PROPUESTA DE SMALL-SIDED GAMES (SSG) PARA DEPORTES INDOOR: BALONCESTO

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- Entrenadora baloncesto de equipos junior (5-16 años).
- Fisioterapeuta del Deporte

OBJETIVOS

Porque necesitamos SSG en baloncesto?

Efectos agudos

Efectos crónicos

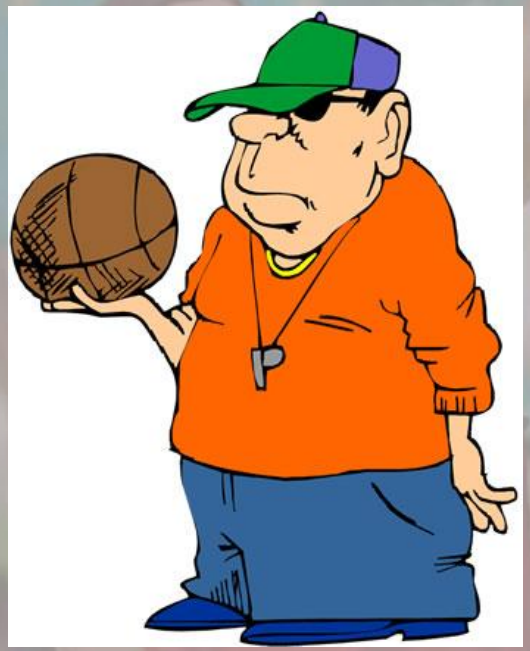
1) PORQUE NECESITAMOS SSG?

Factors of sports performance

Marathon runner	physical	technical	taktical	psychol.
Basketball player	physical	technical	taktical	psychol.
Gymnast	physical	technical	taktical	psychol.

100% of sports performance

Como entrenar las habilidades físicas?



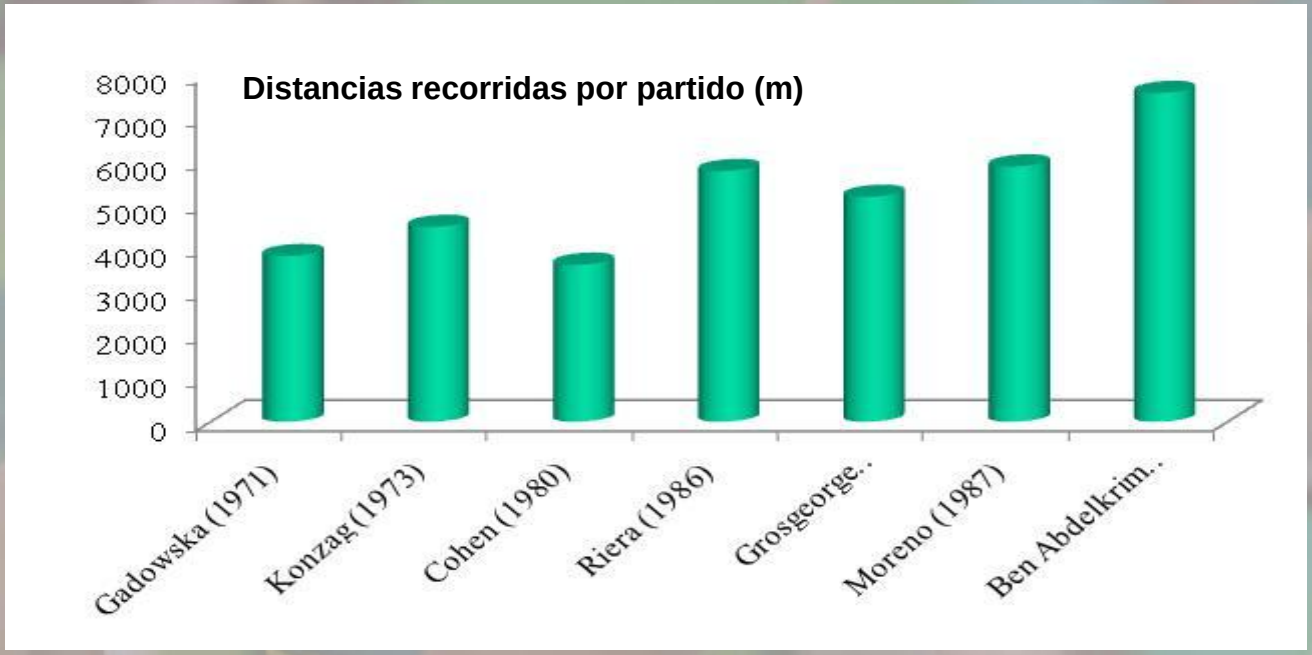
OBJETIVOS

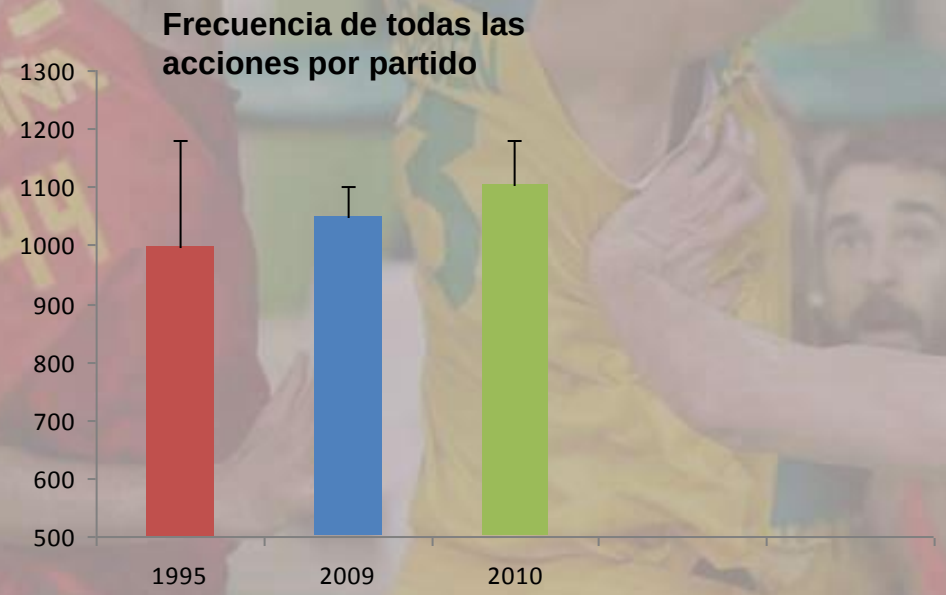
Porque necesitamos SSG en baloncesto?

Efectos agudos

Efectos cronicos

Características de un partido





Cambio de acción cada 2-2.8 sg

(McInnes et al., J Sports Sci 1995; Ben Abdelkrim et al., 2007, 2010).

Acciones específicas:

44 saltos
55 sprints
97 carreras rápidas
113 carreras moderadas
276 acciones de recuperación
175 desplazamientos laterales (ritmo lento)
197 desplazamientos laterales (ritmo medio)
94 desplazamientos laterales (ritmo rápido)

(McInnes et al., J Sports Sci 1995; Ben Abdelkrim et al., 2007, 2010).

$VO_{2máx}$: 50-60 $ml.kg^{-1}.min^{-1}$

Concentración de lactato: 4-7 $mmol.L^{-1}$

Matthew and Delextrat, 2009; Montgomery et al., 2010; Ben Abdelkrim et al., 2007, 2010).

Ratio trabajo : descanso

- Ratio medio: 1: 3.6 (ben Abdelkrim et al., 2010)

- Una acción (1-6 s) a intensidad alta, 22 s descanso o acción a intensidad baja (Hoffman and Maresh, 2000; ben Abdelkrim et al., 2010).

