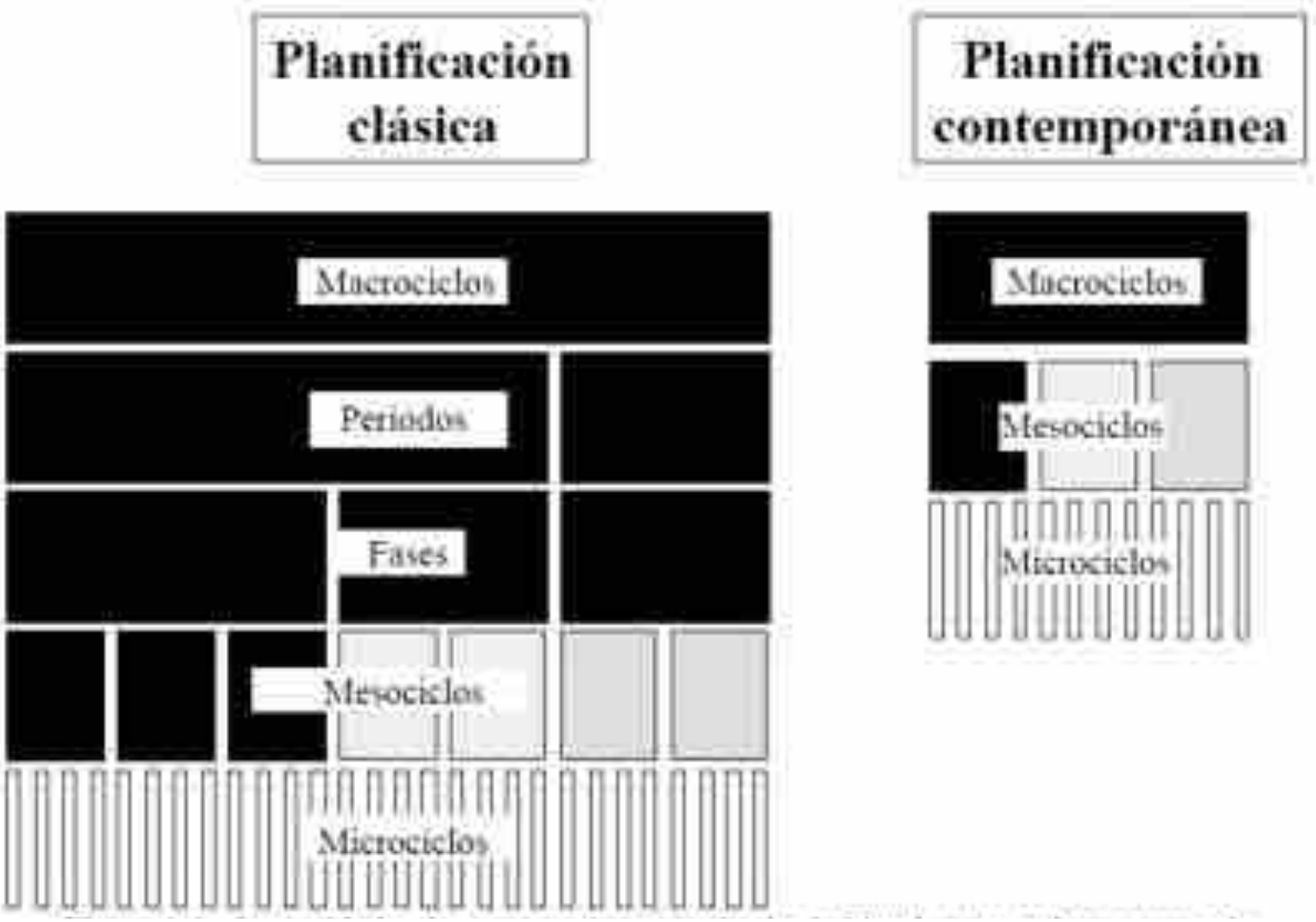


TRADITIONAL PERIODIZATION VS MODERN PERIODIZATION

传统周期和现代周期



TRADITIONAL PERIODIZATION VS MODERN PERIODIZATION
传统周期和现代周期



TRADITIONAL PERIODIZATION VS MODERN PERIODIZATION
传统周期和现代周期


New Horizons for the Methodology and Physiology of Training Periodization

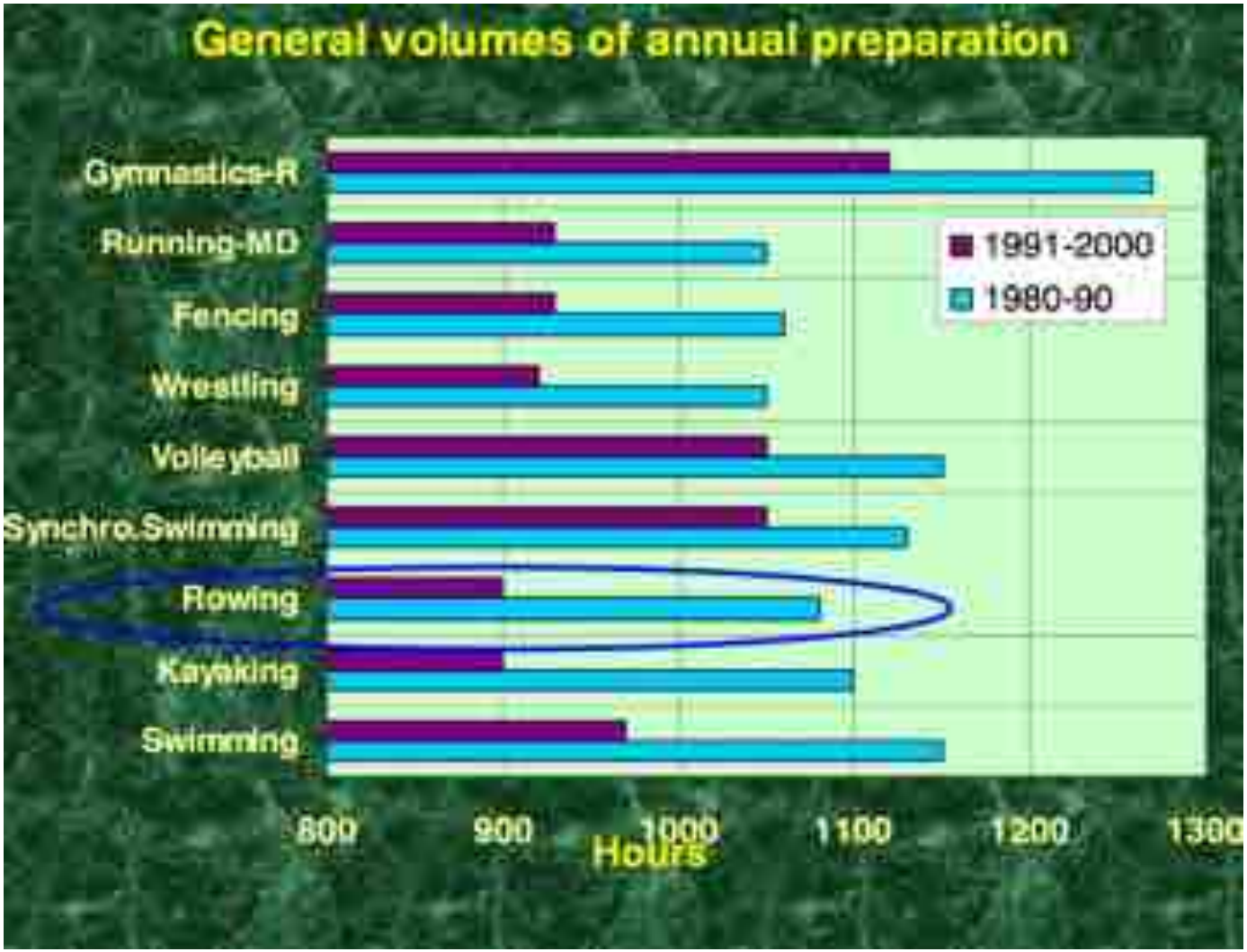
TRADITIONAL PERIODIZATION VS MODERN PERIODIZATION
传统周期和现代周期

Annual volumes of exercises in endurance sports (thousands km)

	1980-90	1995-2009
Swimming	2.5-3.5	2.0-2.5
Kayaking	5.5-6.3	4.5-5.3
Rowing	6.3-7.3	5.5-6.5
Cycling-R	35-45	30-35

TRADITIONAL PERIODIZATION VS MODERN PERIODIZATION

传统周期和现代周期



TRADITIONAL PERIODIZATION VS MODERN PERIODIZATION
传统周期和现代周期

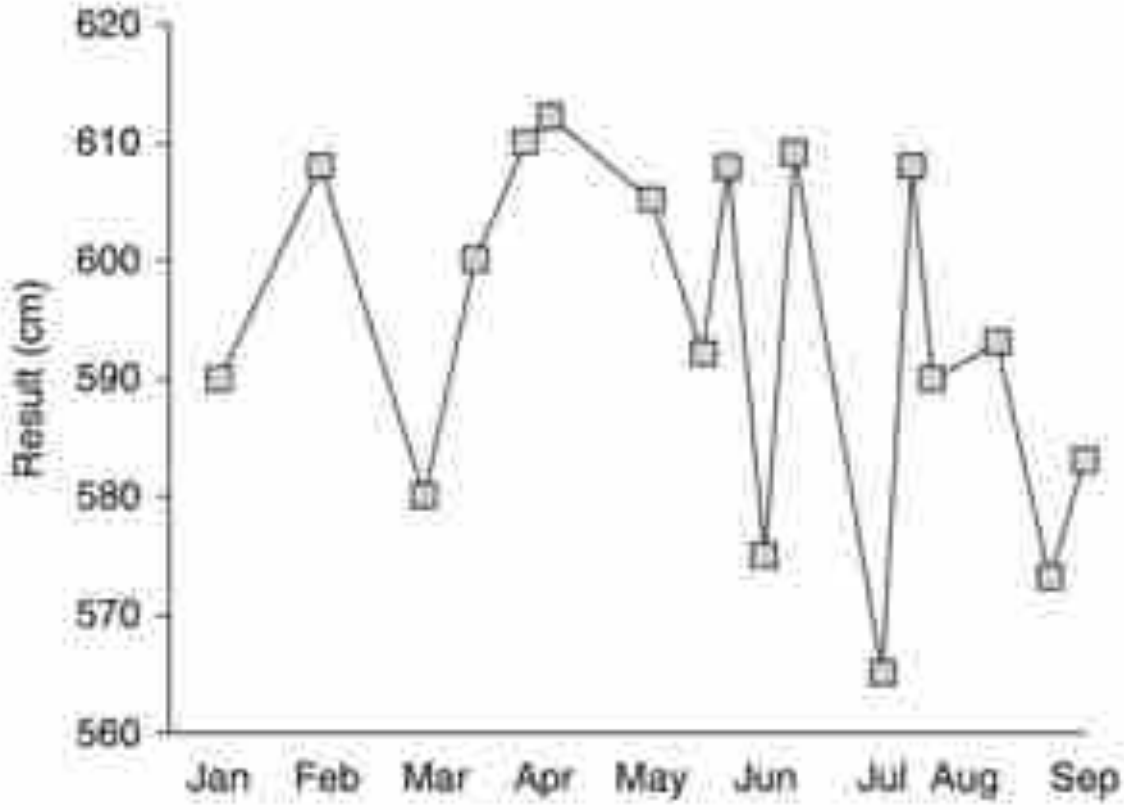
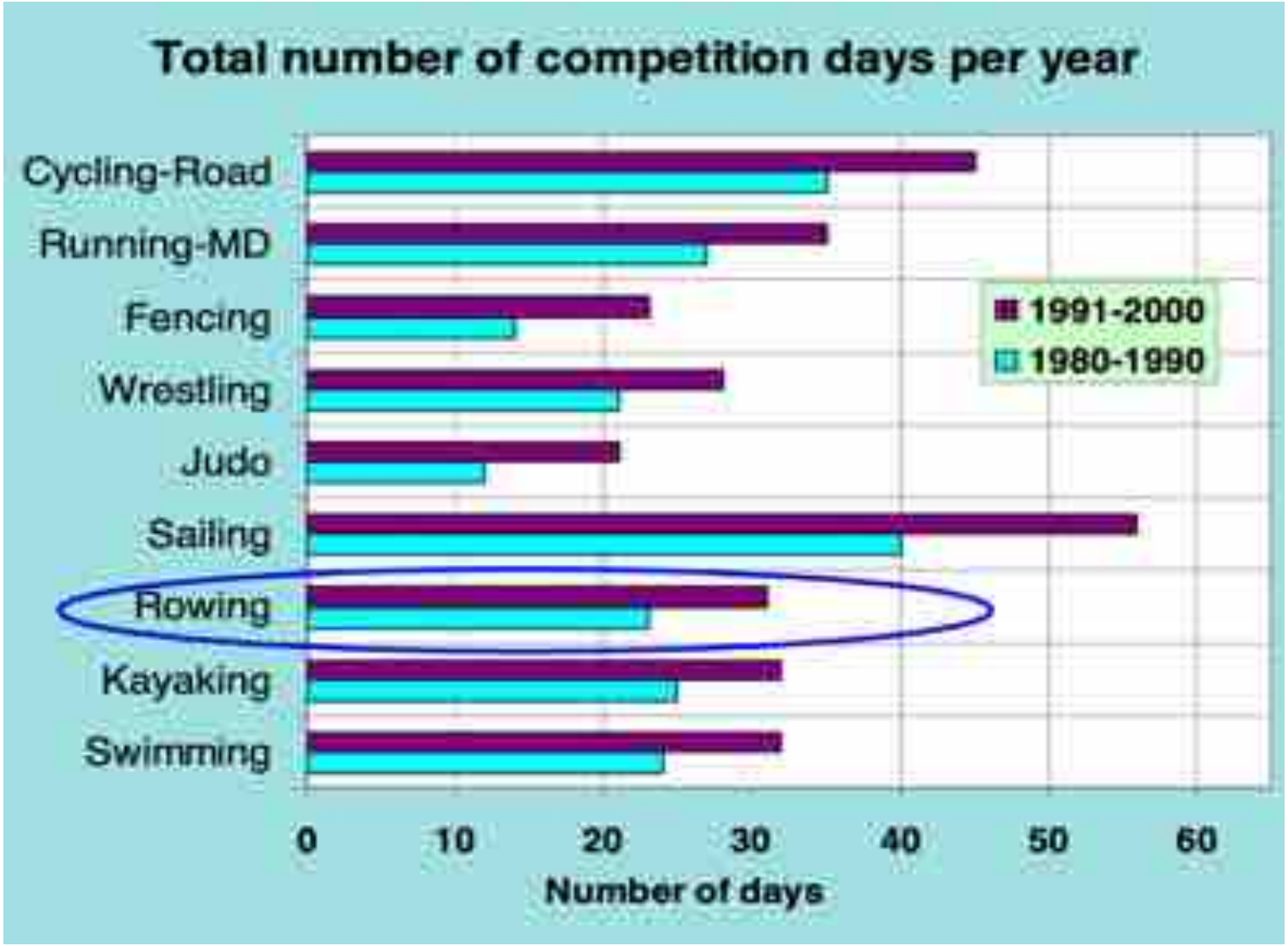


Fig. 4. The annual pole vault performance trend of Sergei Bubka in the 1991 season.[29]

TRADITIONAL PERIODIZATION VS MODERN PERIODIZATION

传统周期和现代周期



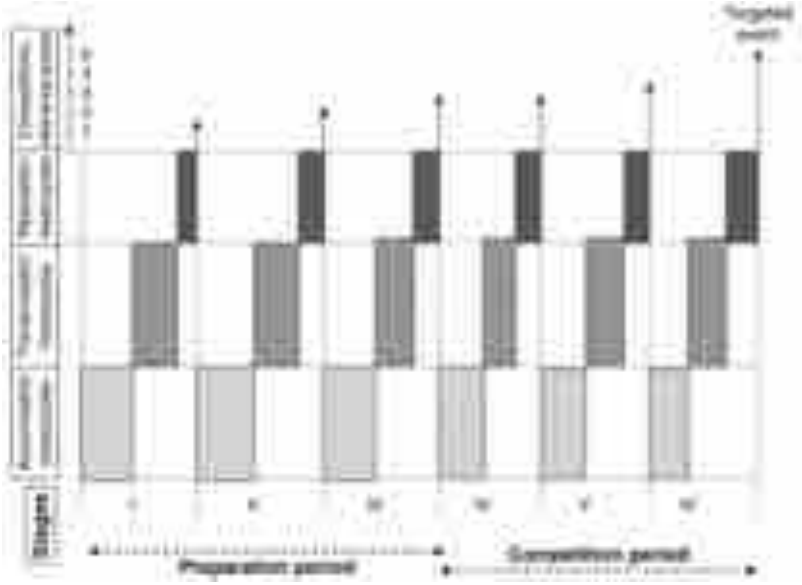
TRADITIONAL PERIODIZATION VS MODERN PERIODIZATION
传统周期和现代周期

Past and Present in High-Performance Training

	Past	Present
Competitions	less	more
Total workloads	more	less
Pharmacology	liberal	hard limitation
Development	mainly	mainly
	simultaneous	consecutive

TRADITIONAL PERIODIZATION VS MODERN PERIODIZATION
传统周期和现代周期

- HIGH TRAINING LOAD CONCENTRATION
- RESIDUAL TRAINING EFFECTS
- CONCECUTIVE DEVELOPMENT
- TRAINING BLOCKS TAXONOMY
- PEAKING



