TRAINING FOR ROWING, THEORY AND PRACTICE

TALLINN 30.11.2019

MANY WAYS TO WIN

BUT WE CAN NOT SELECT THEM ALL

- JUST ONE

LEARN IT, USE IT, DEVELOP IT, BELIEVE IN IT!

MARGINAL GAINS

WHERE WE CAN FIND EVEN VERY SMALL IMPROVEMENTS

- LIFE MANAGEMENT
- NUTRITION
- EQUIPMENT
- TECHNIQUE
- PHYSIOLOGY
- INJURY PREVENTION
- PHYSIOTHERAPY
- DENTAL CARE

ROWING TECHNIQUE

- EFFICIENT
- SIMPLE
- HORIZONTAL
- RELAXED, BEND FROM THE HIP
- SYNCRONIZED, GRIP
- DO NOT DESTROY THE WATER!
- RELEASE CLEAN

FROM SABAUDIA 2019

M4X LINZ

RIGGING TARGET TO MAKE ROWING RELAXED

- EASY GOING TO CATCH, STRETCHER ANGLE 38-42 (45) DEG, SHIMANO, STRETCHER HEIGHT
- BLADE HOLDS WELL DURING THE DRIVE
- 159-160 SPAN (158-161)
- 285-290 SCULL
- INBOARD 87,5CM-89CM (OVERLAP 16CM (+-1CM)
- HEIGHT, DEPENDS ON SIZE OF ROWER (15-20), LEFT 1-1,5CM HIGHER
- INDIVIDUAL RIGGING

EXAMPLE OF INDIVIDUAL RIGGING

BOW 183CM
STROKE 200CM
SPAN 159 & 162
OAR 288 & 289
INB 88 & 89

Classification of Training Exercises

	Aerobic Capacity (Endurance Cap.=AEC)		Anaerobic Capacity (=ANC)		Aerobic Power (=AEP)		Anaerobic Power (=ANP)	
Type of swimmer	S	L	S	L	(S) M	L	S	M (L)
Volume*	Long	Very High	Moderate	Low**	110-90% Comp. distance		110-90% Comp. distance	
Interval	Short (100-300m)	Long (300-800m)	Very Short (25-75m)		Short progresses to Long (50-100m) => (100-300m)		Short (25-100m)	
Intensity *	Extensive alternated with intensive and short intervals in the same or next training session		Nearly all-out	All-out	Race Pace or somewhat faster		All-out	
Rest	Short (40-20s)	(20-10s)	Long (>= 2x swim time) (35s-1:30min)		Short progress. to Very Short (45-30s) => (10-20s)		Short (10-20s)	
	8x100m R=20s 1, 3 fast	6x500m R=20s 1, 2 (50fast/50slow)	6x(3x50m) R=1:20min P/3	3x(2x25m,1x50m) all-out after 25m R=30s after 50m R=90s	5x75m R=45s to 3x125m R=15s	12x100m R=30s to 5x300m R=20s	Brokens / Comp.Test 4x50m R=10s 25+50+25+50m R=5-10s	