Entrenamiento: Sistema Anaeróbico Aláctico (ATP-PCr)

PERO:

- 19% de las acciones con una densidad de 1:1 (Calleja y Terrados, 2008; ben Abdelkrim et al., 2010)

- No tiempo para rellenar las reservas de PCr, entonces se utiliza el sistema anaeróbico láctico.

Entrenamiento: Sistema Anaeróbico lático (ATP-PCr) y sistema aeróbico para mejorar la recuperación

2) EFECTOS CRONICOS

Effects of two different short-term training programs on the physical and technical abilities of adolescent basketball players

Gregory C. Bogdanis [b,*], Vaghelis Ziagos [a], Michalis Anastasiadis [a], Maria Maridaki [b]

Journal of Science and Medicine in Sport (2007) 10, 79–88

Table 1 The mean percentage contribution (per week) of the components of each session to the total session duration

SSG

SSG+ atletismo

	Week 1		Week 2		Week 3		Week 4		Mean	
	SP	MX	SP	MX	SP	MX	SP	MX	SP	MX
Warm-up	18	21.1	18.2	15.4	17.6	16.2	17	17.5	17.7 ± 0.3	17.6 ± 1.3
Fundamentals	70	43.9	37.4	29.4	21.2	15.7	18.1	12.8	36.7 ± 11.9	25.5 ± 7.1
Individual work	0.0	0.0	34	26.4	43.8	32.4	21.3	16.6	24.8 ± 9.5	18.9 ± 7.1
Off.-def. coop.	0.0	0.0	0.0	0.0	0.0	0.0	34.9	26.4	8.7 ± 8.7	6.6 ± 6.6
Team work	6.5	7	5.6	3.3	12.5	10.4	4.6	4.5	7.3 ± 1.8	6.3 ± 1.6
Cool-down	5.5	5.8	4.8	3.6	4.9	4	4.1	3.1	4.8 ± 0.3	4.1 ± 0.6
Circuit training	–	22.2	–	21.9	–	21.3	–	19.1	–	21.1 ± 0.7
Total	100	100	100	100	100	100	100	100	100	100

SP: specialized; MX: mixed training group; Off.-def. coop.: offensive/defensive co-operations between players.

Table 2 Maximal oxygen uptake (VO_{2max}), oxygen uptake the first (VT1) and second ventilatory threshold (VT2), maximal heart rate (HR_{max}) and heart rate at VT1 (HR_{VT1}) and VT2 (HR_{VT2}), before (PRE) and after (POST) training

	SP		MX		C	
	PRE	POST	PRE	POST	PRE	POST
VO_{2max} (ml kg^{-1} min^{-1})	52.3 ± 1.4	54.7 ± 0.7*	52.5 ± 1.3	54.9 ± 1.0*	49.8 ± 3.3	49.4 ± 3.4
VT1 (ml kg^{-1} min^{-1})	33.9 ± 1.1	35.0 ± 1.1	37.0 ± 1.7	38.1 ± 1.6	33.1 ± 2.2	33.2 ± 2.8
VT2 (ml kg^{-1} min^{-1})	43.5 ± 1.2	46.3 ± 0.9	45.6 ± 1.1	46.8 ± 0.9	42.4 ± 2.6	42.1 ± 2.9
HR_{max} (b min^{-1})	201 ± 1	200 ± 1	199 ± 1	200 ± 1	200 ± 2	200 ± 3
HR_{VT1} (b min^{-1})	163 ± 2	162 ± 2	167 ± 2	166 ± 2	164 ± 3	167 ± 3
HR_{VT2} (b min^{-1})	184 ± 2	183 ± 2	186 ± 1	185 ± 2	184 ± 3	184 ± 4

Values are mean ± S.E.

* $p < 0.05$ from the corresponding pre training value.

Incremento similar en la potencia media y maxima durante el test de Wingate después de SP (21±5%) and MX (15±6%).

La resistencia (endurance) de los músculos del tronco se incrementa equitativamente (SP: 23±4%, MX:25±5%).

PERO la resistencia de los brazos se incrementa más en MX (50±11%) que SP (11±14%, $p < 0.05$).

- Características técnicas: efectos crónicos

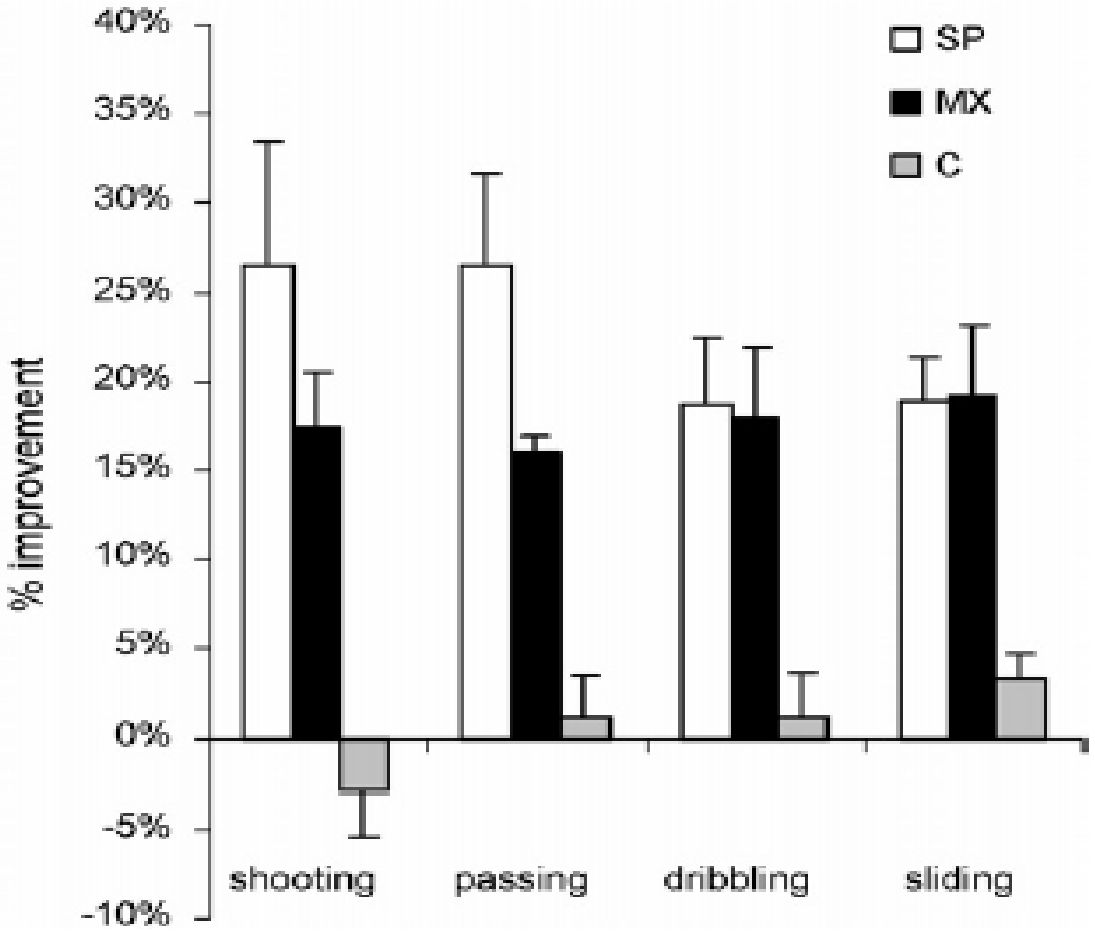


Figure 4 Percent improvement in technical abilities of the control group (C) and the specialized (SP) and mixed training (MX) groups following 4 weeks of training. Values are mean ± S.E.