TRADITIONAL PERIODIZATION VS MODERN PERIODIZATION
传统周期和现代周期

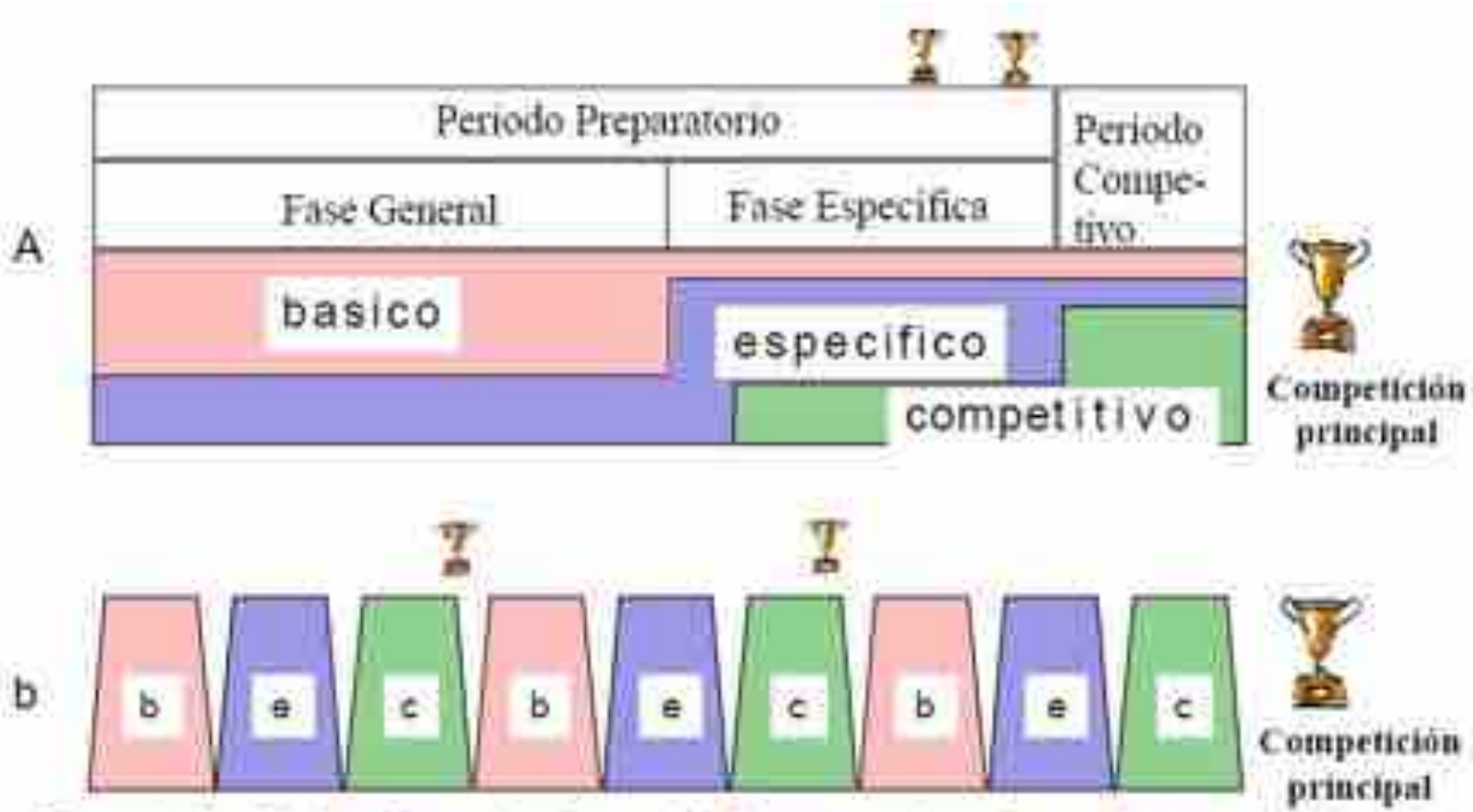
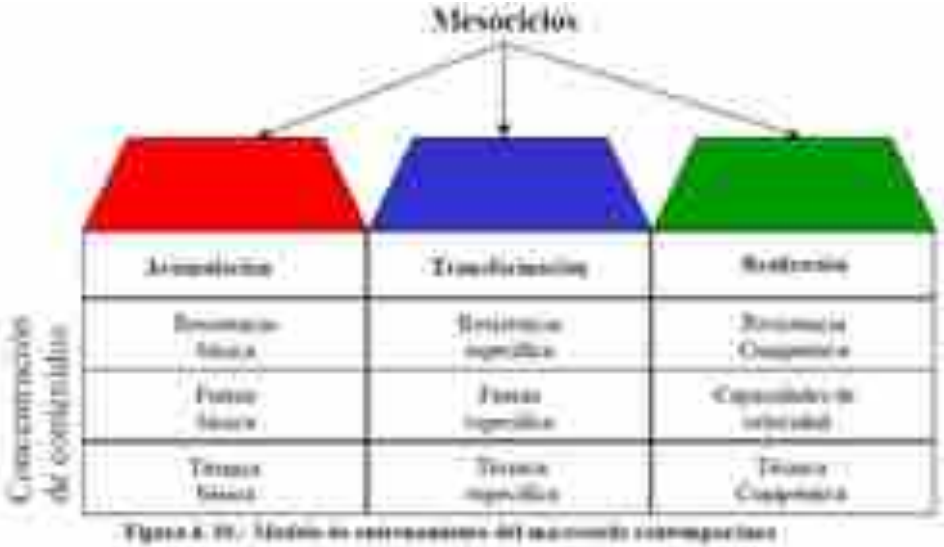
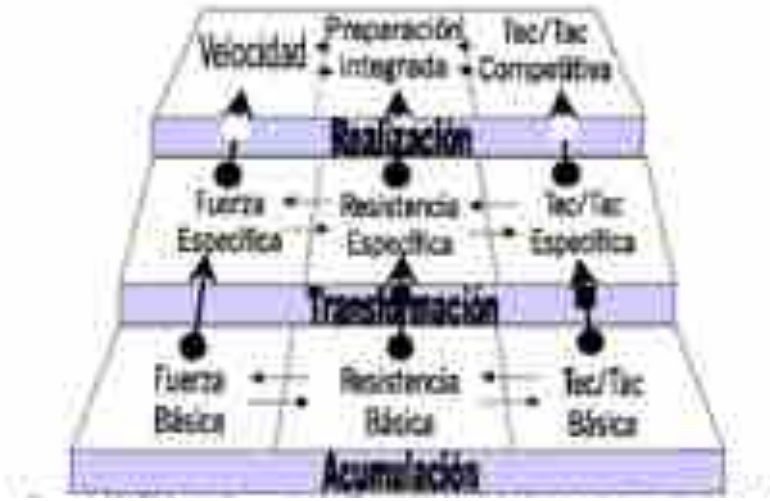


Figura 4. 15.- Diseños alternativos de un ciclo de entrenamiento de un año:a) convencional; b) contemporáneo

PERIODIZATION ATR





Fase	Objetivos y tareas principales	Contenidos
Acumulación	Elevación del potencial básico y general • aumentar las capacidades motrices y aumentar que deben ser básicas para la preparación específica. • asegurar el aumento de	Entrenamiento con volúmenes relativamente elevados e intensidad moderada para capacidades de fuerza, resistencia aeróbica, preparación física y técnica básica
Transformación	Transformación del potencial de las capacidades motrices y técnicas en la preparación específica • transferir las capacidades motrices más generalizadas en formas específicas según las demandas técnicas y tácticas. • mejorar la relación a la fuerza y la estabilidad de la técnica	Entrenamiento con volúmenes óptimos e intensidad moderada para capacidades de fuerza, fuerza, velocidad específica, ejercicios característicos de fuerza y dentro de la estructura de la técnica básica
Realización	Logro de los mejores resultados dentro del margen disponible de preparación • utilizar de forma tan completa como sea posible las capacidades motrices y técnicas dentro de la actividad competitiva específica • obtener la disposición para la competición	Mantenimiento de la actividad competitiva, ejercicios competitivos (fuerza de gestión), ejercicios óptimos de ejercicios con intensidad máxima (fuerza competitiva, resistencia competitiva, velocidad competitiva), entrenamiento en cuanto a los ejercicios competitivos

PERIODIZATION ATR

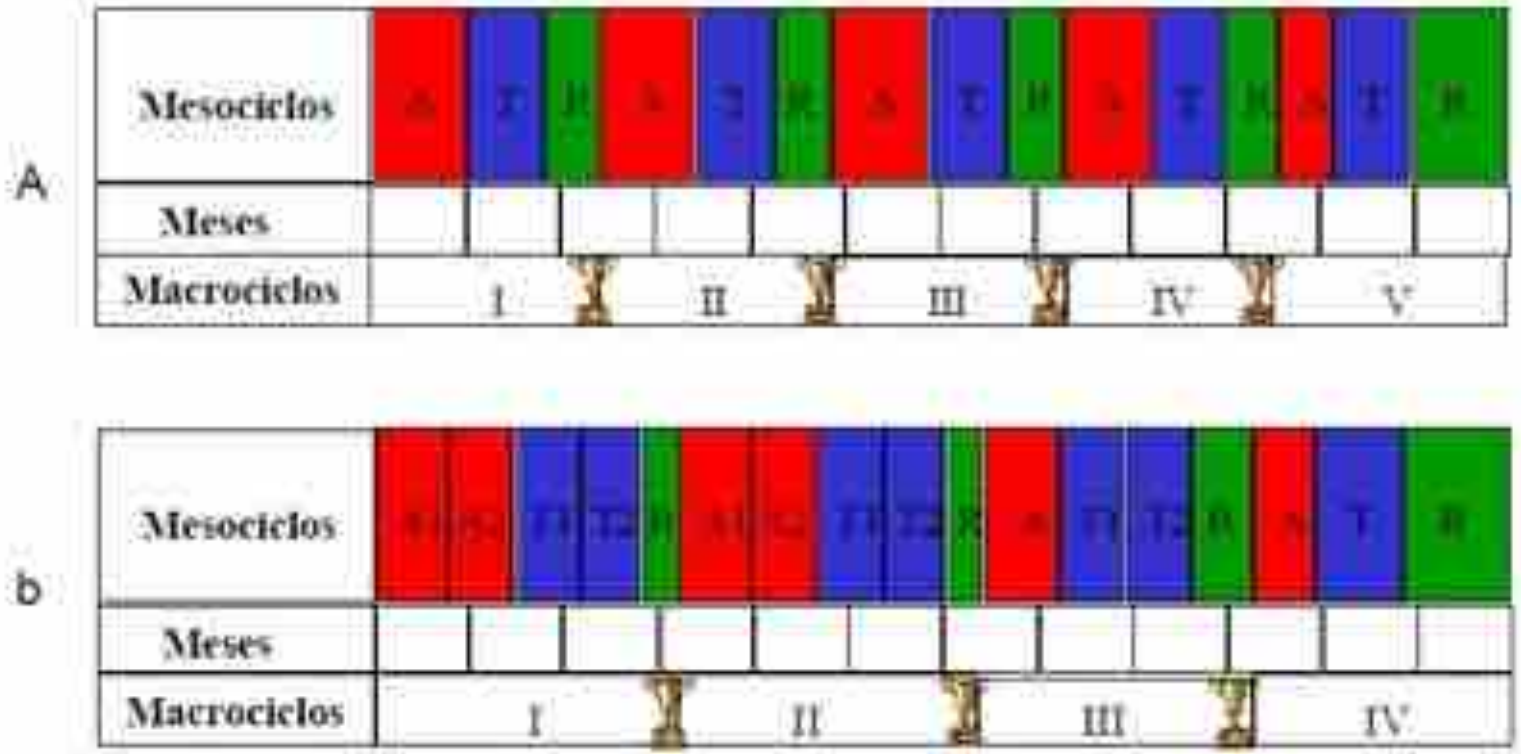


Figura 4. 9.- Variaciones en la planificación de la temporada con diferentes planteamientos de los ciclos de entrenamiento: a) planteamiento con tres mesociclos diferentes; b) planteamiento con 5, 4 y 3 mesociclos.

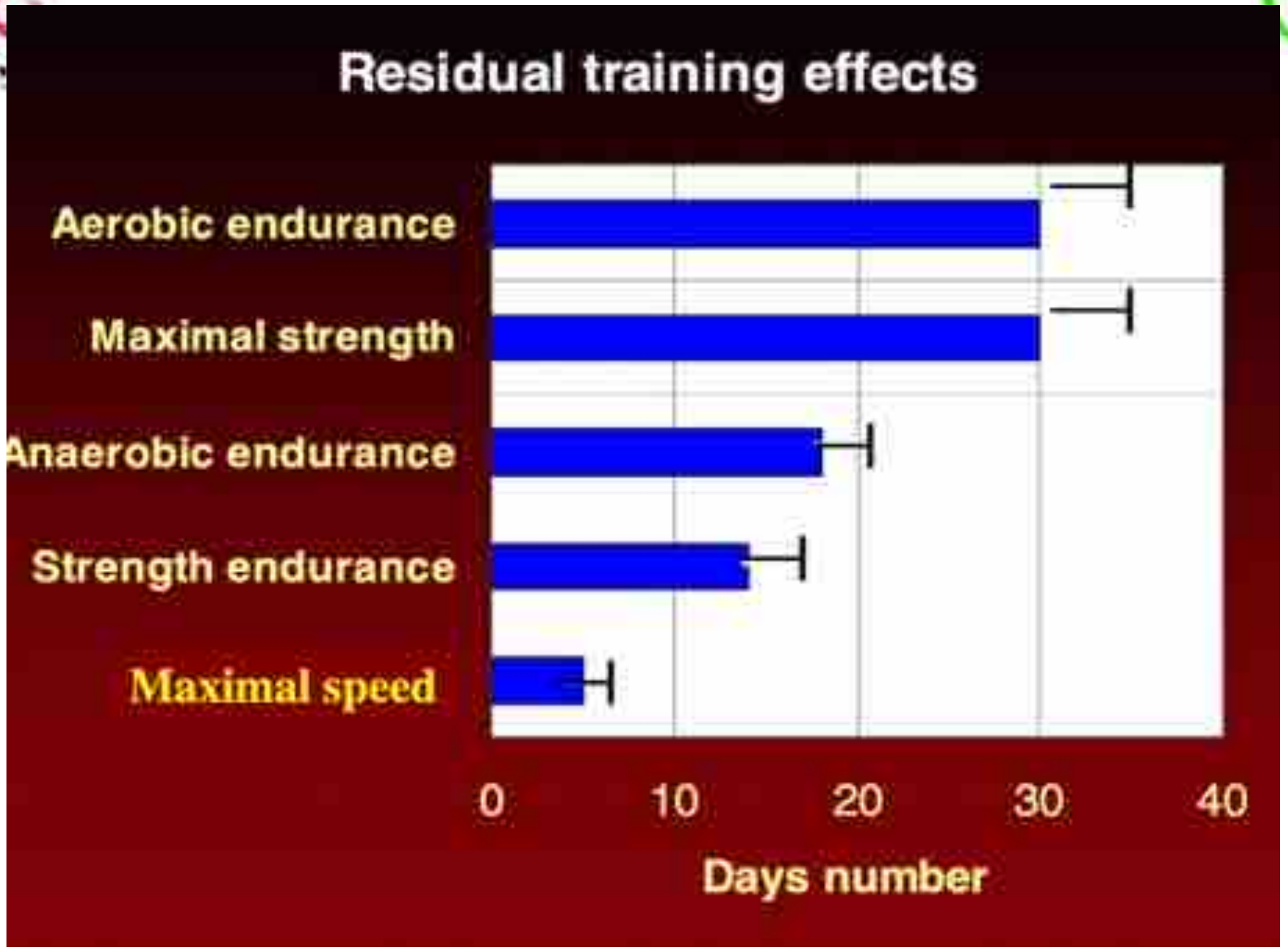
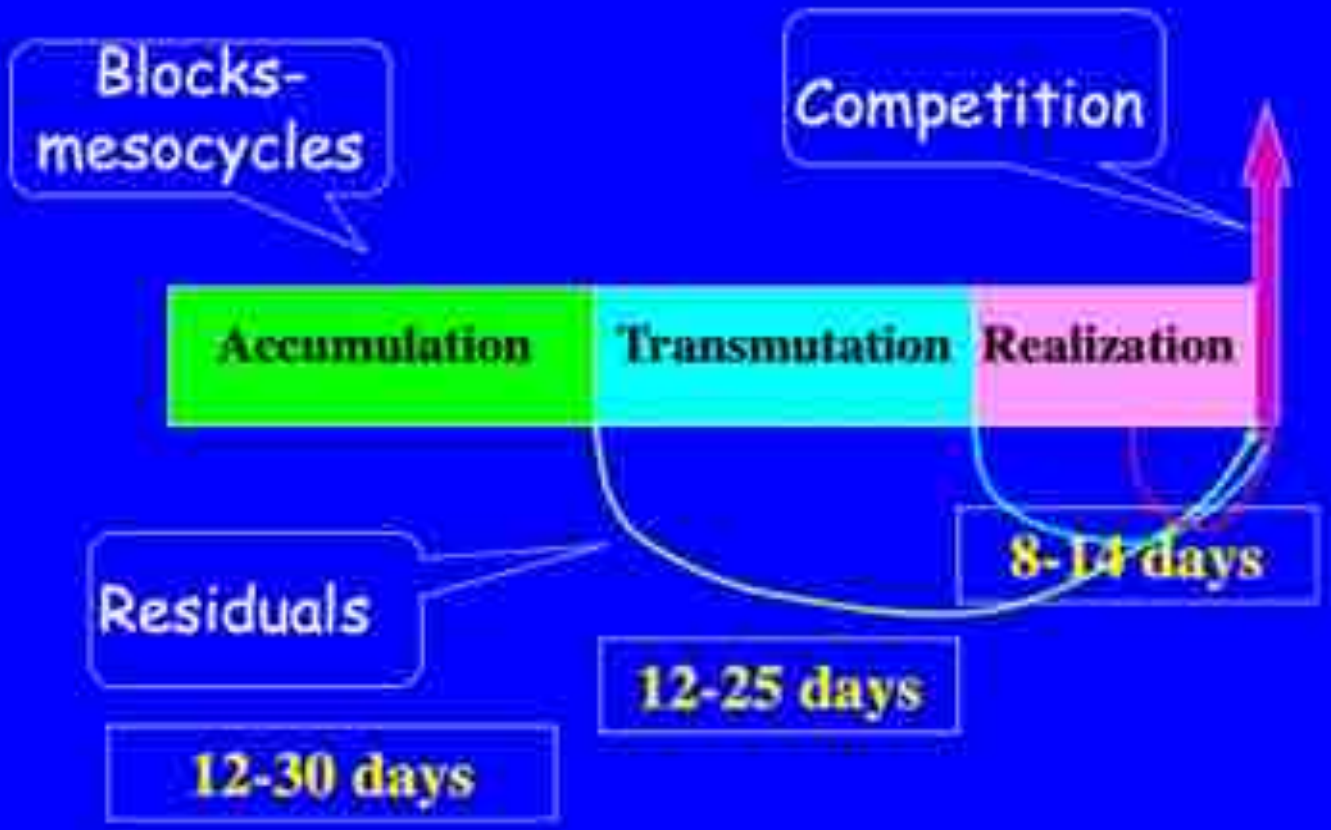

Residual training effects
Aerobic endurance
Maximal strength
Anaerobic endurance
Strength endurance
Maximal speed
0
10
20
30
40
Days number

Table 3. The Duration and Underlying Physiological Mechanisms of the Residual Training Effect for Different Physical (Motor) Abilities (Issurin & Lustig, 2004)

Physical (motor) ability	Residual's duration, days	Physiological background
Aerobic endurance	30 ± 5	Increased amount of aerobic enzymes, mitochondria number, muscle capillaries, hemoglobin capacity, glycogen storage, higher rate of fat metabolism
Maximal strength	30 ± 5	Improvement of neural mechanism, muscle hypertrophy mainly due to the muscle fibers' enlargement
Anaerobic glycolitic endurance	18 ± 4	Increased amount of anaerobic enzymes, buffering capacity and glycogen storage, higher possibility of lactate accumulation
Strength endurance	15 ± 5	Muscle hypertrophy mainly in slow-twitch fibers, improved aerobic/anaerobic enzymes, better local blood circulation and lactic tolerance
Maximal speed (alactic)	5 ± 3	Improved neuromuscular interactions and motor control, increased phosphocreatine storage

Superposition of Residual Training Effects – Timing



PLANIFICACIÓN TRADICIONAL VS CONTEMPORÁNEA

TEORÍA TRADICIONAL

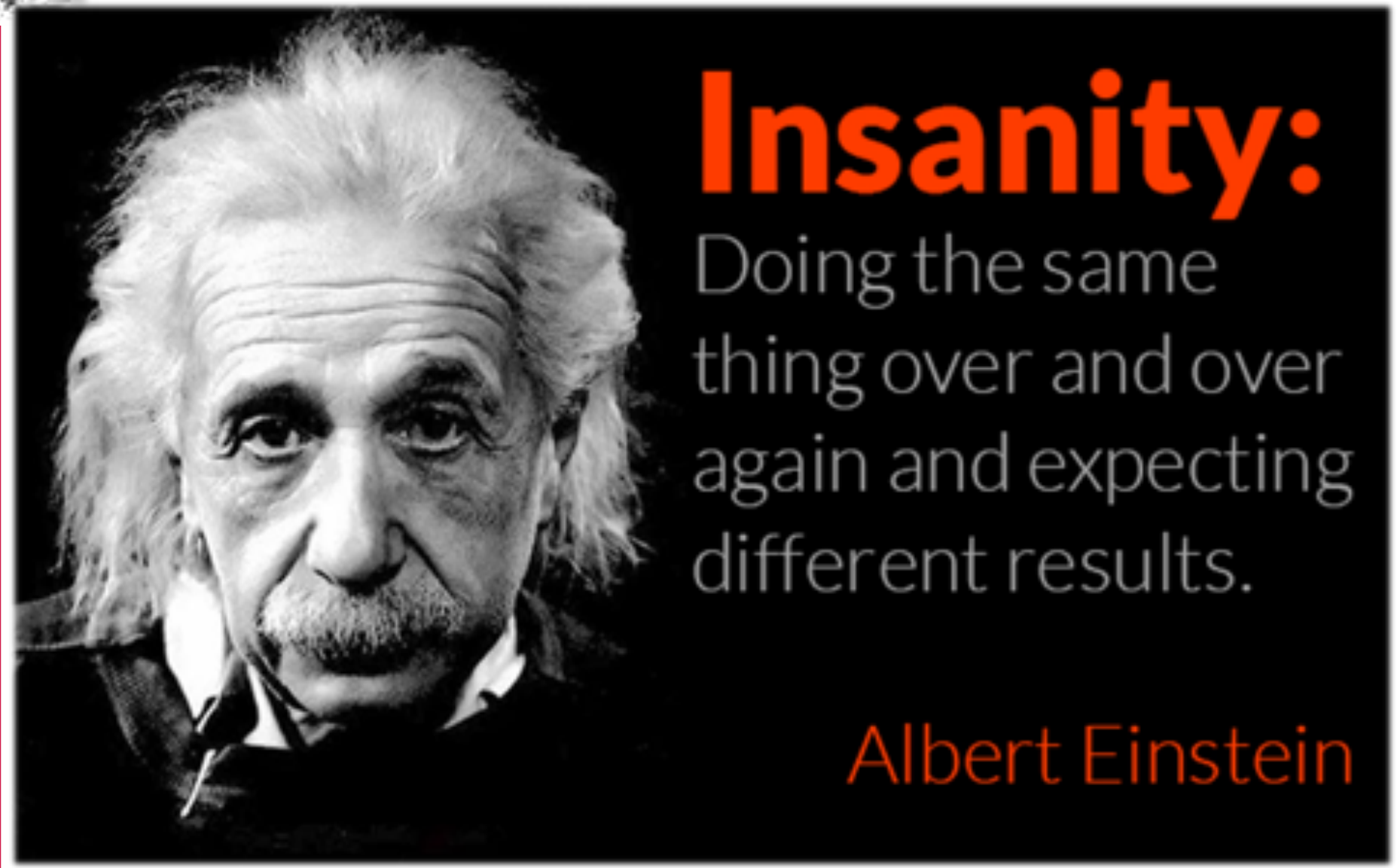
Desarrollo SIMULTÁNEO de las habilidades motoras y destrezas

- LOW-MEDIUM COCNENTRATION of training workload
- Objetivo- períodos de entrenamiento
- Efecto entrenamiento por acumulación

PERIODIZACIÓN BLOQUES

Minimal number of abilities-targets within single block. CONSECUTIVE

- HIGH CONCENTRATION of training worload
- Objetivo- bloques/mesociclos
- Efecto entrenamiento por acumulación y efecto residual del entrenamiento


Insanity:
Doing the same thing over and over again and expecting different results.
Albert Einstein

REVERSE PERIODIZATION反周期

Figure 2: A traditional model for the periodisation of endurance

1. Develop an 'aerobic base'
2. Develop foundations of specific endurance (threshold work)
3. Carry out specific endurance work, together with and speed and power training
4. Taper

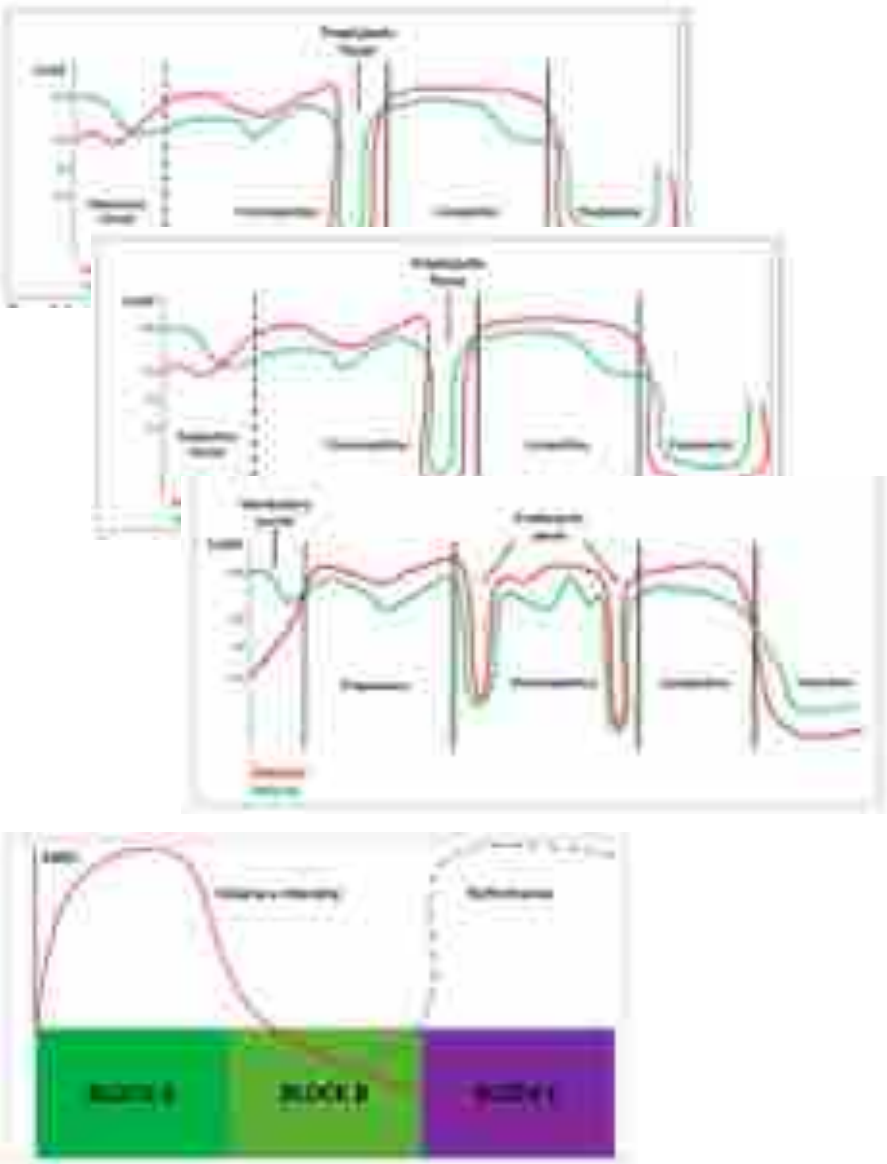
Aerobic endurance → Develop foundations of specific endurance → Specific endurance

Fig 3: Reverse periodisation of endurance

1. Development of a 'speed and power base'
2. Develop foundations of specific endurance
3. Combination training (variety of duration/specificity)
4. Taper

Specific endurance → Develop foundations of specific endurance → Aerobic endurance

Application of training periodization models by elite judo coaches

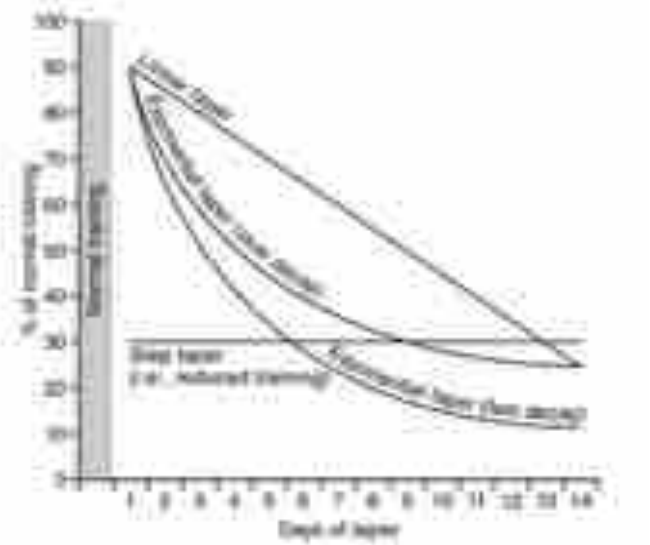


TAPERING y PEAKING 减量和最佳运动表现

A taper is a progressive reduction in training load. This reduction in the training load is meant to reduce the physical and psychological stressors incurred on a daily basis in order to enhance the body's adaptation to training—and thus optimize performance. Many physical and psychological factors are improved with a properly implemented taper.

Key points to consider when planning a taper are these:

- Reduction of the training load
- Management of fatigue and physiological adaptations
- Type of taper (i.e., taper mode)
- Taper duration
- Performance goals



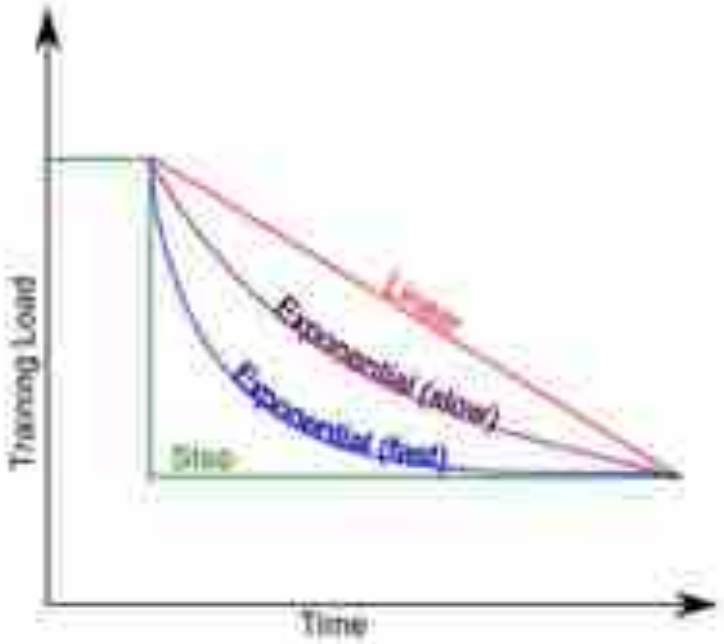
TAPERING y PEAKING 减量和最佳运动表现

TYPES OF TAPER

There are generally *four types* of taper that are discussed in the scientific evidence and that are applied, practically, depending on the sporting context.

The types of taper include:

Linear Taper: This is comprised of a systematic, linear reduction in training load
Step Taper: The training load is reduced suddenly by a constant amount.
Exponential – Fast: Training load is reduced in a systematic, exponential fashion at a fast rate (fast decay)
Exponential – Slow: The training load is reduced in a systematic, exponential manner but at a slow rate (slow decay).