Small-Sided Game Training Improves Aerobic Capacity and Technical Skills in Basketball Players

Delextrat A, Martinez A. Small-Sided Game Training Improves… Int J Sports Med 2014; 35: 385–391

Authors: **A. Delextrat**[1], **A. Martinez**[2]

Affiliations: [1] Sport and Health Sciences Department, Oxford Brookes University, Oxford, United Kingdom
[2] ASPTT Toulon Basketball Club, Toulon, France

Table 1 Description of the 6-weeks training programmes for the small-sided game (SSG) group and the high-intensity intermittent running group (HIT).

	HIT	SSG
subjects characteristics	N = 9 (4 guards, 3 forwards, 2 centres) Age: 16.0 ± 0.6 years Height: 181 ± 7 cm Body mass: 73.5 ± 6.9 kg Basketball training experience: 6.8 ± 3.1 years	N = 9 (4 guards, 3 forwards, 2 centres) Age: 16.3 ± 0.8 years Height: 182 ± 9 cm Body mass: 74.2 ± 6.3 kg Basketball training experience: 7.2 ± 2.9 years
week 1	2 × (8 min of 15″-15″ at 95 % of V_{IFT})	2 × (2 × 3 min45)
week 2	2 × (9 min of 15″-15″ at 95 % of V_{IFT})	2 × (2 × 4 min15)
week 3	2 × (10 min of 15″-15″ at 95 % of V_{IFT})	2 × (3 × 3 min)
week 4	2 × (11 min 30 s of 15″-15″ at 95 % of V_{IFT})	2 × (3 × 3 min30)
week 5	2 × (13 min of 15″-15″ at 95 % of V_{IFT})	2 × (3 × 4 min)
week 6	2 × (9 min of 15″-15″ at 95 % of V_{IFT})	2 × (2 × 4 min15)

15″-15″: 15 s of high-intensity running at a speed corresponding to 95 % of the speed attained in the last stage fully completed during the 30–15 intermittent fitness test (V_{IFT})

Cualidades físicas

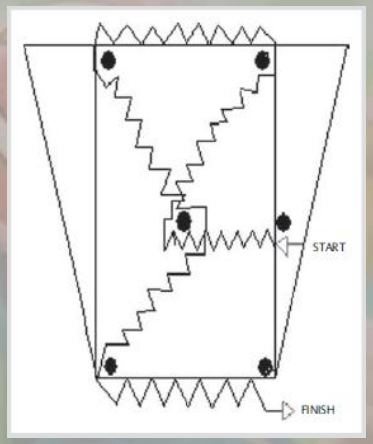
Capacidad aeróbica: 30-15

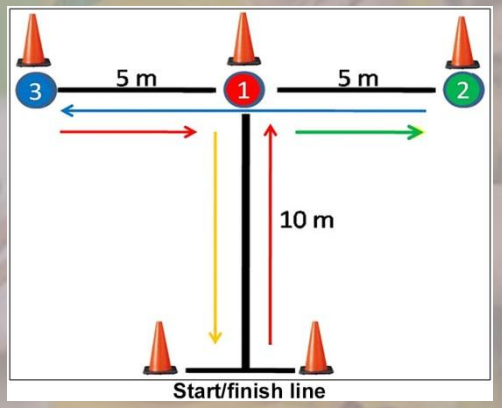
Capacidad de repetir sprints (RSA): 6x(10m+10m), salir cada 20 s.

Agilidad ofensiva (slalom dribble) y defensiva (T-test)

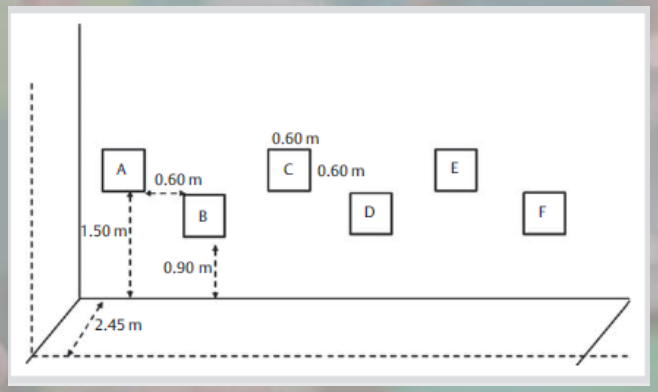
Potencia de los brazos (2-handed chest pass)

Potencia de las piernas (5JT)

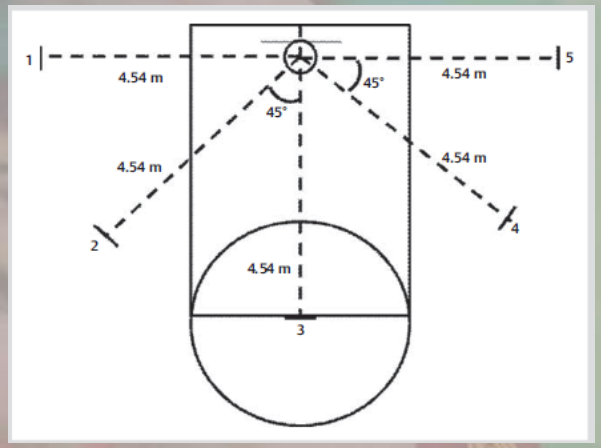




Cualidades técnicas



Pases (30 s)



Tiros (60 sg)

	Time	HIT	SSG	P values and Effect sizes (eta squared η^2)
V_{IFT} ($km.h^{-1}$)	PRE	17.4±0.7	17.2±1.7	**Time: P=0.028, η^2=0.395**
				Group: P=0.814, η^2=0.006
	POST	18.0±1.0	17.9±1.5	Interaction: P=0.765, η^2=0.006
total time RSA (s)	PRE	27.1±1.9	27.9±2.4	Time: P=0.300, η^2=0.070
				Group: P=0.230, η^2=0.108
	POST	27.0±1.8	28.7±1.9	Interaction: P=0.146, η^2=0.144
ideal time RSA (s)	PRE	26.1±1.8	26.3±1.9	Time: P=0.667, η^2=0.013
				Group: P=0.490, η^2=0.037
	POST	25.8±1.7	26.9±1.9	Interaction: P=0.208, η^2=0.117
performance decrement RSA (%)	PRE	3.75±1.99	5.83±2.53	Time: P=0.399, η^2=0.055
				Group: P=0.162, η^2=0.145
	POST	4.35±2.51	6.33±4.26	Interaction: P=0.938, η^2=0.001
defensive agility (s)	PRE	10.32±1.16	10.36±0.72	Time: P=0.558, η^2=0.018
				Group: P=0.432, η^2=0.045
	POST	10.60±0.97	9.89±0.40	**Interaction: P=0.037, η^2=0.270**
offensive agility (s)	PRE	8.33±0.34	8.48±0.50	**Time: P=0.001, η^2=0.700**
				Group: P=0.895, η^2=0.001
	POST	7.97±0.42	7.87±0.24	Interaction: P=0.131, η^2=0.047
shooting skills (points)	PRE	29.4±3.4	29.7±3.7	Time: P=0.151, η^2=0.086
				Group: P=0.195, η^2=0.117
	POST	28.7±4.0	31.9±3.6	**Interaction:P=0.006, η^2=0.394**
passing skills (points)	PRE	97.7±9.0	95.7±4.2	**Time: P=0.004, η^2=0.452**
				Group: P=0.541, η^2=0.027
	POST	107.3±6.9	102.3±5.4	Interaction: P=0.504, η^2=0.018
upper body power (m)	PRE	5.91±1.83	6.10±1.34	Time: P=0.223, η^2=0.080
				Group: P=0.532, η^2=0.029
	POST	5.79±1.49	6.58±1.29	**Interaction:P=0.048, η^2=0.231**
lower body power (m)	PRE	10.7±1.3	10.7±1.0	Time: P=0.094, η^2=0.179
				Group: P=0.734, η^2=0.009
	POST	10.9±1.0	11.2±0.8	Interaction: P=0.401, η^2=0.042

SSG = HIT

SSG > HIT

SSG = HIT

SSG > HIT

SSG = HIT

SSG > HIT

OBJETIVOS

Porque necesitamos SSG en baloncesto?