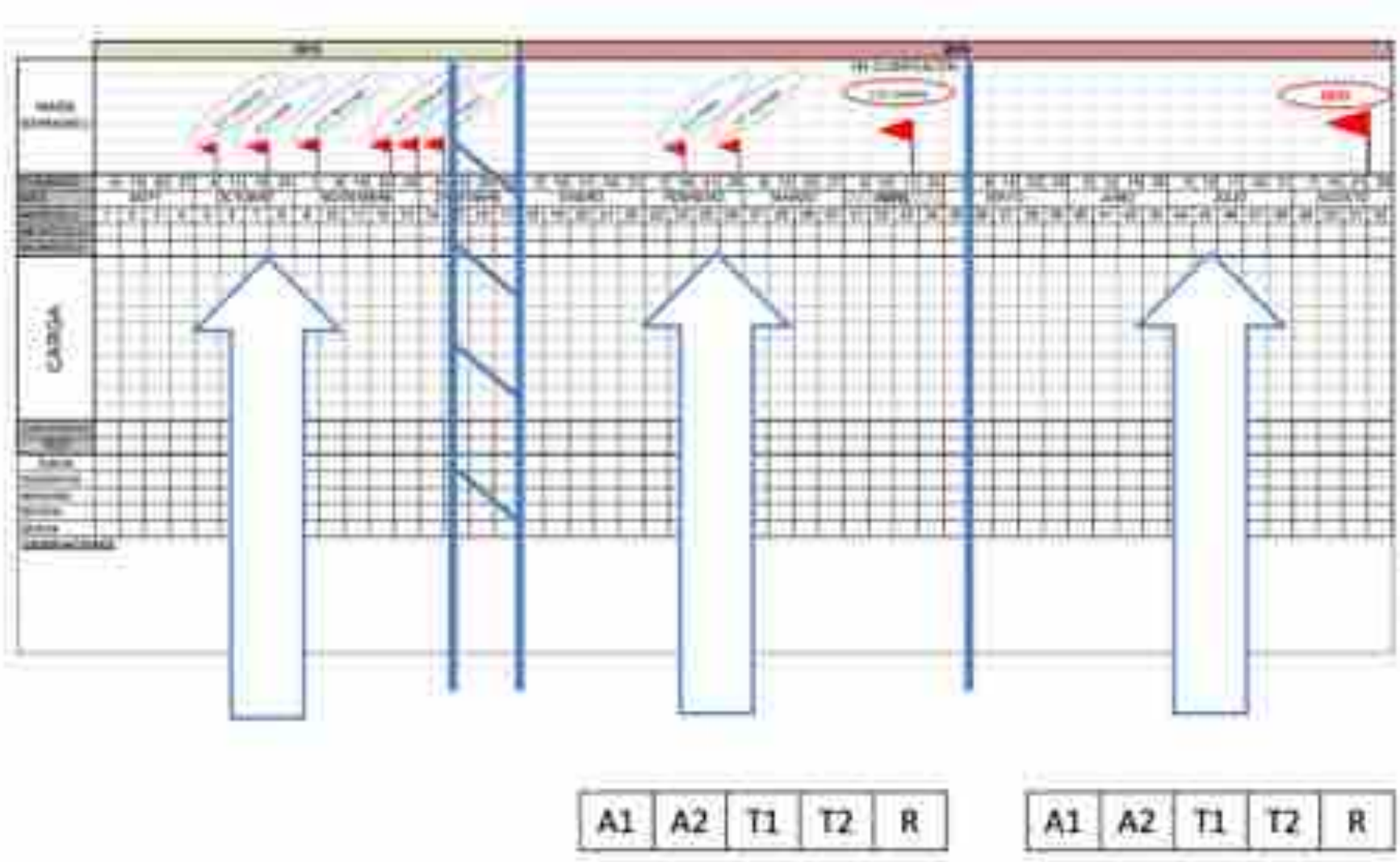
TAPERING y PEAKING 减量和最佳运动表现

Modelo de planificación	Tipo de taper	Duración del taper	Intensidad de trabajo	Reducción del volumen	Frecuencia de entrena.
Tradicional	Exponencial caída lenta	3 semanas	Alta: 90-100%	2ª y 2ª: 40% 3ª: 60%	F: 1ª y 2ª: 2d/s; 3ª: 1d/s T: 1ª y 2ª: 5 d/s; 3ª: 3-4 d/s
ATR	Exponencial caída rápida	2 semanas	Alta: 90-100%	1ª: 40% 2ª: 60%	F: 1ª: 2 d/s; 2ª: 1d/s T: 1ª: 5 d/s; 2ª: 3-4 d/s
Acentuada	Exponencial caída rápida	2 semanas	Alta: 90-100%	1ª s: 40% 2ª: 60%	F: 1ª: 2 d/s; 2ª: 1d/s T: 1ª: 5 d/s; 2ª: 3-4 d/s
M. integrado	Exponencial caída rápida	2 semanas	Alta: 90-100%	1ª: 40% 2ª: 60%	F: 1ª: 2d/s; 2ª: 1d/s T: 1ª: 5 d/s; 2ª: 3-4 d/s
Cualquiera	Escalonado	1 semana	Baja: 30-40%	1ª: 70%	F: No se trabaja T: 3 d/s

s: semana; d/s: días/semana; F: entrenamiento de fuerza en sala; T: entrenamiento en tatami.


WORLD JUDO TOUR
IJF
IJF WORLD JUDO TOUR 2018
JUDO FOR THE WORLD ijf.org
January 19 - 21 Tunis Grand Prix TUNIS
February 10 - 11 Paris Grand Slam FRANCE
February 23 - 25 Düsseldorf Grand Slam GERMANY
March 09 - 11 Agadir Grand Prix MOROCCO
March 17 - 18 Ekateringburg Grand Slam RUSSIA
March/April 30 - 01 Tbilisi Grand Prix GEORGIA
April 06 - 08 Antalya Grand Prix TURKEY
May 25 - 27 Hohhot Grand Prix CHINA
June 15 - 17 Cancun Grand Prix MEXICO
July 27 - 29 Zagreb Grand Prix CROATIA
August 10 - 12 Budapest Grand Prix HUNGARY
September 20 - 27 Baku World Championships and Teams AZERBAIJAN
October 12 - 14 Tashkent Grand Prix UZBEKISTAN
October 26 - 28 Abu Dhabi Grand Slam UAE
November 16 - 18 The Hague Grand Prix NETHERLANDS
November 23 - 25 Osaka Grand Slam JAPAN
December 15 - 16 Saint Petersburg Masters RUSSIA

MONTERO, C.



MONTERO, C.

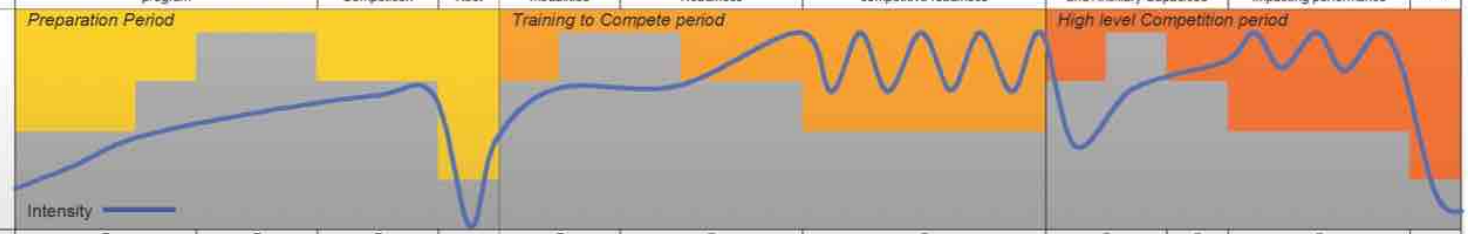
MONTERO, C.

Train to Train Plan – Single Periodization

Month	September	October	November	December	January	February	March	April	May	June	July	August
Phases	GPP			TR	SPP		PCP	Competitive Phase			Transition	
Competitions	Few (For experience only)				Local		Provincials	Nationals and Inter Provincial			Other Sports	
Emphasis	General Strength and Conditioning program Encourage involvement in 1 to 2 other sports				Maximize Fitness Development		Build technical foundations	Develop Decision Making, technical style and tactical readiness. Maintain Physical abilities			No Taekwondo training Maximize other sport involvement	
Loading	*Preparation Period*						*Learning to Compete Period*				*Life long development*	
Emphasis – Equipment	5				5		2	2				
Emphasis – Environment	5				5		3	3				
Emphasis – Psychological	15				10		15	20				
Emphasis – Physical	30				30		20	15				
Emphasis – Tactical	10				15		25	30				
Emphasis – Technical	35				35		35	30				

Train to Compete Training Plan – Double Periodization

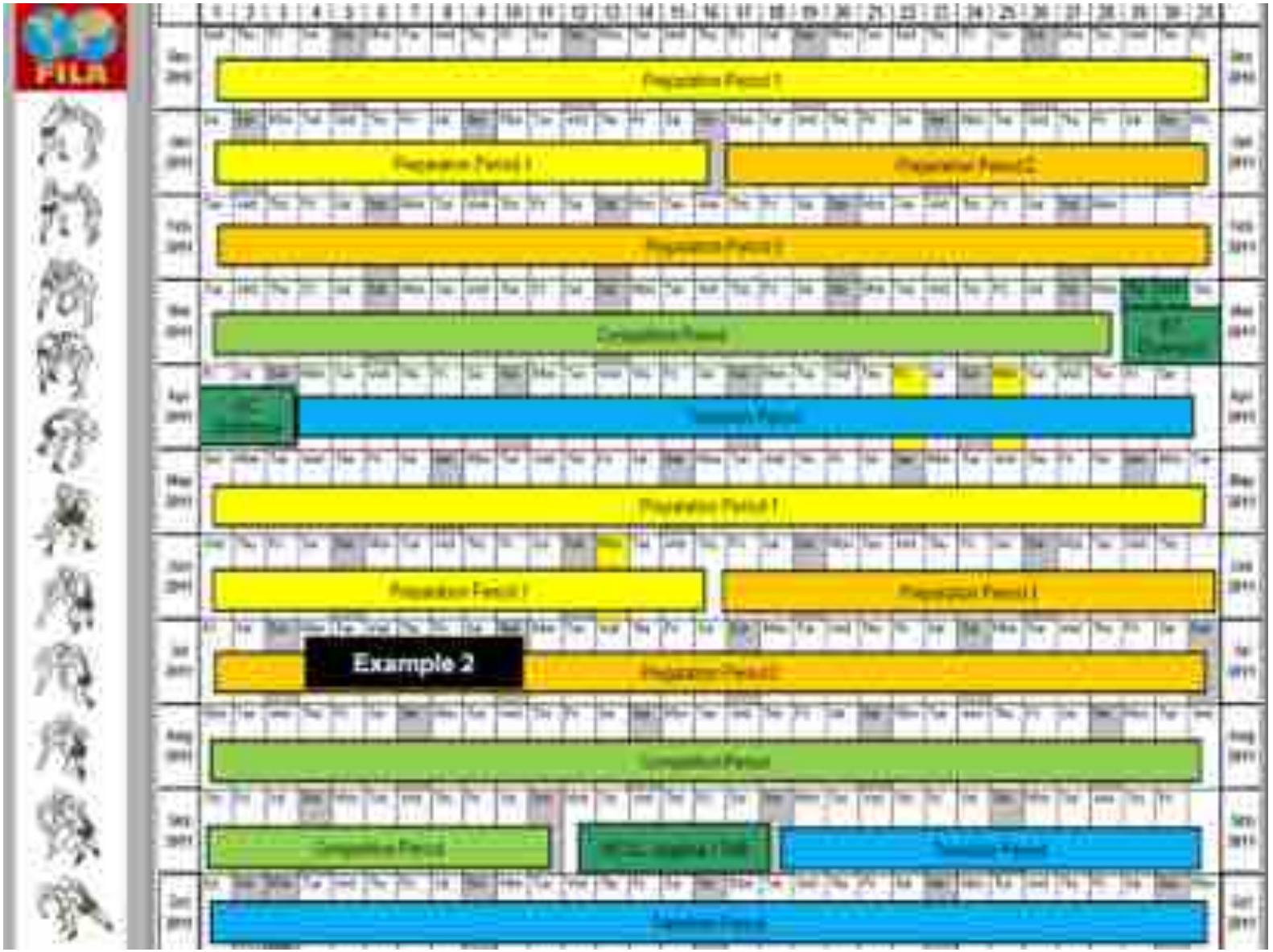
Month	September	October	November	December	January	February	March	April	May	June	July	August
Phases	GPP			SPP	TR	SPP		PCP		Comp Phase	SPP	PCP	COMP Phase	TR
Competitions	Few (not a priority)			Regional	None	Local		Provincials		Nationals – Trials	Trials Interprovincial		National - International	
Emphasis	Well structured strength and conditioning program			Train Through Competition	Active Rest	Boost Physical modalities		Maximize Tactical Readiness		Taper and peak – Optimize competitive readiness	Boost Physical Modalities and Ancillary Capacities		Optimize all factors impacting performance	Rest
Loading	*Preparation Period*					*Training to Compete period*					*High level Competition period*			
Emphasis – Equipment	5	5	5		5	2		2			2	2	2	
Emphasis – Environment	5	5	5		5	3		3			3	3	3	
Emphasis – Psychological	15	15	20		10	15		20			15	20	20	
Emphasis – Physical	30	25	15		30	20		15			25	20	15	
Emphasis – Tactical	10	15	25		15	25		30			20	25	35	
Emphasis – Technical	35	35	30		35	35		30			35	30	25	



Learn To Win and Train to Win – Multiple Periodization

Month		September	October	November	December	January	February	March	April	May	June	July	August
Phases		TR	GPP		PCP	TR	Competitive Phase						
Competitions		None	Few (Not a priority)		Selected Competions	None	Local	Provincials	Nationals and Trials		International		
Emphasis		Highly individualized training supported by integrated team of specialized practitioners				Continual peak and taper for competition. Monitor and adjust training loads to maximize competitive readiness. Integrate use of specialized practitioners to enhance athlete preparation							
Loading	Very High / High / Med / Low	*Preparation Period*				*Multiple High-level Competition Period*							
Emphasis	Equipment	5	5	5	5	5	2	2	2	2	2		
	Environment	5	5	5	5	5	3	3	3	3	3		
	Psychological	15	15	15	20	10	15	20	15	20	20		
	Physical	30	25	20	15	30	20	15	25	20	15		
	Tactical	10	15	20	25	15	25	30	20	25	35		
	Technical	35	35	35	30	35	35	30	35	30	25		

LEIPOLD, A. 2010.



LEIPOLD, A. 2010.

LEIPOLD, A. 2010.

READ, STUDY, REVIEW, LEARN,…BE CRITICAL!


Physiological and performance changes in national and international judo athletes during block periodization training

PRACTICAL EXAMPLE案例介绍

TEAM: Shanghai Judo

14 guys 10 girls

上海柔道队14名男运动员

10名女运动员

ATHLETE: XieYadong 谢亚东

Highest result 2019: 3º China Championship

2018年大师赛、大奖赛冠军；2019年全国冠军赛第三名

Main opponents: Bu y Bilig (Mongolia Interior), Wang Xuewen (Sichuan), Buzhiged (Mongolia Interior), Han Qi (Tianjin), Cheng Tseng-yin (Jiangsu).

主要对手：布和毕力格（内蒙古）、王学文（四川）、布日格德（内蒙古）、韩淇（天津）、程训钊（江苏）。

Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE案例介绍

Background上海柔道队背景

- Athletes came from Chinese New Year and 2 weeks before they were in Nanjing training with the Army´s team
- 2020年2月1日，上海柔道队运动员恢复训练，两周前他们在南京和八一队一起训练。
- New situation: lock down in the training base
- 新情况:封闭训练基地
- New head coach新任外籍主教练
- Some athletes were injured一些运动员受伤了

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PRACTICAL EXAMPLE案例介绍

1. Goal setting设定训练目标

MAIN GOAL: 主要目标

Get medal in China Games

取得第十四届全运会奖牌

Date: Sept 2021

日期：2021年9月

Improve physical capacities提升体能

Keep low body fat and increase muscle mass

保持低体脂，增加肌肉量

Improve technical/strategy

改进技术/战术

Important **communication** with athlete!!!

与运动员的交流沟通非常重要！！！

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PRACTICAL EXAMPLE案例介绍

2. ***Sport context conditions*** 体育环境条件

Social environment社会环境

Equipment: best conditions for training

设备:训练的最佳条件

Budget: good support from Shanghai Elite Sports Training

预算:上海竞技体育训练管理中心的大力支持



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PRACTICAL EXAMPLE案例介绍

3. Setting up the competition calendar
设置比赛日历

New head coach
新任主教练
19 weeks left for the 1st competition距离第一个比赛只有19周的时间

China Championship
10-14 June
全国锦标赛6月10–14日

National Championship
12-16 October
全国冠军赛10月12–16日

National Master
27-29 November
大师赛11月27–29日

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PRACTICAL EXAMPLE案例介绍

4. Staff工作团队组建

Leader 团队负责人: Mr. Gag

Sports coordinator: Mrs. Zhang

Head coach 外籍主教练: Felipe Sánchez

Assistant coach 中方教练: Ji, Wu

Sports doctor: Mr. Cheng

Scientist: Li Bo

Physiotherapist: Tom Davitt

Support staff: Shanghai Elite Sport Training Administrative Center团队支持：上海竞技体育训练管理中心

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PRACTICAL EXAMPLE案例介绍

5. Identify training phases确定训练阶段

Modern periodization:ATR采用现代训练周期划分

Why?为什么要做周期划分？

Several important competions during the season

19 weeks for the 1st important competition

因为整个2020赛季中有几场重要比赛，其中第一场重要比赛在第19周。

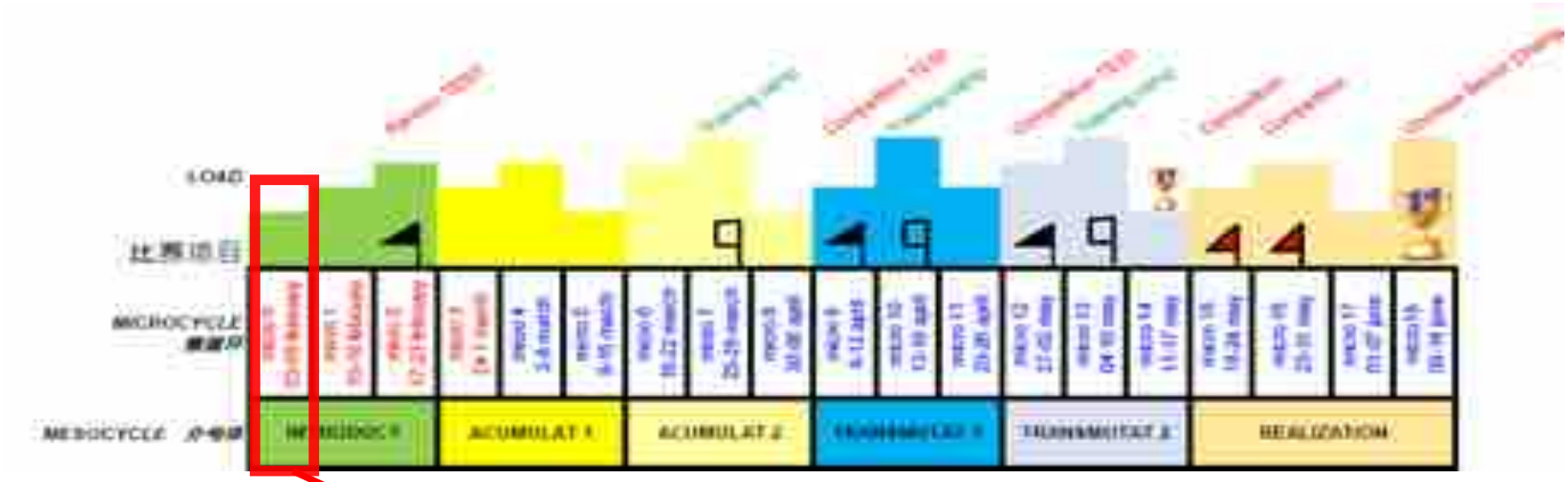
Training phases:训练阶段

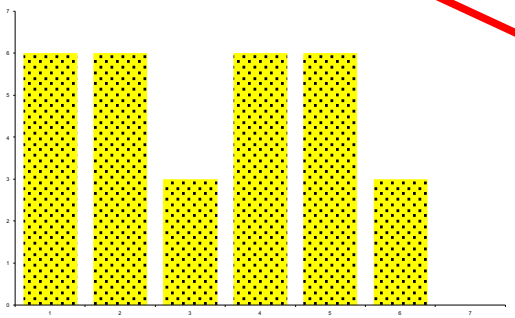
INTRODUCTORY: 3 weeks
预备期：3周
ACUMULATION: 3 + 3 weeks
积累期：3周+3周
TRANSMUTATION: 3 + 3 wee
转化期：3周+3周
REALIZATION: 4 weeks
实现期：4周
Total: 19 weeks共计19周