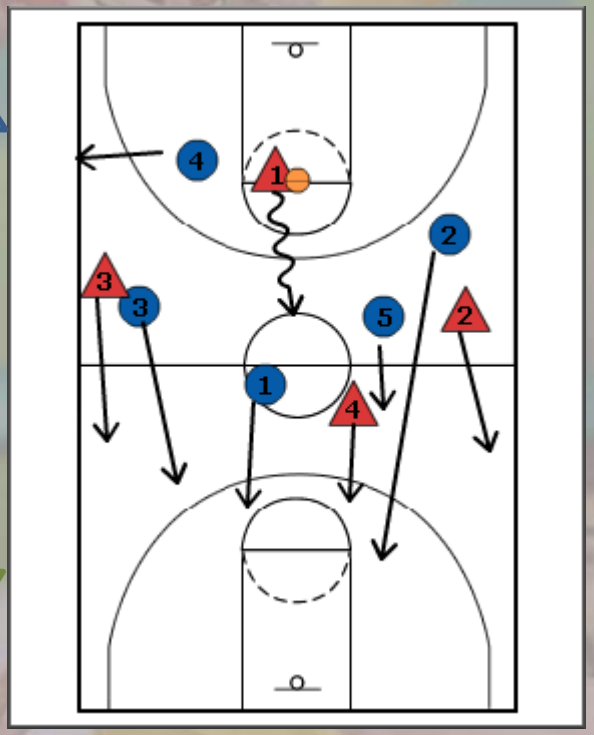
Efectos a termino corto

Efectos a termino largo

3) EFECTOS AGUDOS

Número de jugadores

Espacio de juego



Reglas de juego

Ratio trabajo/ descanso

3-A) Efecto del número de jugadores

Parámetros Fisiológicos

5 vs 5

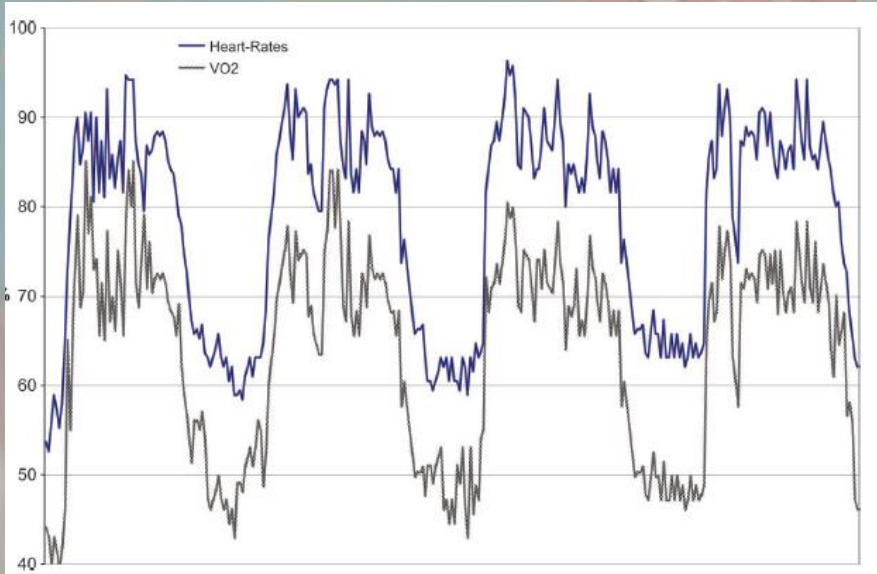


Figure 2. Profile of heart-rates and $\dot{V}O_2$ of a player (A.L.) performing a 5v5 drill.

2 vs 2

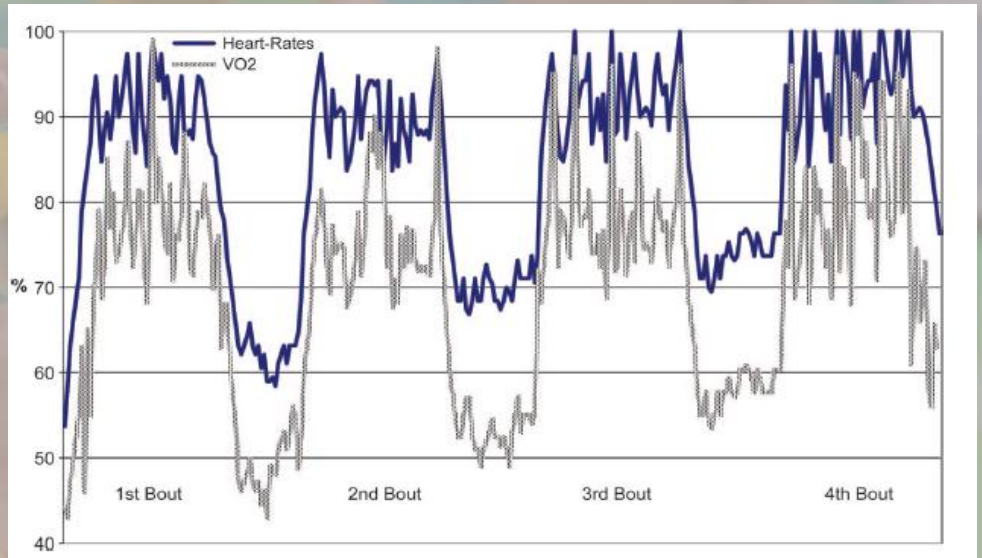


Figure 3. Profile of heart-rates and $\dot{V}O_2$ of a player (A.L.) performing a 2v2 drill.

Castagna et al, J Sports Sci 2011

3-A)Efecto del número de jugadores

Parámetros Fisiológicos

		Heart Rate					
		Period	Bout	Active Recovery	% maximum per period	% maximum per bout	% maximum in active recovery
3X3	Effort 1	176,0±6,9	173,4	152,2	88,4	87,1	76,5
	Effort 2	175,9±9,1			88,4		
	Effort 3	170,4±7,7			85,6		
	Effort 4	171,1±9,6			86,0		
4X4	Effort 1	165,9±17,7	164,7	144,7	83,3	82,7	72,7
	Effort 2	167,1±17,6			83,9		
	Effort 3	165,9±15,1			83,3		
	Effort 4	160,1±14,2			80,4		

Sampaio et al, Revista de Psicología del Deporte, 2009.

3-A)Efecto del numero de jugadores

Parámetros Fisiológicos

	2vs2	4vs4	*P*-value
%HRmax (total drill duration)	87.1 ± 2.9	84.5 ± 4.0	$P < 0.001$
%HRmax (actual drill duration)	89.9 ± 3.1	87.3 ± 4.2	$P < 0.001$
Edwards' TL	54.1 ± 3.5	51.0 ± 5.1	$P < 0.001$
RPE	8.8 ± 0.9	7.7 ± 1.1	$P < 0.001$

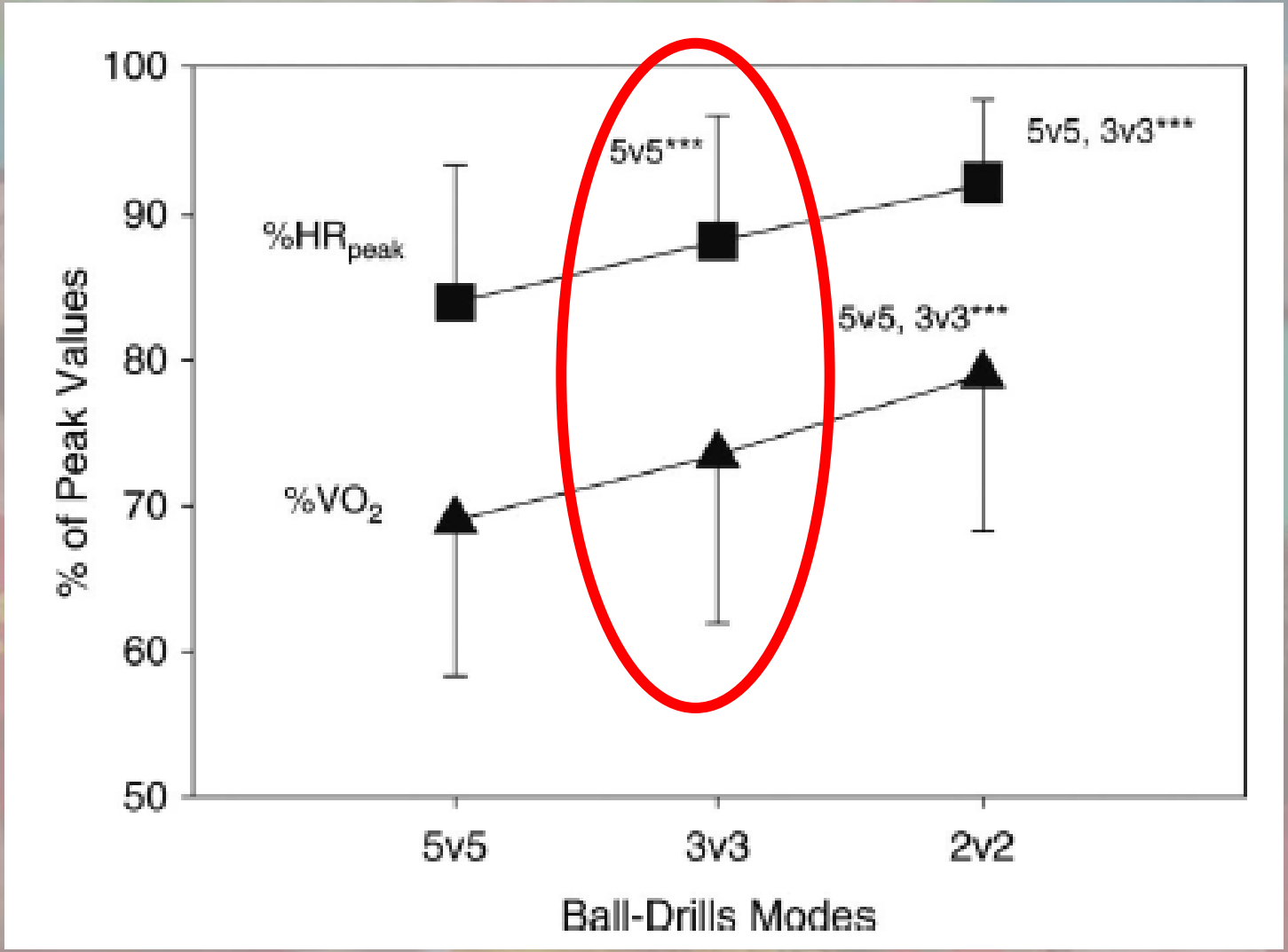
Conte et al, J Sports Sci 2016

	Player number (4v4; 2v2)	
Physiological demand	Mean ±SD	Effect size ±CL
RPE	6 ± 2; 8 ± 2	0.95 ±0.26* moderate
Peak heart rate as % of max heart rate	92 ± 3; 92 ± 3	0.28 ±0.29* small
Mean heart rate as % of max heart rate	83 ± 5; 86 ± 4	0.53 ±0.26* moderate

Klusemann et al, J Sports Sci 2012

3-A)Efecto del número de jugadores

Consumo de Oxígeno (VO_2)



Castagna et al, J Sports Sci 2011

3-A) Efecto del número de jugadores

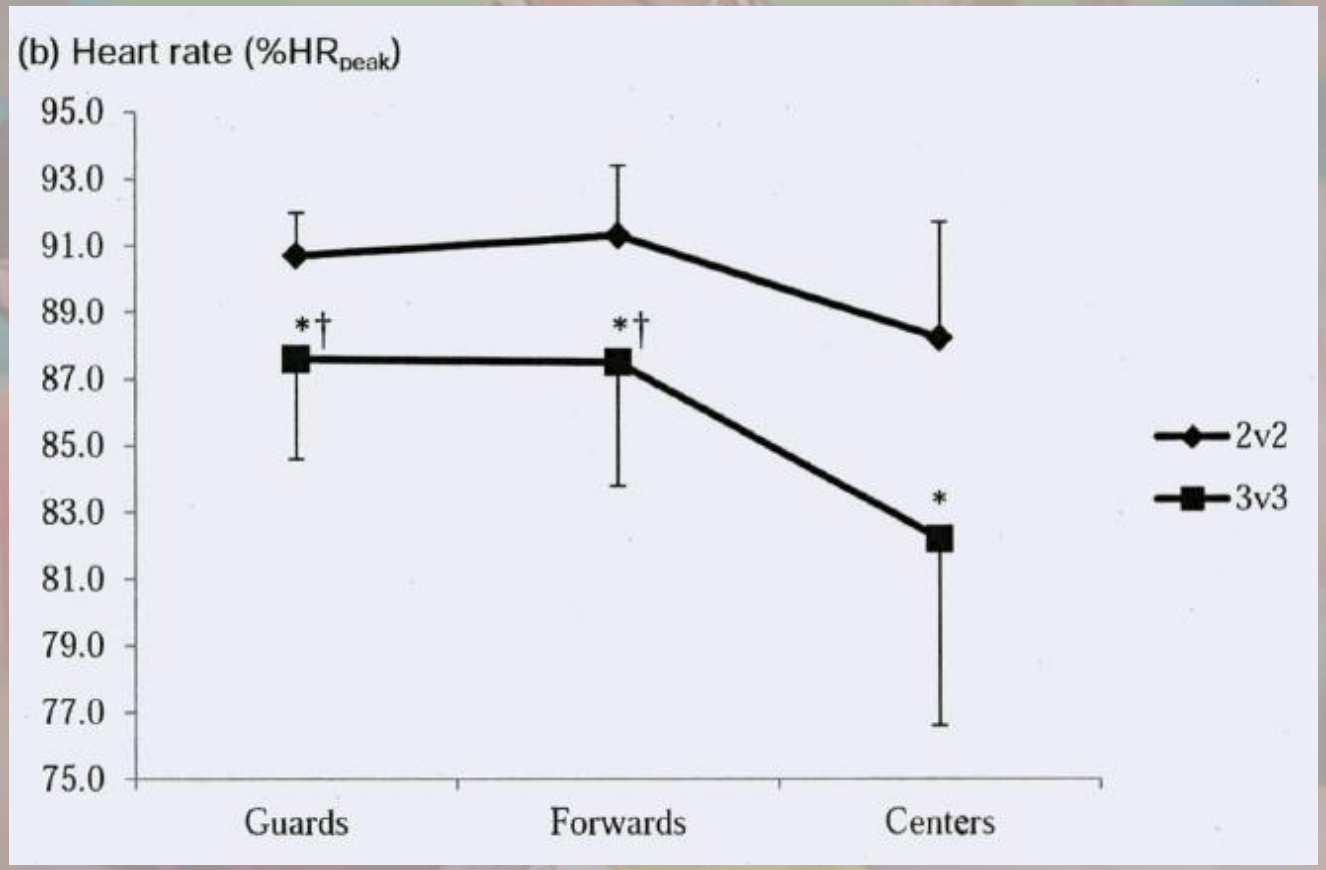
Acciones Específicas

Physical demand (count)	Player number (4v4; 2v2)	
	mean ± SD	Effect size ±CL
Total Movements	378 ± 51; 382 ± 52	0.07 ±0.18 trivial
Stand/Walk	125 ± 23; 120 ± 18	−0.20 ±0.17* small
Jog	66 ± 12; 63 ± 11	−0.28 ±0.25* small
Run	35 ± 10; 35 ± 10	0.06 ±0.33 unclear
Sprint	11 ± 5; 15 ± 5	0.73 ±0.26* moderate
Low shuffle	42 ± 10; 39 ± 12	−0.39 ±0.28* small
Med shuffle	75 ± 17; 72 ± 19	−0.19 ±0.24 trivial
High shuffle	8 ± 4; 13 ± 6	0.97 ±0.28* moderate
Jump	16 ± 6; 26 ± 5	1.75 ±0.29* large