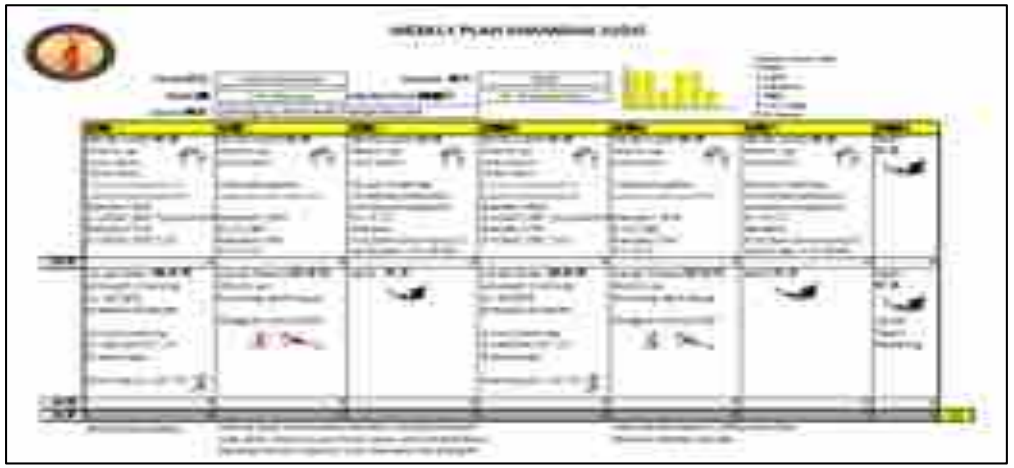
Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE案例介绍

6. Build your training plan 制定你的训练计划







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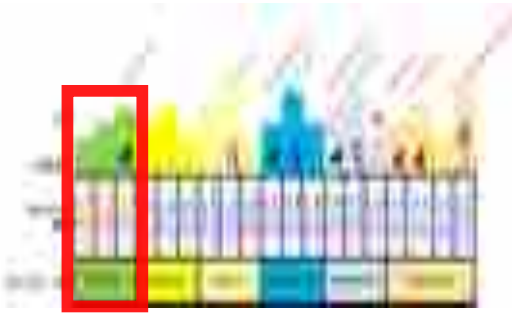
PRACTICAL EXAMPLE案例介绍

6. Build your training plan 制定你的训练计划

INTRODUCTORY: 3 weeks
预备期：3周

-Aerobic circuits
-Yako soku geiko
-Olympic lifts technique
-Initial evaluation
-Randori
-General conditioning
-10 sessions per week
-Rest Thus/Sat aftern/Sund
-Test technique
-Team meeting



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PRACTICAL EXAMPLE案例介绍

6. Build your training plan 制定你的训练计划

ACUMULATION: 3 + 3 weeks

积累期：3周+3周

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PRACTICAL EXAMPLE案例介绍

6. Build your training plan 制定你的训练计划

ACUMULATION: 3 + 3 weeks
积累期：3周+3周

-Aerobic circuits
-Running
-Yako soku geiko
-Olympic lifts
-10/12 sessions per week
-recovery microcycle
-ne waza: diff positions
-shiai (w/referee)
-kakari geiko
-judo GS videos

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PRACTICAL EXAMPLE案例介绍

6. Build your training plan 制定你的训练计划

TRANSMUTATION: 3 + 3 weeks

转化期：3周+3周

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PRACTICAL EXAMPLE案例介绍

6. Build your training plan

TRANSMUTATION: 3 + 3 weeks

转化期：3周+3周

Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE案例介绍

6. Build your training plan 制定你的训练计划

TRANSMUTATION: 3 + 3 weeks
转化期：3周+3周

-Anaerobic circuits
-Yako soku geiko
-Randori groups 4-5
-Randori + Golden score
-Randori modo gachi
-Randori “Ippon”
-Randori “tactical situations”
-Randori newaza (trans TW-NW)
-Shiai (w/referee)
-Competition indiv/team
-10/11 sessions per week
-Recovery microcycle

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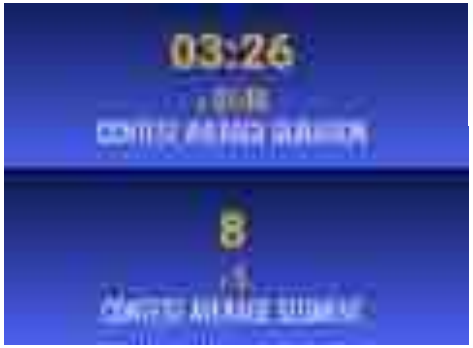
PRACTICAL EXAMPLE 案例介绍

6. Build your training plan 制定你的训练计划

TRANSMUTATION: 3 + 3 weeks
转化期：3周+3周



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Randori

Randori

Randori

Round 1	Round 2	Round 3	Round 4	Round 5
2 vs 1	3 vs 4	6 vs 4	4 vs 1	5 vs 6
3 vs 6	6 vs 1	2 vs 3	5 vs 3	1 vs 3
4 vs 5	2 vs 5	1 vs 6	6 vs 2	4 vs 2

5 x randori (1` kumikata+1 randori+1attack+1 defense)/1`

1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6

5 x randori (3 +1 GOLDEN SCORE)/1`30`

1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6

Team competition

柔道队比赛

上海，2020年4月23日，14:30

SHANGHAI TEAM A	SHANGHAI TEAM B	SHANGHAI TEAM C
Ren Yajing 任雅静	Zhang Min 张敏	Feng Douduo 冯多多
SunHan 孙含	Wang Danni 王丹妮	Puliani 浦佳妮
Jiang Junjie 姜俊杰	Zhao Junxiang 赵君翔	Xu Fengyi 徐凤逸
ZhangZhiyuan 张致远	WangXin 王鑫	Wang Shangjun 王上钧
ZhouYixin 周祎歆	XieYadong 谢亚东	Wu Zedong 吴泽东
FeiJunjun 费君君	Qiu Ye xin 邱亚鑫	LiPinzheng 李品正
Coach: Wu	Coach: Ji	Coach: Felipe
Team support : Wang Guopeng	Team support : Yang Yibin	Team support : Yang Yiying

Individual competition

LIST OF CONTESTS-MORNING 09:30

LIST OF CONTESTS-AFTERNOON 15:30

Individual competition

RULES

1. IF YOU WIN ALL THE FIGHTS BY IPPON YOU WILL HAVE 100 POINTS
2. IN CASE THAT THERE ARE SEVERAL ATHLETES WITH SAME NUMBER OF IPPONS, WILL WIN THAT ONE WHO WON WITH FASTEST IPPON
3. WIN BY WAZARI IS HALF SCORE
4. JUDO ATHLETES THAT HAVE (*) TACTICAL GOALS, IF WIN BUT DO NOT FOLLOW THE STRATEGY WILL ONLY HAVE HALF SCORE
5. IF YOU WIN ONE ATHLETE OF HIGHER WEIGHT CATEGORY YOU WILL SCORE +10 POINTS

	Nº FIGHTS	WIN by IPPON= X POINTS	WIN by WAZARI= X POINTS
Ren Yajing 任雅静	6	16,66	8,33
Zhang Min 张敏	6	16,66	8,33
Feng Duoduo 冯多多	6	16,66	8,33
Yang Yiying 薛一颖	6	16,66	8,33
Wang Danni 王丹妮	5	20	10
Xu Fengyi 徐凤逸	5	20	10
SunHan 孙晗	5	20	10
Jiang Junjie 姜俊杰	7	14,28	7,14
Zhao Junxiang 赵珺珩	7	14,28	7,14
Wang Shangxun 王上轩	7	14,28	7,14
Wu Zedong 吴泽东	4	25	12,5
WangXin 王鑫	7	14,28	7,14
ZhangZhiyuan 张致远	5	20	10
XieYadong 谢亚东	6	16,66	8,33
ZhouXixin 周玮韵	4	25	12,5
Qiu Yaxin 邱亚鑫	3	33,33	16,66
FeiJunyun 费俊云	3	33,33	16,66

PRACTICAL EXAMPLE 案例介绍

Build your training plan 制定你的训练计划

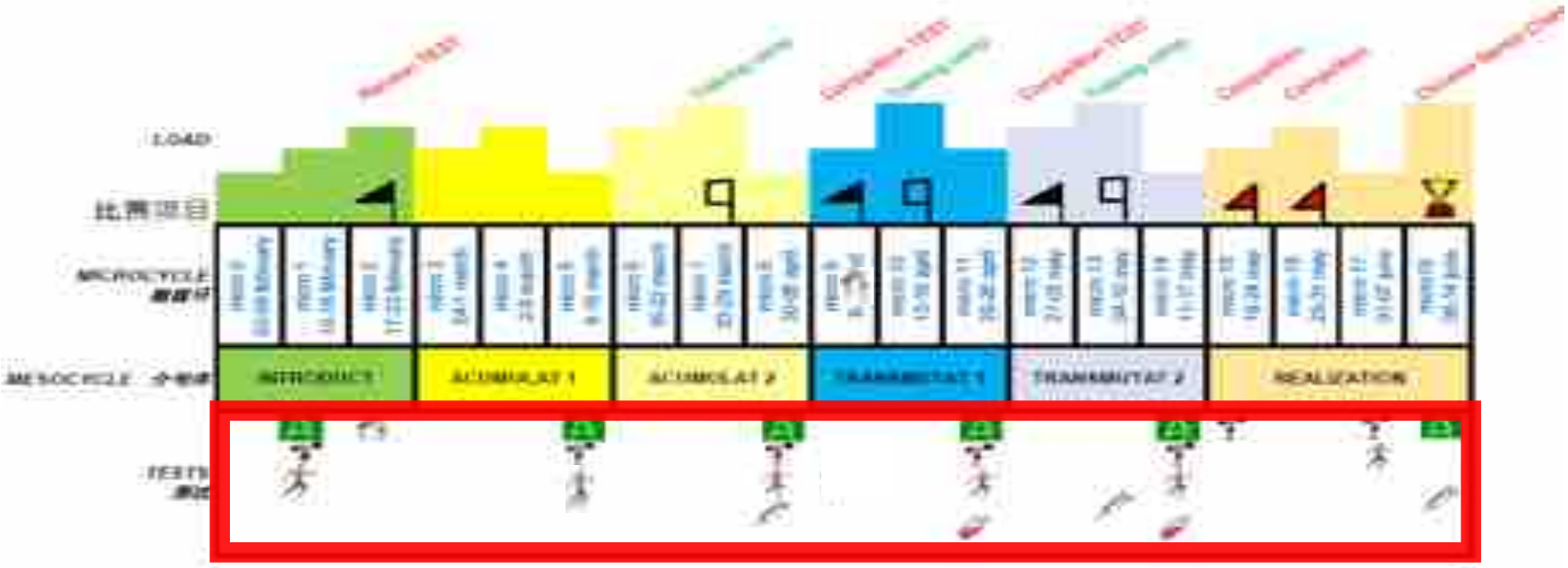
REALIZATION: 4 weeks
实现期：4周

-Lactic power
-Competition tactic
-Randori (1-3´)/+ rec
-Randori Golden score
-Randori modo gachi
-Randori “tactical situations”
-Randori newaza (trans TW-NW)
-Shiai (w/referee)
-Tapering
-Training Camp NANJING
-10 sessions per week

Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE 案例介绍

7. Setting up evaluation tests 安排各项测试和评估



Body composition
身体成分

Endurance test
耐力测试

Strength test
力量测试

Technique test
柔道技术测试

Blood analysis
生理生化测试

Lactate test
血乳酸测试

Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE案例介绍

8. Follow the training plan严格执行训练计划

Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE案例介绍

8. Follow the training plan严格执行训练计划

Contact: felipellanes@gmail.com

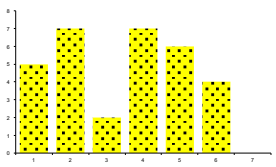
PRACTICAL EXAMPLE案例介绍

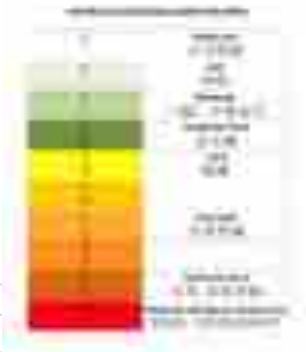
8. Follow the training plan严格执行训练计划

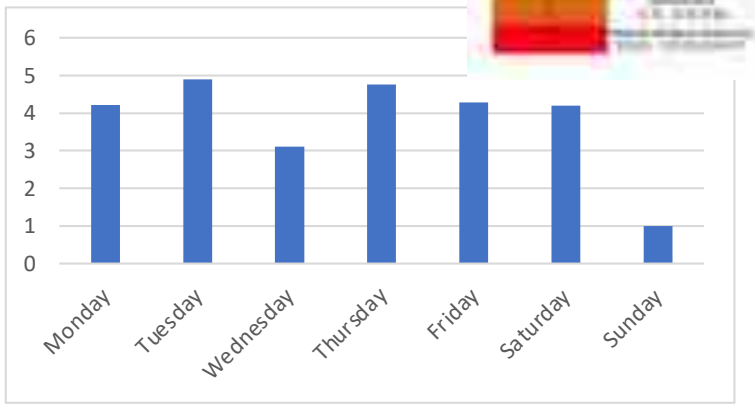
Everyday we are registering many data about training sessions:

RPE (rate of perceived exerhtion)每天我们都需要记录许多关于训练课程的数据（运动员训练感受反馈表）

TRAINING LOAD训练负荷计算统计







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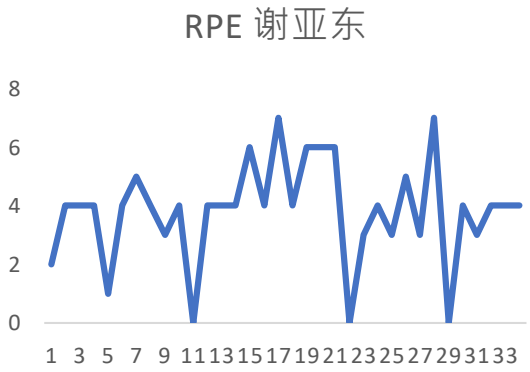
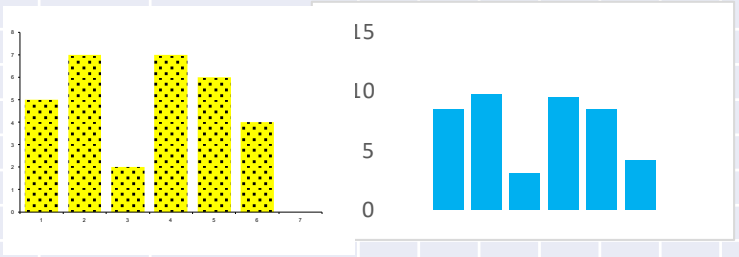
PRACTICAL EXAMPLE案例介绍

8.Follow the training plan严格执行训练计划

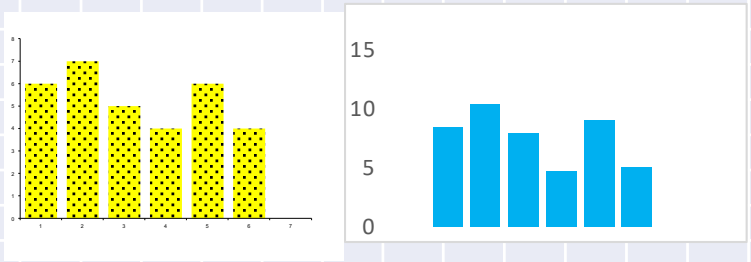


		3,9	4,6	4,5	5,3	3,1	4,4	5,1	4,1	4,5
陈一帆	ChenYi fan	3	4	5	5	3	4	6	4	4
费君君	feijunjun	4	5	5	5	3	5	2	4	5
冯多多	FengDuoDuo	4	3	5	5	4	5	5	5	6
姜俊杰	Jiangjunjie	4	7	5	7	3	4	5	4	3
李雪莹	LiXueying	4	3	4	5	2	3	5	4	5
马菲宇	MaFeiyu	4	4	4	5	3	5	6	5	5
浦佳妮	Pujiani	4	3	4	5	2	4	5	3	4
任雅静	RenYajing	5	4	4	5	4	4	5	5	5
孙含	SunHan	3	3	3	3	3	4	3	3	5
王丹妮	Wang Danni			4	5	4	6	7	5	5
王上钧	wang shang jun	4	5	3	3	2	4	6	3	3

	17-23 February							24-1 March						
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	8,5	9,8	3,1	9,5	8,5	4,2	0	8,4	10	7,9	4,7	9	5,1	0



Intensity planned (17-23 Feb) Rate Perceived Exert (17-23 Feb)



Intensity planned (24-1 March) Rate Perceived Exert (24-1 March)

Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE案例介绍

8. Follow the training plan严格执行训练计划

Everyday we are registering many data about training sessions:

每天我们都需要记录许多关于训练课程的数据：

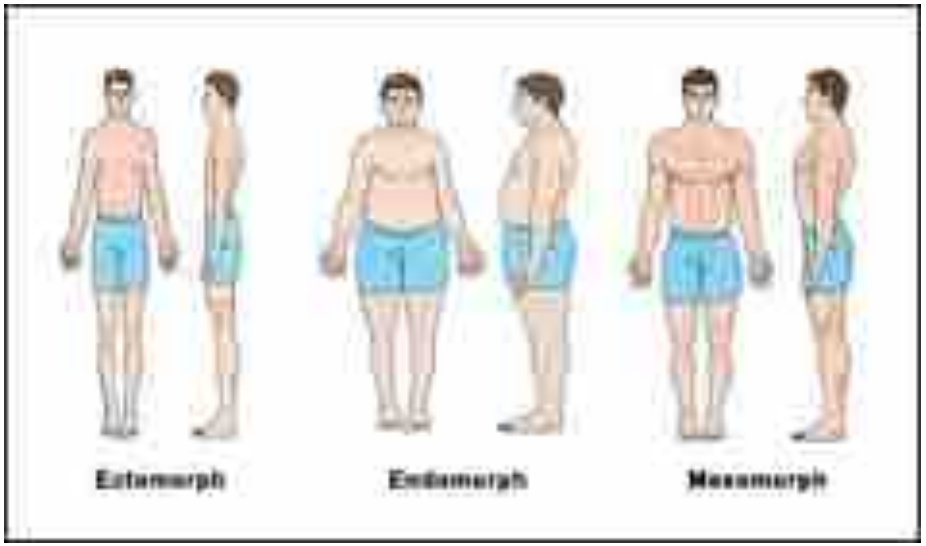
INJURY CONTROL伤病控制治疗情况记录

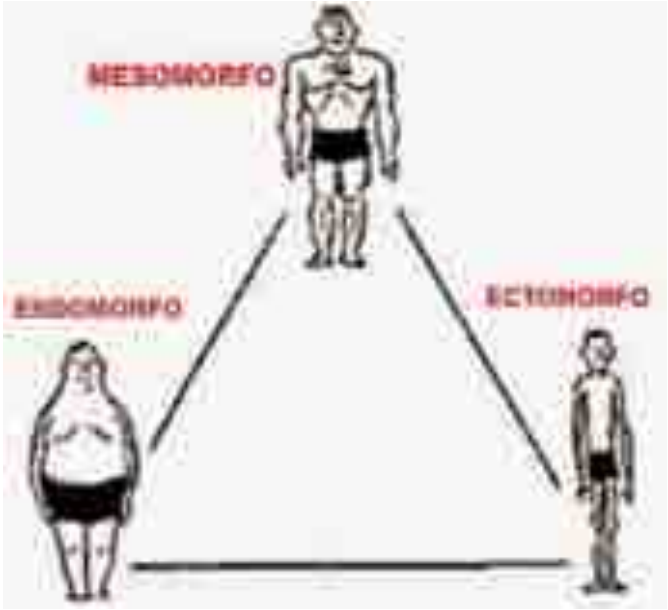
Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE案例介绍

9. Evaluate the periodization training process
对阶段训练进行评估

BODY COMPOSITION身体成分测试
Somatotype体型分类





体型一词在人体生理分类系统中使用。根据三种极端的体型，人类可以分为：内形体型，又称圆型，脂肪型；中形体型，又称肌肉型；外形体型，又称纤细型，线形型。

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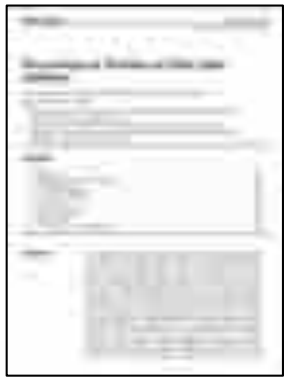
PRACTICAL EXAMPLE案例介绍

9. Evaluate the periodization training process
对阶段训练进行评估



BODY COMPOSITION

Somatotype

We can compare with TOP national teams

Table 1. Somatotype of high-level judo athletes

Athlete characteristics	Endomorphy (mean ± SD)	Mesomorphy (mean ± SD)	Ectomorphy (mean ± SD)	Reference
Male				
Hungarian team (n = 18)	3.6 ± 1.9	7.0 ± 1.3	1.6 ± 0.9	Fortosi[7]
Japanese (n = 12)	3.4 ± 2.0	6.5 ± 1.4	1.0 ± 0.8	Kawamura et al.[20]
French (n = 10)	1.2 ± 0.5	7.5 ± 0.9	1.5 ± 0.7	Kawamura et al.[20]
Brazilian team 1999 (n = 7)	2.7 ± 1.3	7.9 ± 1.6	1.1 ± 0.6	Silva et al.[16]
WCF under 71 kg (n = 16)	2.3 ± 0.4	5.6 ± 0.5	1.3 ± 0.4	Claessens et al.[14]
WCF 71–86 kg (n = 9)	3.0 ± 0.5	6.6 ± 0.7	1.7 ± 0.7	Claessens et al.[14]
WCF >86 kg (n = 11)	4.1 ± 0.9	6.2 ± 0.6	1.3 ± 0.4	Claessens et al.[14]
Brazilian university team 1996 (n = 6)	2.7 ± 1.8	6.2 ± 1.5	1.6 ± 1.2	Franchini et al.[11]
Female				
Brazilian university team 1996 (n = 7)	4.1 ± 1.3	5.0 ± 1.1	1.7 ± 1.2	Franchini et al.[11]
Brazilian team 1999 (n = 7)	4.3 ± 1.3	5.1 ± 0.8	1.1 ± 1.0	Franchini et al.[12]
Brazilian elite (n = 38)	3.6 ± 1.9	5.1 ± 1.7	1.5 ± 0.9	Matsudo and Fernandes Filho[18]
WCF = World Champ	谢亚东	**2,44**	**6,74**	**1,27**

Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE案例介绍

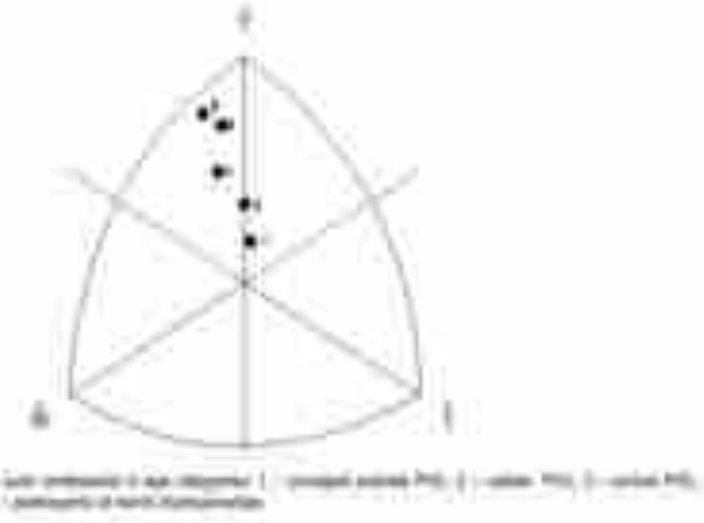
9. Evaluate the periodization training process
对阶段训练进行评估

BODY COMPOSITION身体成分

Somatotype体型类型

We can compare with TOP national teams

我们可以和顶级国家队相比



Contact: felipellanes@gmail.com

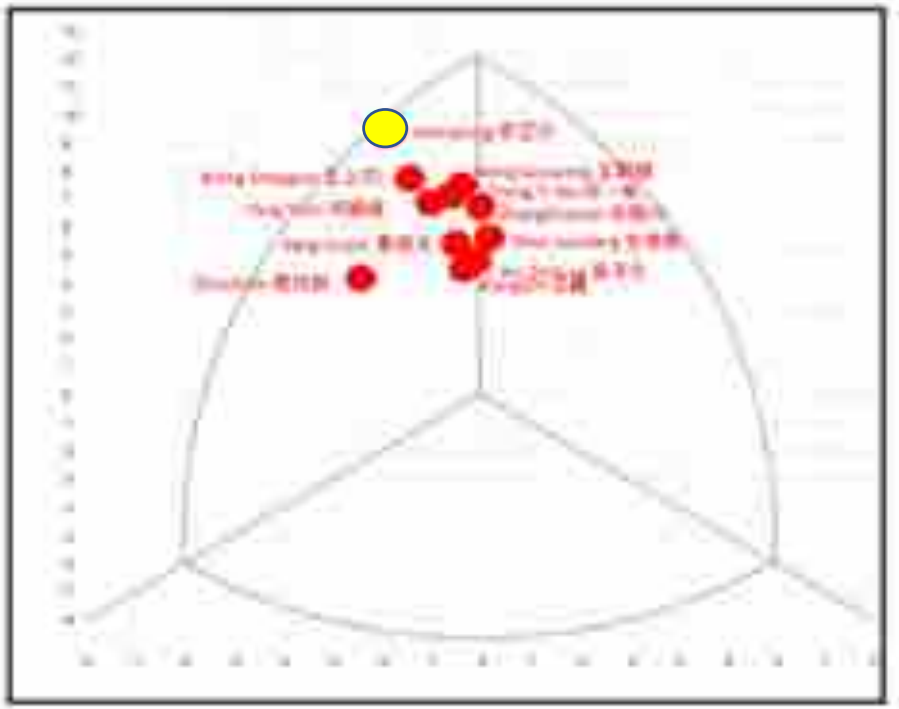
PRACTICAL EXAMPLE案例介绍

9. Evaluate the periodization training process
对阶段训练进行评估

BODY COMPOSITION身体成分

Somatotype体型类型

We can compare with our own team我们可以和自己的团队相比



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PRACTICAL EXAMPLE案例介绍

9. Evaluate the periodization training process
对阶段训练进行评估

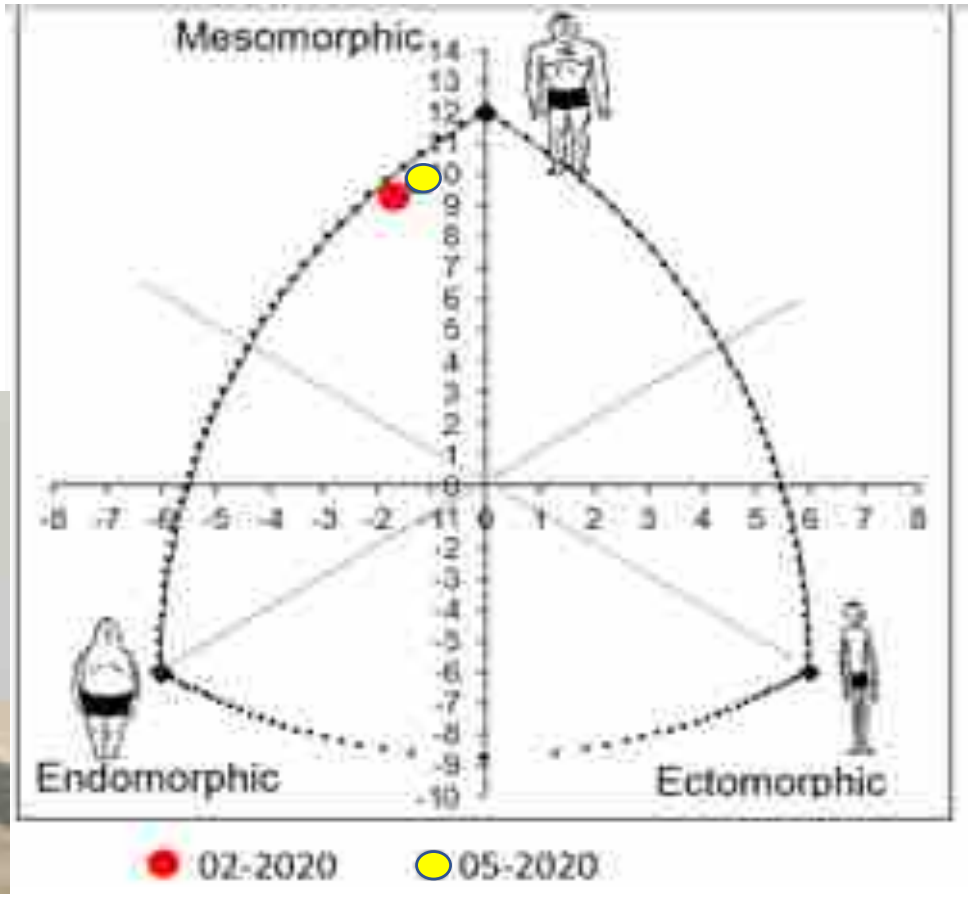
BODY COMPOSITION身体成分

Somatotype体型类型

or compare with

your own data

我们可以拿自己不同时间的数据作比较



Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE案例介绍

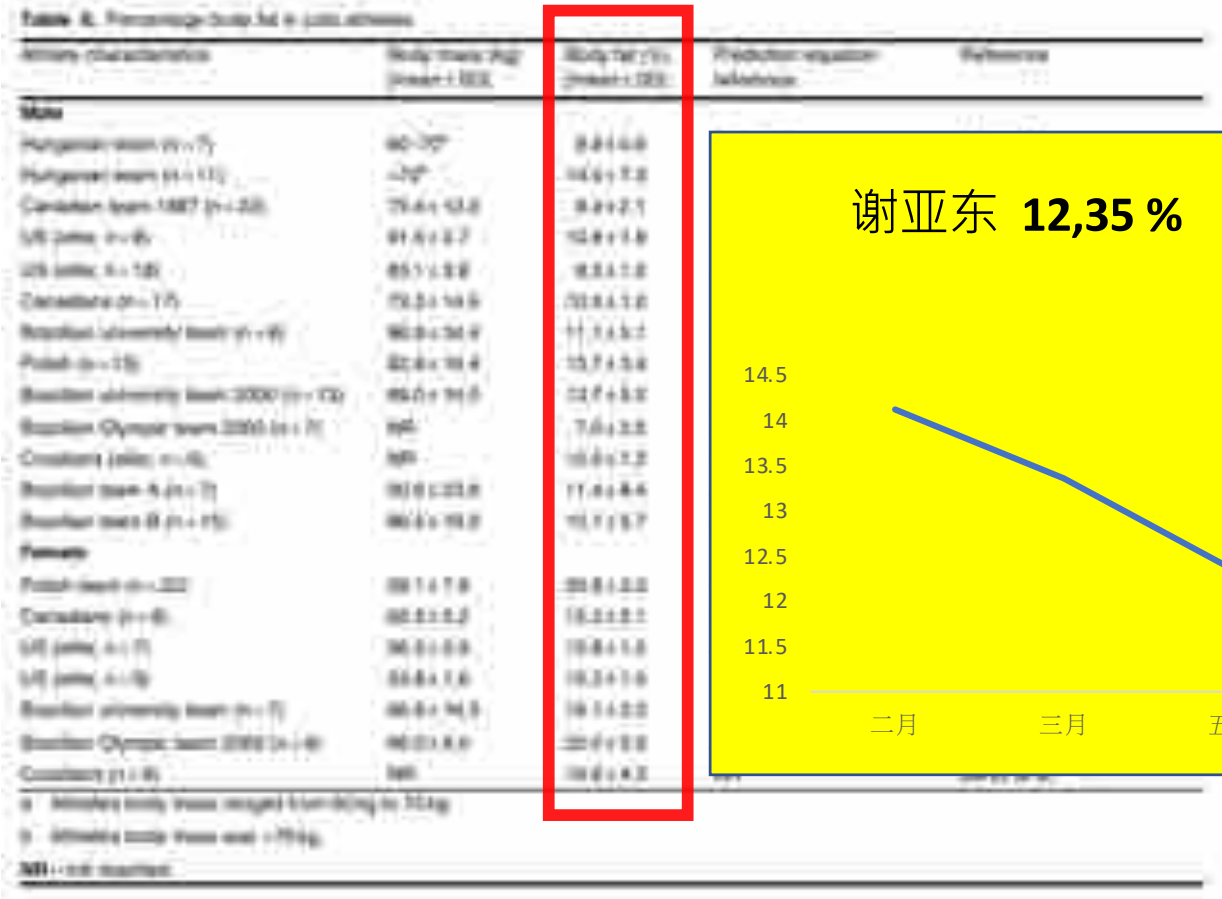
9. Evaluate the periodization training process
对阶段训练进行评估