Klusemann et al, J Sports Sci 2012

3-A) Efecto del número de jugadores

Posición de Juego



2v2>3v3 por cada posición de juego

Pivots<bases y aleros en el 3vs3,pero pivots =bases en el 2v2

Delextrat and Kraiem, Int J Sports Physiol Perf, 2013

3-A) Efecto del número de jugadores

Acciones técnicas

	2 c 2	4 c 4	
Dribble	23.7 ± 6.1	14.4 ± 7.2	$P < 0.001$
Steal	2.5 ± 1.9	2.1 ± 1.6	$P = 0.354$
Rebound	7.0 ± 3.3	3.3 ± 2.1	$P < 0.001$
Turnover	2.9 ± 2.0	2.5 ± 1.9	$P = 0.282$
Total Pass	21.9 ± 5.4	17.7 ± 6.7	$P = 0.005$
Correct pass	19.8 ± 5.3	15.9 ± 6.2	$P = 0.005$
Wrong pass	2.1 ± 1.7	1.9 ± 1.4	$P = 0.381$
% Correct pass	90.1 ± 8.1	89.2 ± 6.8	$P = 0.523$
Total Shot	16.0 ± 5.3	6.8 ± 3.0	$P < 0.001$
Scored shot	6.8 ± 3.7	2.8 ± 2.1	$P < 0.001$
Missed shot	9.1 ± 3.3	4.0 ± 1.9	$P < 0.001$
% Made shot	40.8 ± 15.8	37.4 ± 23.1	$P = 0.273$

Conte et al, J Sports Sci 2016

A-Efecto del número de jugadores

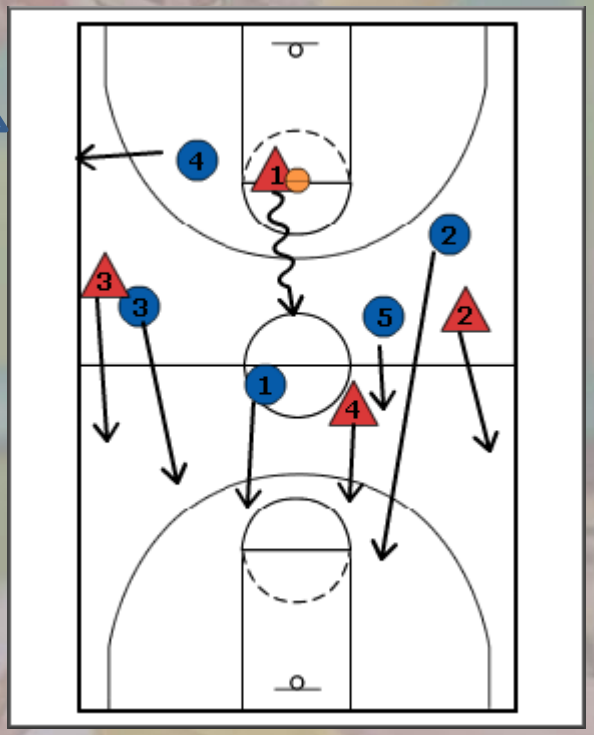
Acciones técnicas

Technical Element (per player per game)	Player number (4v4; 2v2)	
	mean ± SD	Effect size ±CL
Total Elements	43 ± 10; 68 ± 12	2.28 ±0.30* very large
Dribble	12 ± 5; 20 ± 6	1.18 ±0.27* moderate
Pass	15 ± 5; 19 ± 5	0.94 ±0.31* moderate
Close range shot	3 ± 2; 8 ± 3	1.71 ±0.37* large
Mid-range jump shot	2 ± 2; 4 ± 3	0.44 ±0.33* small
3-point shot	2 ± 2; 3 ± 3	0.37 ±0.36* small
Rebound	5 ± 3; 8 ± 3	1.18 ±0.38* moderate
Ball Screen	3 ± 3; 5 ± 4	1.17 ±0.44* moderate

Klusemann et al, J Sports Sci 2012

3) Efectos agudos

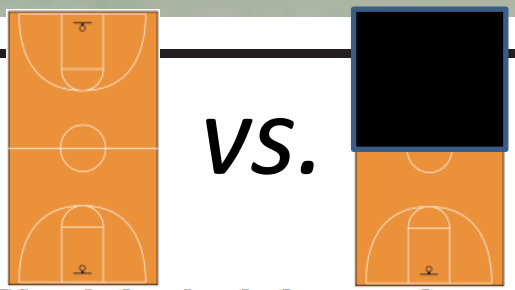
Número de jugadores



Espacio de juego

3-B-Efecto del espacio de juego

Parámetros Fisiológicos



Physiological demand	Court size (Half; Full) Mean ± SD	Effect size ±CL
RPE	6 ± 2; 7 ± 2	0.62 ±0.22* moderate
Peak heart rate as % of max heart rate	92 ± 3; 92 ± 3	0.06 ±0.26 trivial
Mean heart rate as % of max heart rate	84 ± 5; 85 ± 4	0.18 ±0.21 trivial
Mean % time spent in Zone 4 (80–89% HR max)	46 ± 27; 56 ± 19	0.18 ±0.33 unclear
Mean % time spent in Zone 5 (90–100% HR max)	20 ± 27; 25 ± 27	0.18 ±0.40 unclear

Klusemann et al, J Sports Sci 2012

3-B)Efecto del espacio de juego

Parámetros Fisiológicos

TABLE 1. Heart rate and %HRmax responses of female high school basketball players for half-court and full-court 3-a-side games, respectively.*†

	3-a-Side games			
	Half-court		Full-court	
	Mean ± *SD*†	CV (%)	Mean ± *SD*	CV (%)
HR	161.8 ± 6.2	3.8	180.9 ± 5.7	3.2
%HRmax	76.3 ± 2.5	3.3	85.6 ± 3.1	3.6

*CV = coefficient of variation; HR = heart rate; %HRmax = percentage of maximum heart rate.

†$p < 0.05$.

Atli et al, J Strength Cond Res 2013

3-B)Efecto del espacio de juego

Parámetros Fisiológicos

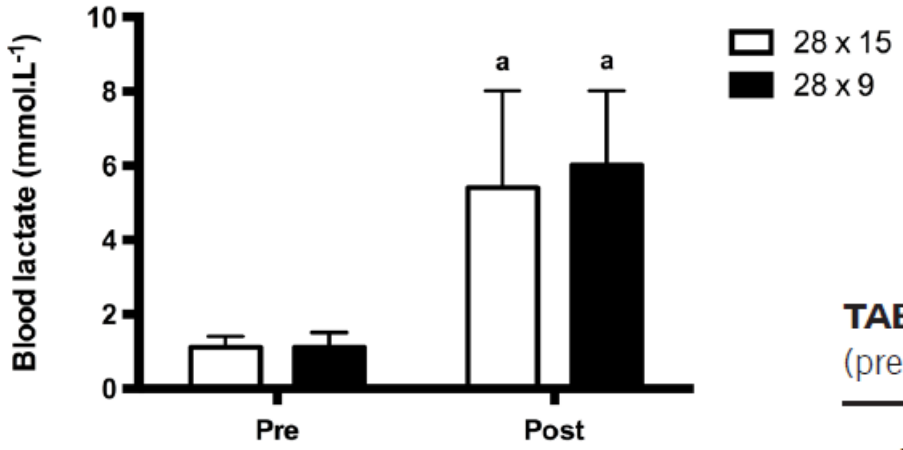


FIG. 1. Lactate concentration response.
a – significant difference to pre ($p<0.00$); Pre – before SSG;
– immediately after SSG; SSG28x15 – small-sided game, 28
m court area; SSG28x9 – small-sided game, 28x9 m court ar

Marcelino et al, Biol. Sport 2016

TABLE 1. Repeated-sprint ability (RSA) test performance before (pre) and after (post) SSG (mean ± SD).