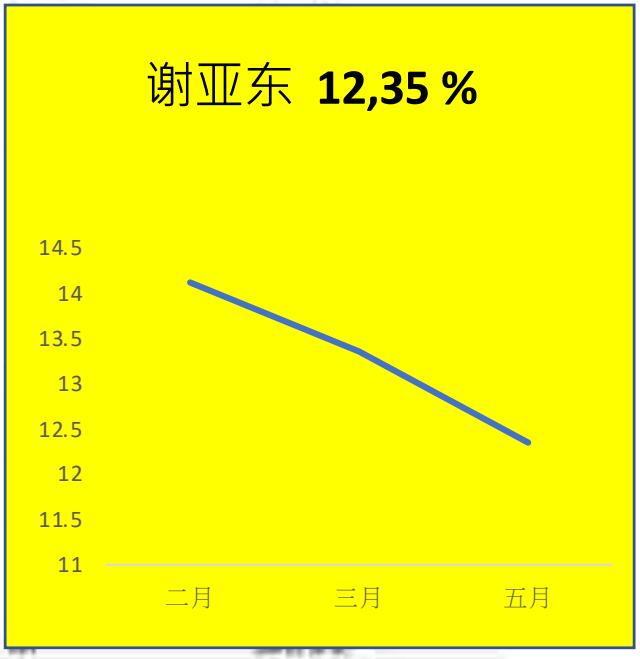
BODY COMPOSITION身体成分

% Body fat

体脂率

世界不同
国家男女
柔道运动员
的体脂率
数据分析





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PRACTICAL EXAMPLE案例介绍

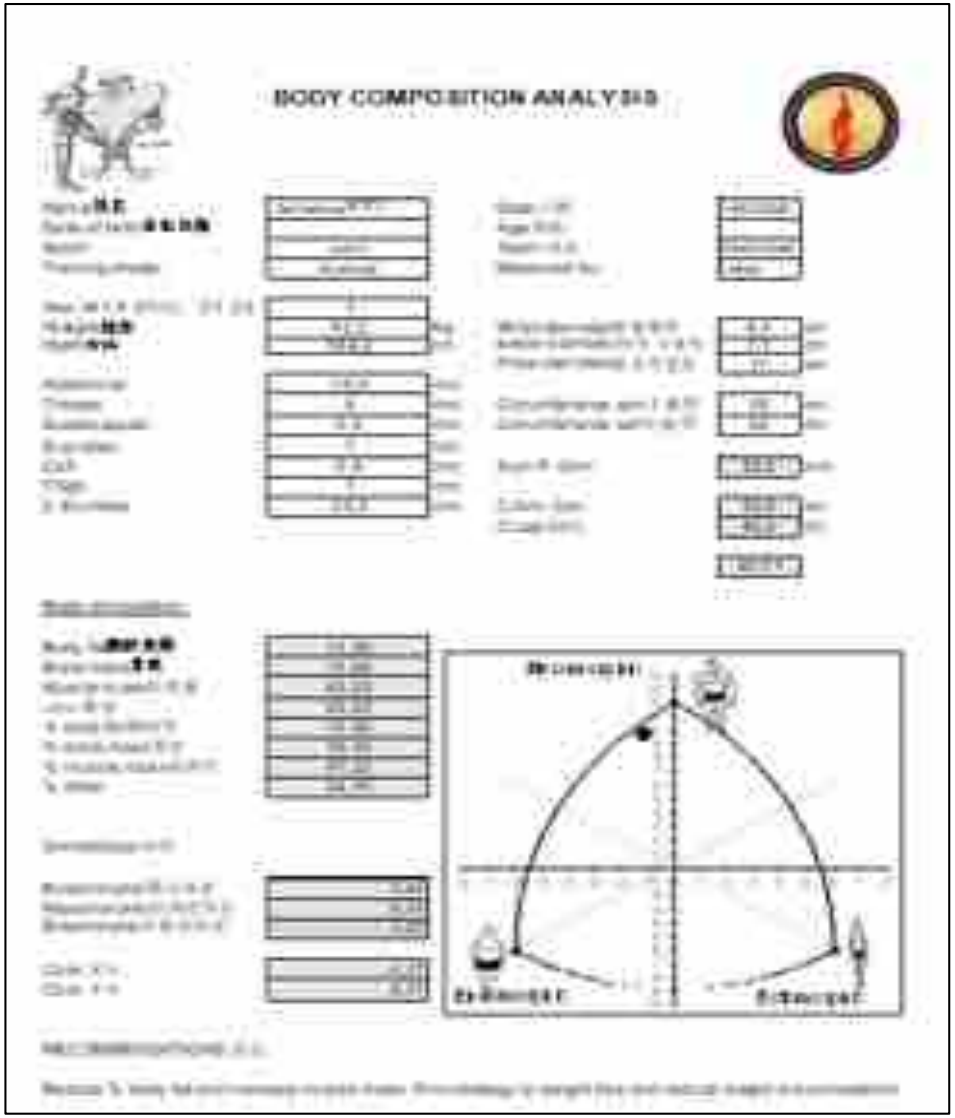
9. Evaluate the periodization training process
对阶段训练进行评估

BODY COMPOSITION

% Body fat

上海柔道队运动员谢亚东的身体成分分析表

根据他在体型三维图上的位置分析他在国际上-90公斤级中的身体形态情况



Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE案例介绍

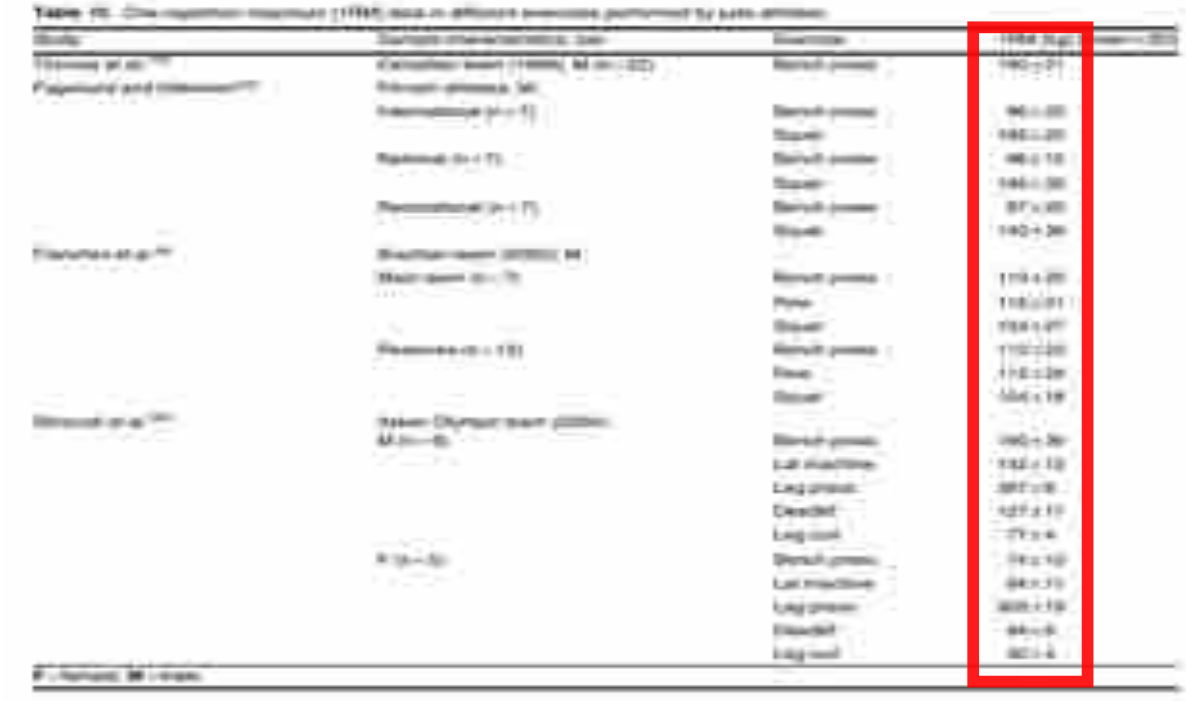
9. Evaluate the periodization training process
对阶段训练进行评估

STRENGTH力量测试（最大力量卧推、深蹲）

Maximum strength- BENCH PRESS-SQUAT

We can compare with TOP national teams

我们与国际顶尖国家的柔道队做对比（巴西、法国等）



Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE案例介绍

9. Evaluate the periodization training process
对阶段训练进行评估

STRENGTH力量测试（最大力量卧推、深蹲）

Maximum strength- BENCH PRESS-SQUAT

We can compare with TOP national teams

我们与国际顶尖国家的柔道队做对比（巴西、法国等）

谢亚东 **130 kg**

Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE案例介绍

9. Evaluate the periodization training process
对阶段训练进行评估

STRENGTH力量测试（最大力量卧推、深蹲）

Maximum strength- BENCH PRESS-SQUAT

We can compare with TOP national teams

我们与国际顶尖国家的柔道队做对比（巴西、法国等)

谢亚东 **160 kg**

Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE案例介绍

9. Evaluate the periodization training process
对阶段训练进行评估

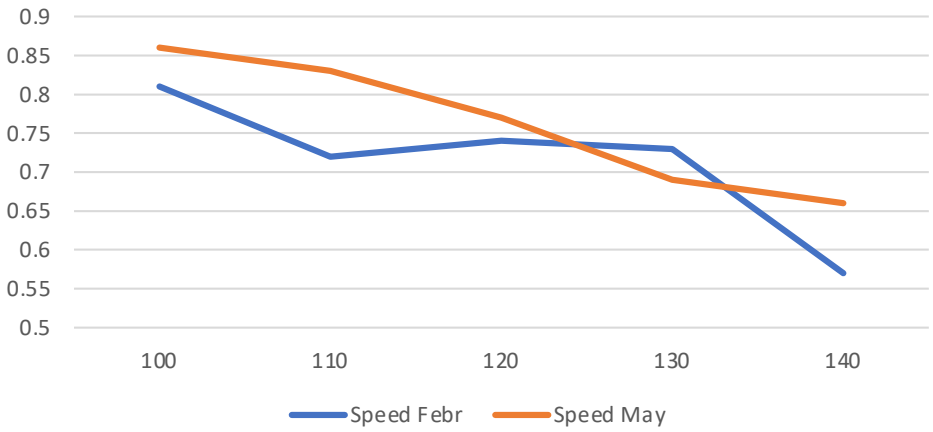
STRENGTH力量测试

Velocity/Power 速度/功率测试

50-60-70-80-90-100% RM

采用50%–100%的重量进行测试

深蹲测试 SQUAT - XieYadong 谢亚东



蓝线为二月测试，红线为五月测试

Contact: felipellanes@gmail.com


Judo
RECORDING ATHLETE 2/2
Bench Press - Wide Grip
All
YADONG Xie
4
0
3
BAR Graph
Mean Velocity (m/s)
0
110.00
Mean Velocity (m/s)
LOGGED IN

3. PRACTICAL EXAMPLE案例介绍

9. Evaluate the periodization training process
对阶段训练进行评估

STRENGTH力量测试

Isometric grip

Endurance judogi grip test

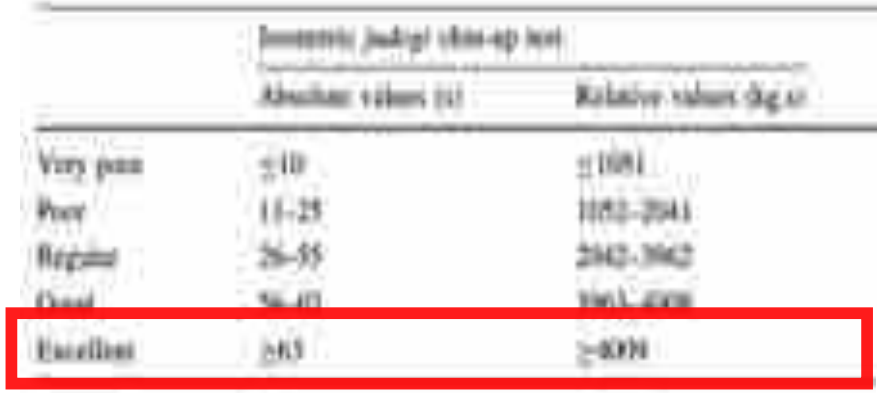
等距抓握

柔道握力耐力测试

右侧两图为国际上优秀运动员这两项的测试指标文献


Endurance in judogi grip strength tests: Comparison between elite and non-elite judo players

谢亚东 **64 s**



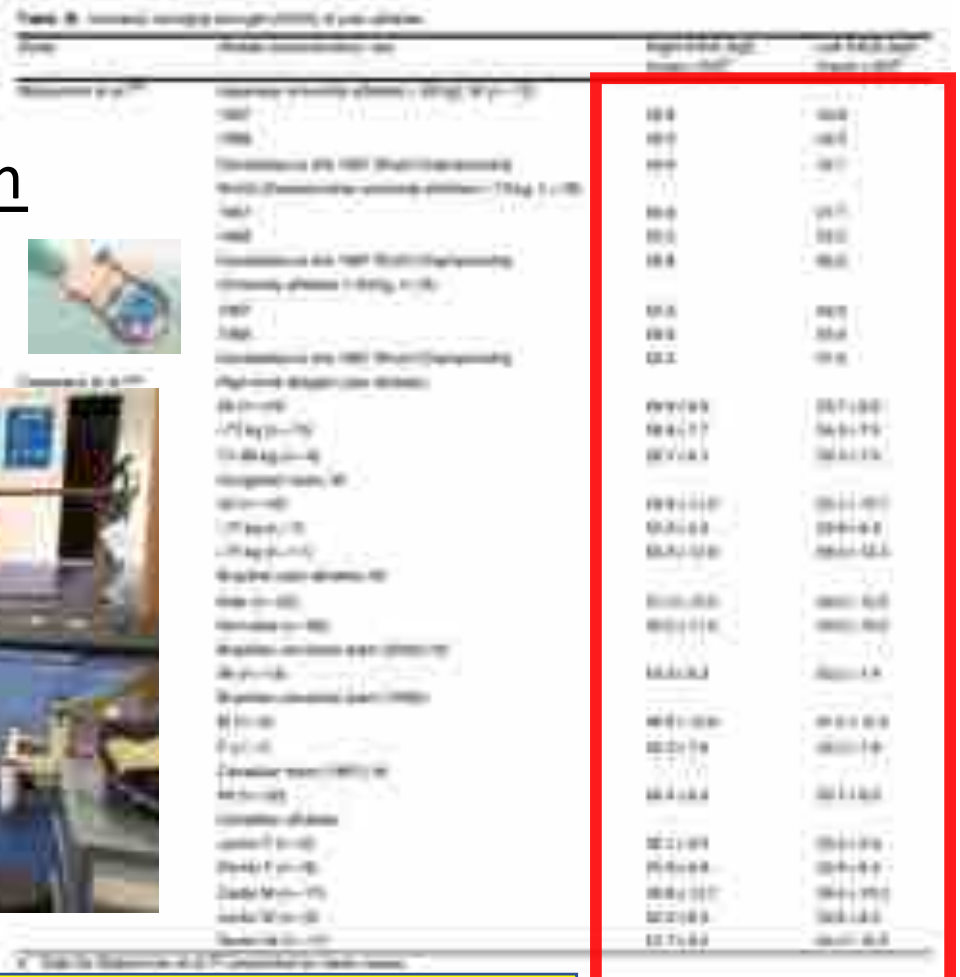
Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE

9. Evaluate the periodization training process
对阶段训练进行评估

STRENGTH

Isometric handgrig strength



谢亚东 **Right: 68 Left: 65**

Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE案例介绍

9. Evaluate the periodization training process
对阶段训练进行评估

STRENGTH力量测试

Technique Clean:杠铃轨迹

barbell trajectory纠正挺举技术动作、姿势

Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE

9. Evaluate the periodization training process
对阶段训练进行评估

STRENGTH

Technique Snatch:

纠正抓举技术动作姿势

Contact: felipellanes@gmail.com

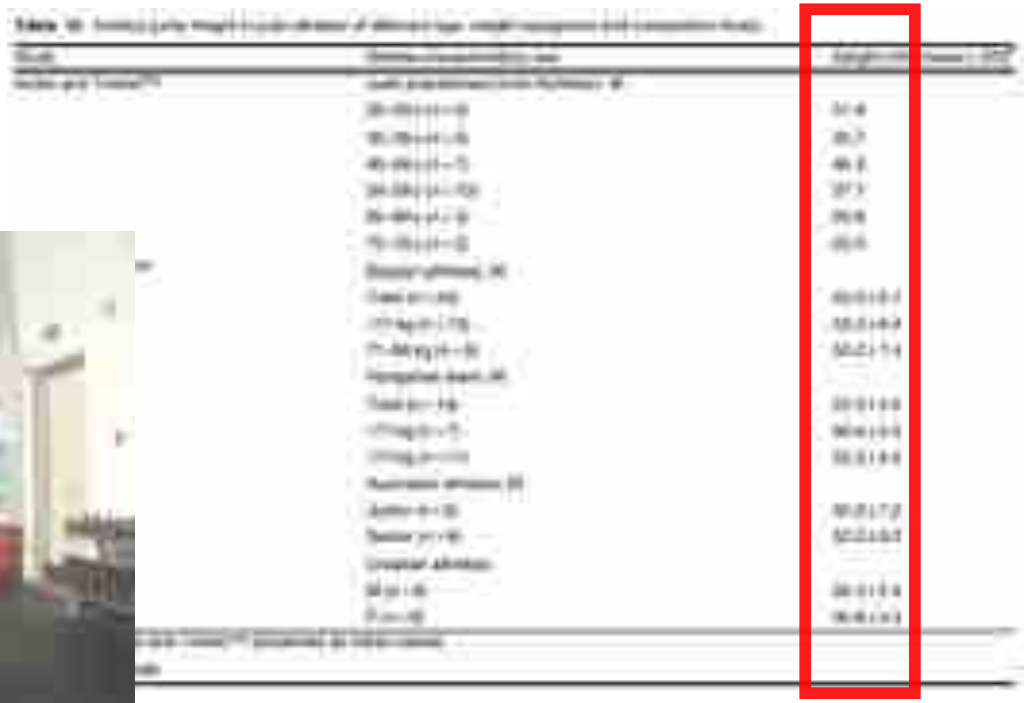
PRACTICAL EXAMPLE

9. Evaluate the periodization training process
对阶段训练进行评估

STRENGTH

Vertical jump 垂直纵跳:

Abalakov Jump



谢亚东 **50 cm**

Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE案例介绍

9. Evaluate the periodization training process
对阶段训练进行评估

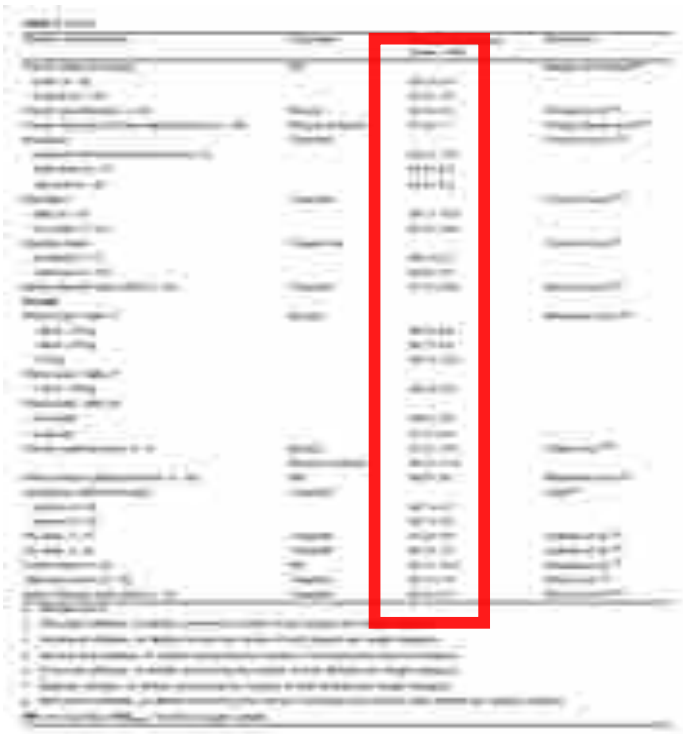
ENDURANCE耐力测试

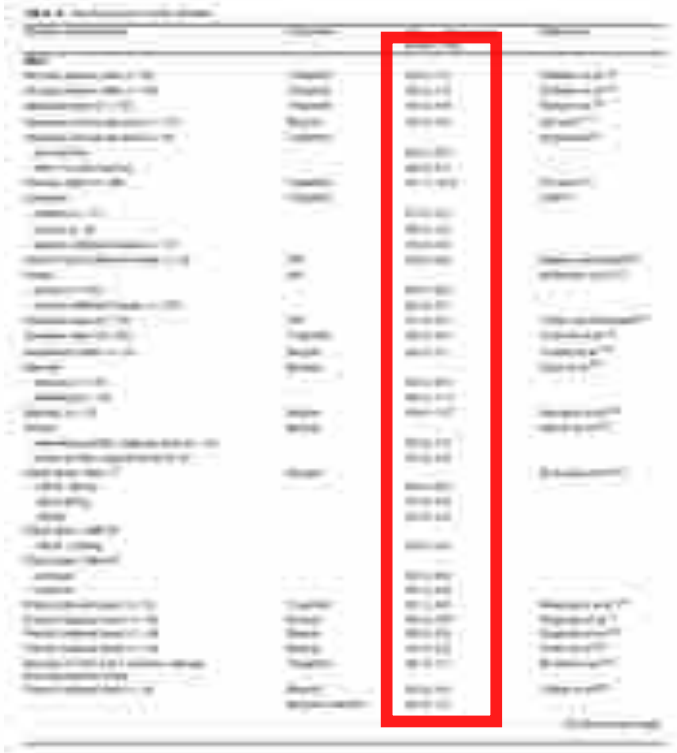
VO2 max (ml/kg/min)最大摄氧量

We can compare with TOP national teams

我们可以与世界顶尖国家队进行对比

数据来自于上图的文献《精英运动员的体能数据》





Contact: felipellanes@gmail.com

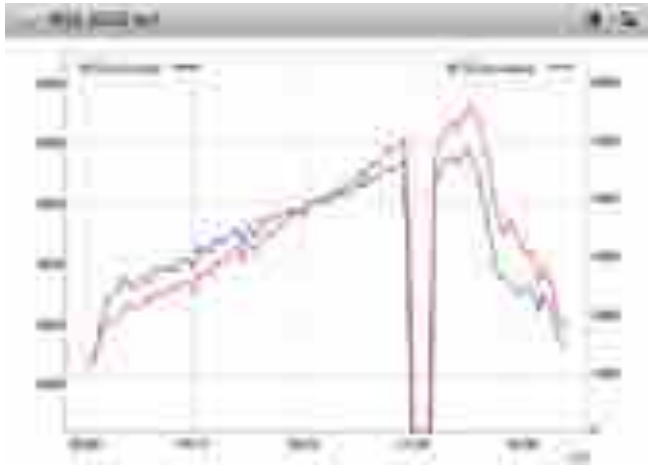
PRACTICAL EXAMPLE案例介绍

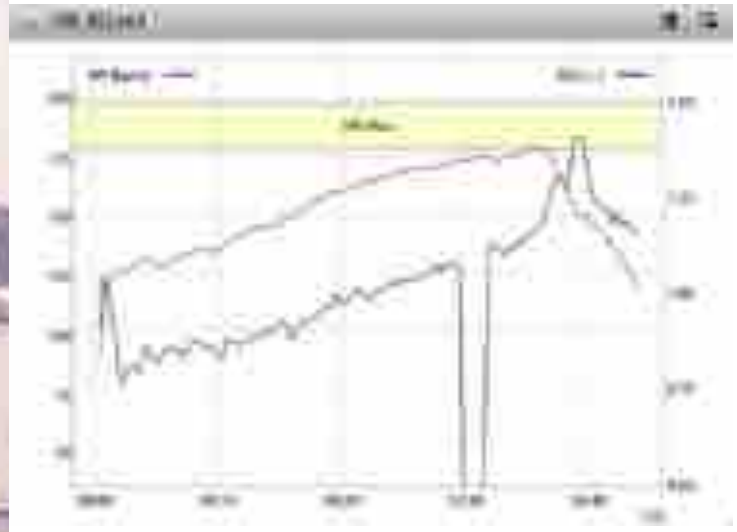
9. Evaluate the periodization training process
对阶段训练进行评估

ENDURANCE耐力测试

VO2 max 最大摄氧量

谢亚东 **VO2 max 50 ml/kg/ min** 50摩尔/公斤/分钟
VO2 max rel. 4882 ml/min摩尔/分钟





Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE案例介绍

9. Evaluate the periodization training process
对阶段训练进行评估

ENDURANCE耐力测试

TEST COOPER 12

谢亚东 **Test Cooper 12´**
3170 m 3170米

VO2 max 59 ml/kg/ min
最大摄氧量为 59摩尔/公斤/分钟

Contact: felipellanes@gmail.com

PRACTICAL EXAMPL案例介绍

9. Evaluate the periodization training process
对阶段训练进行评估

CHINA JUDO ASSOCIATION

中国柔道协会体能大比武

PHYSICAL TESTS

虽然谢亚东获得了总成绩第二名，
我们还是将谢亚东的成绩与-90公斤
各单项的最好成绩进行对比分析。

	Bench press (kg)	Half squat (kg)	Tire flip (s)	Reverse sled drag (s)	3000 m	Climber 2 (steps)	Climber 4 (steps)	Rowing 1000 m (s)	Rowing 2000 m (s)
U65	115	160	21"7	11"87	641.21	146	282	03:59.4	07:31.0
U66	135	160	17"4	10"49	637.57	146	272	03:30.4	07:19.0
U73	140	165	20"21	10"34	603	155	283	03:27.0	07:16.0
U81	145	190	23"29	12"10	649.14	151	284	03:16.0	06:53.0
U90	175	200	21"03	13"87	641.77	156	298	03:11.0	06:58.0
U100	160	200	20"18	14"12	707	153	253	03:09.0	06:45.0
100	170	210	26"26	13"06	869.99	130	256	03:20.9	06:56.0

Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE

9. Evaluate the periodization training process
对阶段训练进行评估

CHINA JUDO ASSOCIATION

PHYSICAL TESTS

-90公斤			
代表队	姓名	总分	排名
国家队	布和毕力格	65	1
上海	谢亚东	57	2
天津	韩淇	48	3
江苏	万国秋	36	4
江苏	申一杰	32	5
上海	周祎歆	26	6
国家队	王学文	25	7
山东	赵忠禹	24	8

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PRACTICAL EXAMPLE

9. Evaluate the periodization training process
对阶段训练进行评估

CHINA JUDO ASSOCIATION 中国柔道协会体能大比武

PHYSICAL TESTS

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PRACTICAL EXAMPLE

9. Evaluate the periodization training process
对阶段训练进行评估

CHINA JUDO ASSOCIATION

中国柔道协会体能大比武

PHYSICAL TESTS

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PRACTICAL EXAMPLE

9. Evaluate the periodization training process
对阶段训练进行评估

CHINA JUDO ASSOCIATION 中国柔道协会体能大比武

PHYSICAL TESTS

代表队	姓名	[illegible]	排名
上海	[illegible]	156	1
上海	[illegible]	148	2
天津	[illegible]	142	3
国家队	[illegible]	140	4
甘肃	[illegible]	123	5
山东	[illegible]	123	5
甘肃	[illegible]	120	6
山东	[illegible]	118	7
江苏	[illegible]	113	8

代表队	姓名	[illegible]	排名
国家队	[illegible]	298	1
天津	[illegible]	266	2
上海	[illegible]	240	3
上海	[illegible]	237	4
江苏	[illegible]	232	5
江苏	万国柱	227	6
国家队	王学文	215	7
山东	[illegible]	204	8

代表队	姓名	[illegible]	排名
国家队	[illegible]	[illegible]	1
上海	[illegible]	[illegible]	2
天津	[illegible]	[illegible]	3
江苏	[illegible]	[illegible]	4
[illegible]	[illegible]	[illegible]	5
甘肃	[illegible]	[illegible]	5
江苏	[illegible]	[illegible]	6
山西队	[illegible]	[illegible]	7
山东	[illegible]	[illegible]	8
山东	[illegible]	[illegible]	9

代表队	姓名	[illegible]	排名
天津	[illegible]	[illegible]	1
[illegible]	[illegible]	[illegible]	2
国家队	[illegible]	[illegible]	3
[illegible]	[illegible]	[illegible]	4
[illegible]	[illegible]	[illegible]	5
[illegible]	[illegible]	[illegible]	6
[illegible]	[illegible]	[illegible]	7
国家队	[illegible]	[illegible]	8




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PRACTICAL EXAMPLE案例介绍

9. Evaluate the periodization training process
对阶段训练进行评估

BLOOD ANALYSIS血液分析

Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE案例介绍

10. Readjustment重新调整训练计划

After the **results of the different tests**, any **injury** or any **change in the competition calendar** maybe we need to adjust our training plan according the current situation.

在不同测试的结果出来后，任何伤病或比赛日程上的任何变化都可能需要我们根据目前的情况调整我们的训练计划。

Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE案例介绍

10. Readjustment重新调整训练计划

由于疫情原因我们无法外出参加训练营，少年赛、青年赛和锦标赛都推迟了。因此，我们调整了训练计划，在4月23日、5月15日组织了队内教学赛，并在6月8日-13日赴南京实战训练，模拟比赛。

TEAM COMPETITION (23 April)

INDIVIDUAL COMPETITION (15 May)

TRAINING CAMP (Nanjing, 8-13 June)

Contact: felipellanes@gmail.com

PRACTICAL EXAMPLE案例介绍

11.Follow the training plan继续严格执行训练计划

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PRACTICAL EXAMPLE案例介绍

12. Final evaluation最终评估

Next week will organize a staff meeting to check the feedback about this period.

四个月的周期训练计划随着去江苏队对抗实战一周，模拟比赛强度的训练结束而全部完成。下周我们将组织一次团队会议，对这四个月的训练进行评估，并与运动员开展1对1面对面反馈。

Things to improve
Problems and possible solutions for next period

查找需要改进的地方和可能的解决方案，为下一阶段训练夯实基础。

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PRACTICAL EXAMPLE案例介绍

Create your athlete´s profile创建运动员的个人数据档案

为不同的体能能力评估创建一个带有评分表的图表。
你可以使用队伍内的数据或使用评分制，并将科学论文的数据作为参照。

Create a chart with a scoring scale for the evaluation of different capacities. You can use data from your training group and use percentiles or use data from scientific papers.

		最大摄氧量 VO2 MAX	专项抓握耐力 SPECIFIC GRIP ENDURANCE	下肢最大力量 MAX STRENGTH (lower body)	上肢最大力量 MAX STRENGTH (upper	下爆发力（弹跳） POWER (abalakov jump)	最大抓把力量 MAXIM GRIP STRENGTH	体脂率 % BODY FAT
[illegible]		7	9	8	6	7	9	7
EXCELLENT	10	72.25	70	150	200	65	70	9
	9	68	63	140	190	60	65	10
VERY GOOD	8	63.75	60	130	180	55	60	11
	7	59.5	57	120	170	50	55	12
GOOD	6	55.25	54	110	160	45	50	13
	5	51	50	100	150	40	45	14
MEDIUM	4	46.75	40	90	140	35	40	15
	3	42.5	30	80	130	30	35	16
LOW	2	38.25	20	70	120	25	30	17
	1	34	15	60	110	20	25	18
[illegible]	0	29.75	10	50	100	15	20	19

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PRACTICAL EXAMPLE案例介绍

Create your athlete´s profile创建你的运动员个人数据档案

谢亚东的个人数据档案

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OTHER IMPORTANT ASPECTS其他重要方面

Theoretical training理论训练

- The rules, sports periodization, physiological adaptations or nutrition are some of aspects that athletes must know.
- 比赛规则、训练周期安排、生理适应、营养、反兴奋剂都是运动员必须了解的几个方面。教练员要组织运动员开展理论学习，首先理解训练计划，然后相信训练计划，认真执行训练计划。

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OTHER IMPORTANT ASPECTS其他重要方面

Rapid weight loss快速减重

	TEAM COMPETITION	INDIVIDUAL COMPETITION	
	Weigh in	Weigh in	Random Weigh in (+5%)
	22 April 2020, 17.30 h	12 May 2020, 17.30 h	13 May 2020, 08.30 h
Ran Yajing 任雅静	51	50	52,5
Zhang Min 张敏	57	56	58,8
Ma Feiyu 马菲宇	60	58	60,9
Feng Doudou 冯多多	60	58	60,9
Yang Yiying 仰一颖	59	58	60,9
LiXueying 李雪莹	64	62	65,1
Pujiani 浦佳妮	67	66	69,3
Wang Danni 王丹妮	75	74	77,7
Xu Fengyi 徐凤逸	70	68	71,4
SunHan 孙涵	78	78	81,9
Wang Guopeng 王郭朋	62	61	64,05
Jiang Junjie 姜俊杰	69	68	71,4
Cheng Yi fan 陈一帆	69	68	71,4
Zhao Junxiang 赵君祥	75	74	77,7
Wang Shangjun 王上钧	75	74	77,7
Wu Zedong 吴泽东	76	75	78,75
WangXin 王鑫	77	76	79,8
ZhangZhiyuan 张致远	83	82	86,1
Xiaradong 夏冬东	93	92	96,6
ZhouYixin 周祎欣	93	92	96,6
Yang Yijin 杨毅瑾	103	102	107,1
LiPincheng 李品正	105	103	108,15
Qiu Ye xin 邱业鑫			
Feiziqun 费梓君			

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OTHER IMPORTANT ASPECTS其他重要方面

Rehydratation/比赛日的补水建议

Advices for competition day

上图为比赛日当天的饮食补充建议

尿液颜色

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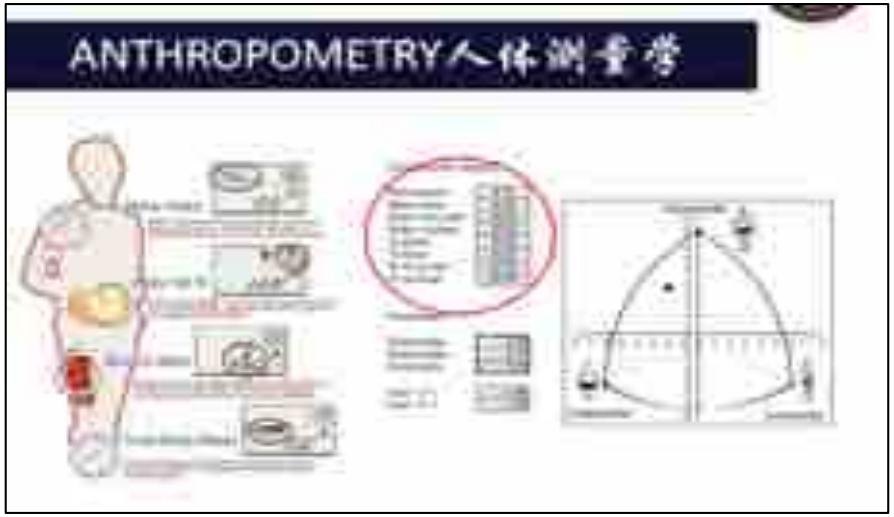
OTHER IMPORTANT ASPECTS其他重要方面

Theoretical training理论训练



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