RSA test measures		SSG 28x15	SSG 28x9
Best time (s)	Pre	3.20 ± 0.10	3.18 ± 0.07
	Post	3.24 ±0.14	3.18 ± 0.15
	ES	0.33 (small)	0.03 (trivial)
Mean time (s)	Pre	3.36 ± 0.10	3.37 ± 0.07
	Post	3.43 ± 0.20	3.39 ± 0.25
	ES	0.40 (small)	0.04 (trivial)
Performance decrement (%)	Pre	5.31 ± 3.90	6.15 ± 3.31
	Post	6.01 ± 3.98	6.47 ± 3.03
	ES	0.12 (trivial)	0.06 (trivial)

Note: RSA – repeated-sprint ability; SSG – small-sided game; ES – effect size.

3-B)Efecto del espacio de juego

Acciones específicas

Physical demand (count)	Court size (Half; Full)	
	mean ± SD	Effect size ±CL
Total Movements	407 ± 30; 340 ± 35	−1.73 ±0.24* large
Stand/Walk	137 ± 14; 103 ± 11	−2.62 ±0.24* very large
Jog	63 ± 13; 68 ± 10	0.50 ±0.30* moderate
Run	34 ± 9; 37 ± 11	0.15 ±0.30 unclear
Sprint	13 ± 6; 13 ± 6	0.08 ±0.24 trivial
Low shuffle	45 ± 9; 32 ± 9	−1.53 ±0.34* large
Med shuffle	81 ± 13; 62 ± 20	−1.06 ±0.34* moderate
High shuffle	11 ± 5; 7 ± 3	−0.86 ±0.29* moderate
Jump	23 ± 8; 18 ± 6	−0.53 ±0.18* small

Klusemann et al, J Sports Sci 2012

B-Efecto del espacio de juego

Acciones Técnicas

Technical Element (per player per game)	Court size (Half; Full)	
	mean ± SD	Effect size ±CL
Total Elements	57 ± 18; 46 ± 13	−0.64 ±0.17* moderate
Dribble	16 ± 8; 13 ± 6	−0.32 ±0.18* small
Pass	18 ± 6; 14 ± 4	−0.75 ±0.23* moderate
Close range shot	6 ± 4; 5 ± 3	−0.32 ±0.26* small
Mid-range jump shot	3 ± 3; 2 ± 2	−0.53 ±0.38* small
3-point shot	3 ± 3; 2 ± 2	−0.30 ±0.29* small
Rebound	7 ± 2; 5 ± 3	−0.58 ±0.25* small
Ball Screen	4 ± 4; 4 ± 5	−0.24 ±0.34 unclear

Klusemann et al, J Sports Sci 2012

3-B) Efecto del espacio de juego

Acciones Técnicas

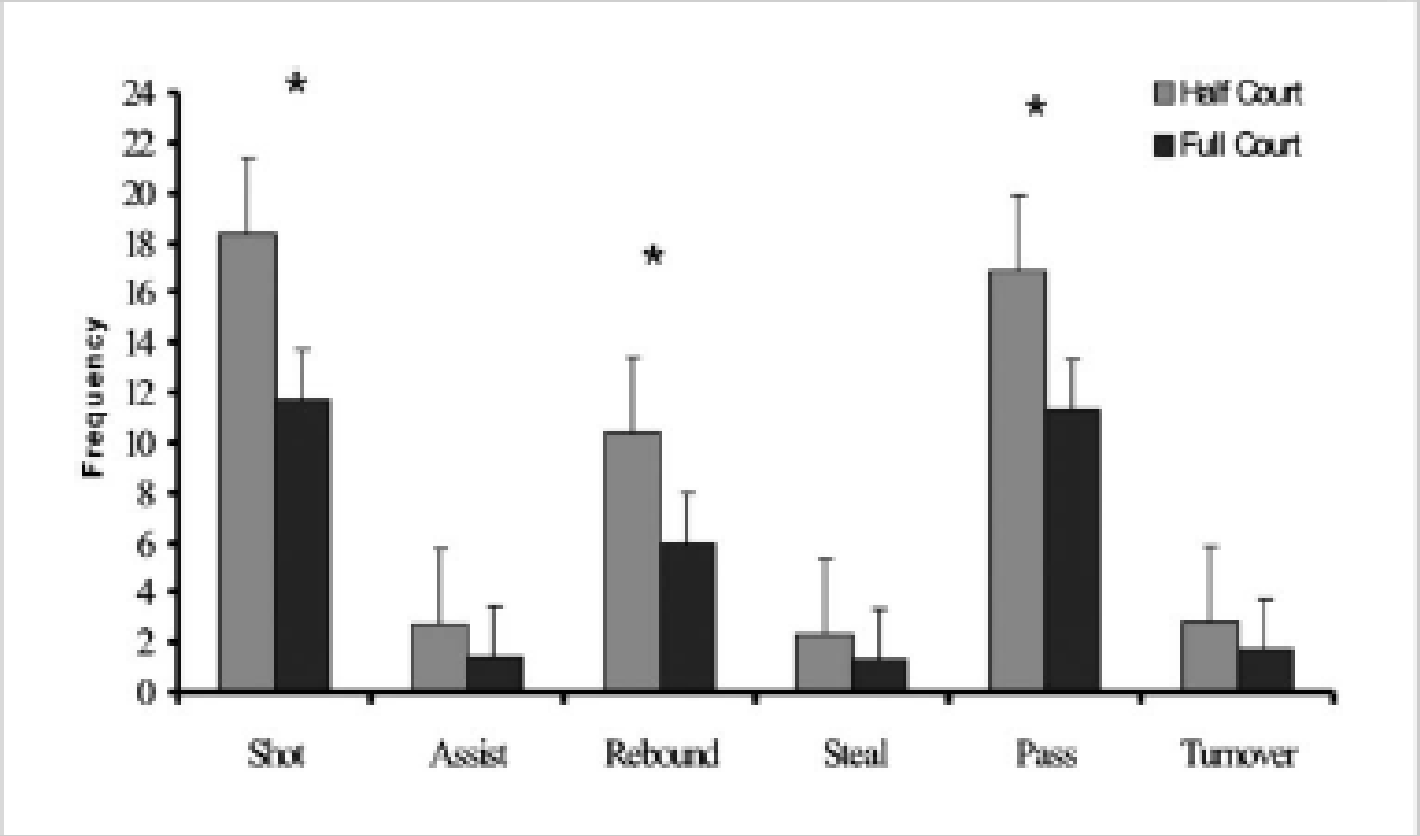
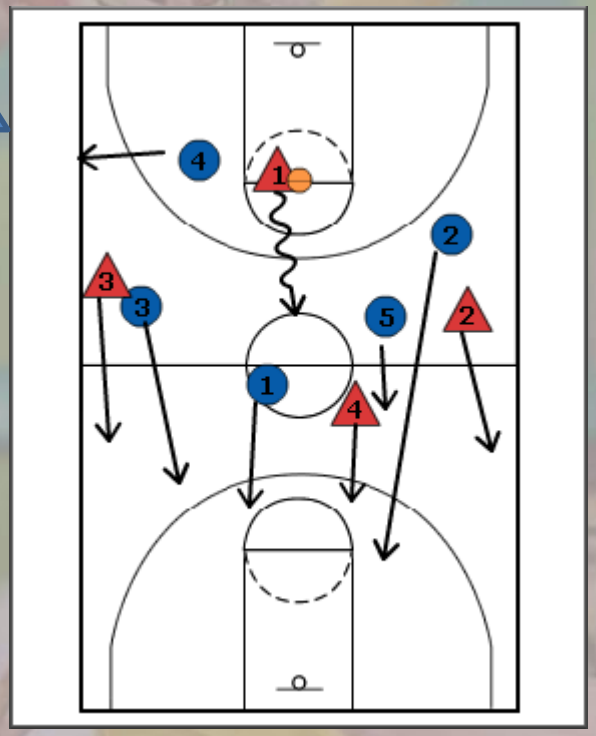


Figure 1. Comparison of female high school basketball players' frequencies of technical actions for half-court and full-court 3-a-side games.

Atli et al, J Strength Cond Res 2013

3) Efectos agudos

Número de jugadores



Espacio de juego

Ratio trabajo/ descanso

3-C) Efecto del ratio trabajo/descanso

Parámetros Fisiológicos

	Work-to-rest ratio (2x5 min; 4x2.5 min)	
Physiological demand	Mean ± SD	Effect size ±CL
RPE	7 ± 2; 7 ± 2	−0.50 ±0.23* small
Peak heart rate as % of max heart rate	92 ± 3; 92 ± 2	−0.17 ±0.22 trivial
Mean heart rate as % of max heart rate	86 ± 4; 83 ± 3	−0.83 ±0.19* moderate
Mean % time spent in Zone 4 (80–89% HR max)	53 ± 26; 58 ± 9	0.43 ±0.29* small
Mean % time spent in Zone 5 (90–100% HR max)	33 ± 32; 14 ± 13	−0.49 ±0.32* small

Klusemann et al, J Sports Sci 2012

3-C) Efecto del ratio trabajo/descanso

Parámetros Fisiológicos

Physical demand (count)	Work-to-rest ratio (2x5 min; 4x2.5 min)	
	mean ± SD	Effect size ±CL
Total Movements	365 ± 45; 393 ± 49	0.57 ±0.15* small
Stand/Walk	119 ± 20; 124 ± 20	0.25 ±0.13* small
Jog	65 ± 11; 66 ± 11	0.08 ±0.22 trivial
Run	33 ± 8; 38 ± 8	0.49 ±0.17* small
Sprint	12 ± 5; 14 ± 6	0.47 ±0.28* small
Low shuffle	39 ± 12; 40 ± 12	−0.10 ±0.21 trivial
Med shuffle	69 ± 17; 77 ± 18	0.40 ±0.22* small
High shuffle	9 ± 6; 12 ± 6	0.55 ±0.26* small
Jump	20 ± 7; 22 ± 7	0.27 ±0.14* small

Klusemann et al, J Sports Sci 2012

3-C) Efecto del ratio trabajo/descanso

Acciones Técnicas

Technical Element (per player per game)	Work-to-rest ratio (2x5 min; 4x2.5 min)	
	mean ± SD	Effect size ±CL
Total Elements	51 ± 17; 55 ± 18	0.22 ±0.13* small
Dribble	14 ± 7; 15 ± 8	0.18 ±0.15 trivial
Pass	16 ± 5; 17 ± 6	0.17 ±0.16 trivial
Close range shot	6 ± 3; 6 ± 4	−0.07 ±0.24 trivial
Mid-range jump shot	3 ± 2; 3 ± 3	0.17 ±0.27 trivial
3-point shot	2 ± 2; 2 ± 3	0.11 ±0.23 trivial
Rebound	6 ± 3; 7 ± 3	0.23 ±0.27 trivial
Ball Screen	3 ± 4; 4 ± 4	−0.15 ±0.30 unclear

Klusemann et al, J Sports Sci 2012

3-C) Efecto del ratio trabajo/descanso

Parámetros Fisiológicos /tecnicos

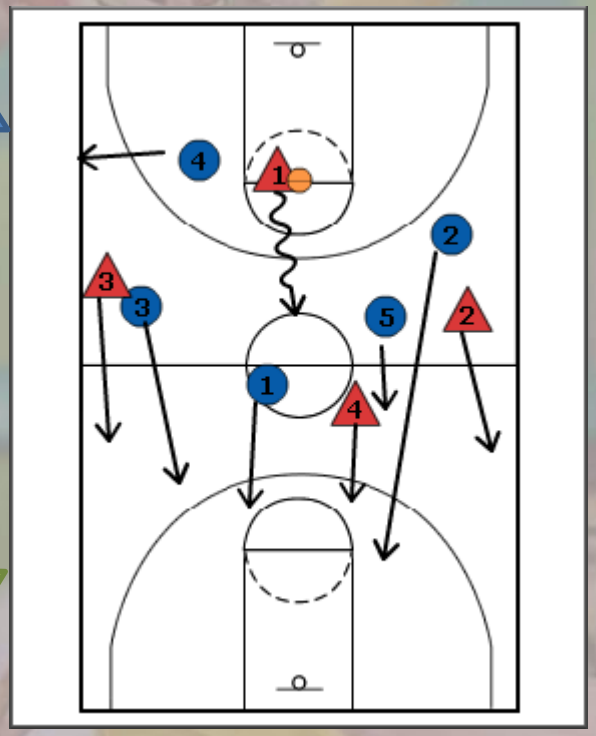
	BDcont	BDint	*P*-value
%HRmax (total drill duration)	87.4 ± 2.8	84.2 ± 3.9	$P < 0.001$
%HRmax (actual drill duration)	90.8 ± 2.7	86.5 ± 3.7	$P < 0.001$
Edwards' TL	55.1 ± 2.8	50.0 ± 4.6	$P < 0.001$
RPE	8.5 ± 1.0	8.0 ± 1.3	$P = 0.006$
Dribble	17.4 ± 8.1	20.7 ± 7.9	$P < 0.001$
Steal	2.5 ± 2.1	2.2 ± 1.4	$P = 0.423$
Rebound	5.0 ± 3.5	5.4 ± 3.1	$P = 0.490$
Turnover	2.5 ± 1.9	2.9 ± 2.0	$P = 0.302$
Total Pass	18.7 ± 6.4	21.0 ± 6.3	$P = 0.101$
Correct pass	17.0 ± 6.2	18.7 ± 5.9	$P = 0.208$
Wrong pass	1.7 ± 1.3	2.3 ± 1.8	$P = 0.092$
% Correct pass	90.3 ± 6.9	89.0 ± 8.0	$P = 0.406$
Total Shot	10.8 ± 6.7	12.9 ± 5.8	$P = 0.074$
Scored shot	4.6 ± 3.8	5.0 ± 3.5	$P = 0.336$
Missed shot	6.2 ± 3.6	7.0 ± 3.8	$P = 0.170$
% Made shot	38.7 ± 20.1	39.5 ± 19.5	$P = 0.827$

Conte et al, J Sports Sci 2016 (Cont: 3x4min/Int:3x(7min de1min-1min)

3) Efectos agudos

Número de jugadores

Espacio de juego



Reglas de juego

?

Densidad trabajo/descanso

TAKE HOME MESSAGE

- El entrenador tiene muchas posibilidades para adaptar los SSG
- Se puede cambiar el número de jugadores, el espacio de juego y el ratio trabajo: pausa
- Se puede entrenar la capacidad aeróbica o anaeróbica durante SSG
- Necesitamos mas investigaciones en baloncesto!!!!!