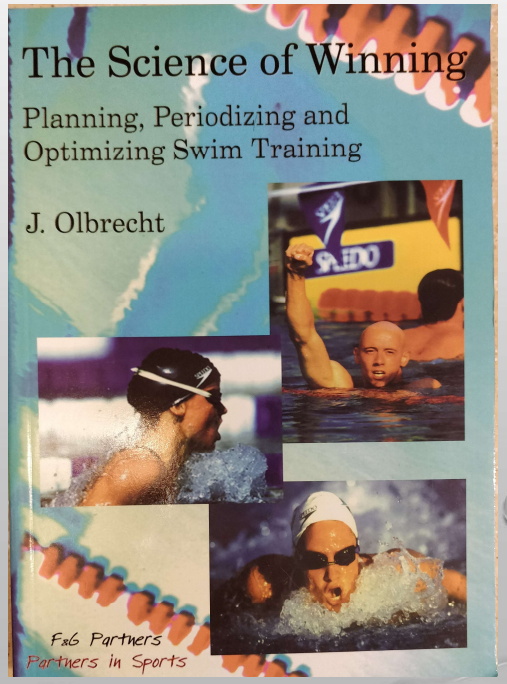
*depends on conditioning level

Sprint and technique are not in this classification

** has been changed vs previous publication, see text

Adapted: J. Olbrecht:Schwimmen, Lernen und Optimieren 1994

TRAINING BASED ON SCIENCE BY JAN OLBRECHT, ADAPTED TO ROWING



Week	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Event	EST	6k			ITA			6k			2K						AL				CAMP	ITA		EST		CAMP		ITA	WC			WC			Q		EUR				CAMP			OG	
					27.10.-17.11						Erg						FA				9.2.-1.3.			EST		15.3.-13.4.			ITA			ITA			LU		P				Place?			TOKYO	
Period	1	R			2			E			3					4	25.1.			5			C		6			S		7	V			L	8	O				9				
		A						R			PA					ski							H					A			A			U		Z								
		C						G			RN					9-23.1. Imatra							A					B			R			Z		O								
		E									U												M					A			E			E		Z								
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1	3x30		3x20	3x10		3x30		3x20		3x10		3x30		3x20	3x10		3x30		3x10		3x30		3x20	3x10		3x20			3x10	3x20			3x10	3x10	3x10	3x20	3x10		3x20	3x10		3x20		3x10	
14,9091	16	16	15	12	19	20	18	15	14	12	18	17	15	14	12	21	16	18	12	20	19	18	15	13	17	16	15	13	12	16	12	11	12	10	17	16	15	14	12	17	15	11	12	8
Training Units, note that ANC exercises are inside other trainings.																																				?								
Reg	3	3	3	2	2	3	3	5	5	2	4	4	4	4	2	4	4	4	2	4	4	2	2	3	4	4	4	4	5	4	4	4	4	4	4	4	4	4	4	4	4	4	3	6
Long End	6	4	6	3	4	5	4	3	2	2	3	3	3	3	2	3	3	3	2	3	3	2	2	2	4	4	4	2	4	4	1	5	3	1	3	3	3	4	2	3	4	4	1	
END F	0	0	0	0	1	1	1	0	1	0	1	1	1	1	0	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	0	0	0	0
LaSS	1	1	1	1	2	1	1	1	2	1	2	1	2	1	1	1	1	2	1	2	2	2	1	1	2	1	1	1	1	1	1	0	1	1	1	1	2	1	0	1	1	1	1	1
ANC	2	1	1	1	1	2	1	1	1	1	2	1	2	1	1	2	1	1	1	2	1	2	1	1	1	1	1	1	0	1	0	0	0	0	1	1	1		0	1	1	1	1	
AEP					1		1			1		1		1		1	0	1	0	1	0	1	1			1	1		1	1		1	1			1		1	2	1	1	1	1	
Race		2						1									1							1				3			3			3		0							2	2
Power	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	2	1	1	1	1	2	2	2	2	2	2	2	2	1	0
Tot Units	12	12	11	8	12	12	12	12	12	8	12	12	12	12	7	12	12	13	7	13	12	9	8	9	12	12	12	11	12	12	10	11	10	10	11	12	12	12	10	12	12	12	9	9

	28.10-3.11.		week 44			4.-10.11		Week 45		
	Main session	Time	Inside	Secondary session	Time	Main session	Time	Inside	Secondary session	Time
Mo	Warmup	40	incl 6x40"/1`24 high res.			Warmup	40	incl 6x40"/1`24 high res.		
	Strength	60	3x30, legs: Dyno 22 spm	Regeneration/Long Endurance	70	Strength	60	3x30, legs with Dyno	Regeneration/Long Endurance	70
			Benchpull, Core, 3x20					Benchpull, Core, 3x20		
	Cooldown	20	Bike or erg			Cooldown	20	Bike or erg		
Tu										
	Row	100	Long endurance	Long endurance	70	Row	100	Long endurance	Long endurance	70
	incl. Contrast		2x(40"/60"+60"/80"+60")5´			incl. Contrast		2x(40"/60"+60"/80"+60")5´		
We	Warmup	20		Regeneration		Warmup	20			
	ANC	1	3x20"/45"	Bike	90	ANC	1	3x20"/45"	Bike	120
	4x10`/2`	50	20-22-24-22-20			5x10`/2`	50	20-22-24-22-20		
	Cooldown	20				Cooldown	20			
Th										
						Long Endurance	90		Rest	
	Long endurance	100								
Fr	Warmup	40	incl 6x40"/1`24 high res.			Warmup	40	incl 6x40"/1`24 high res.		
									Regeneration/Long Endurance	70
	Strength	60	3x30, legs with Dyno	Regeneration/Long Endurance	70	Strength	60	3x30, legs with Dyno		
		60	Benchpull, Core, 3x20					Benchpull, Core, 3x20		
	Cooldown	20	Bike or erg			Cooldown	20	Bike or erg		
Sa	Warmup	20								
	Aerobic Power/VO2	30	3x8´/5`(LaSS+)	Regeneration/Long Endurance	100	Long Endurance	100		Bike or easy row or comb	120
	Cooldown	20	24-26-28-26			incl. Contrast		3x(40"/60"+60"/80"+60")5´	Can be longer when bike	
				Bike					Bike	
Su										
	Long Endurance	120		Rest		Long Endurance	120		Rest	

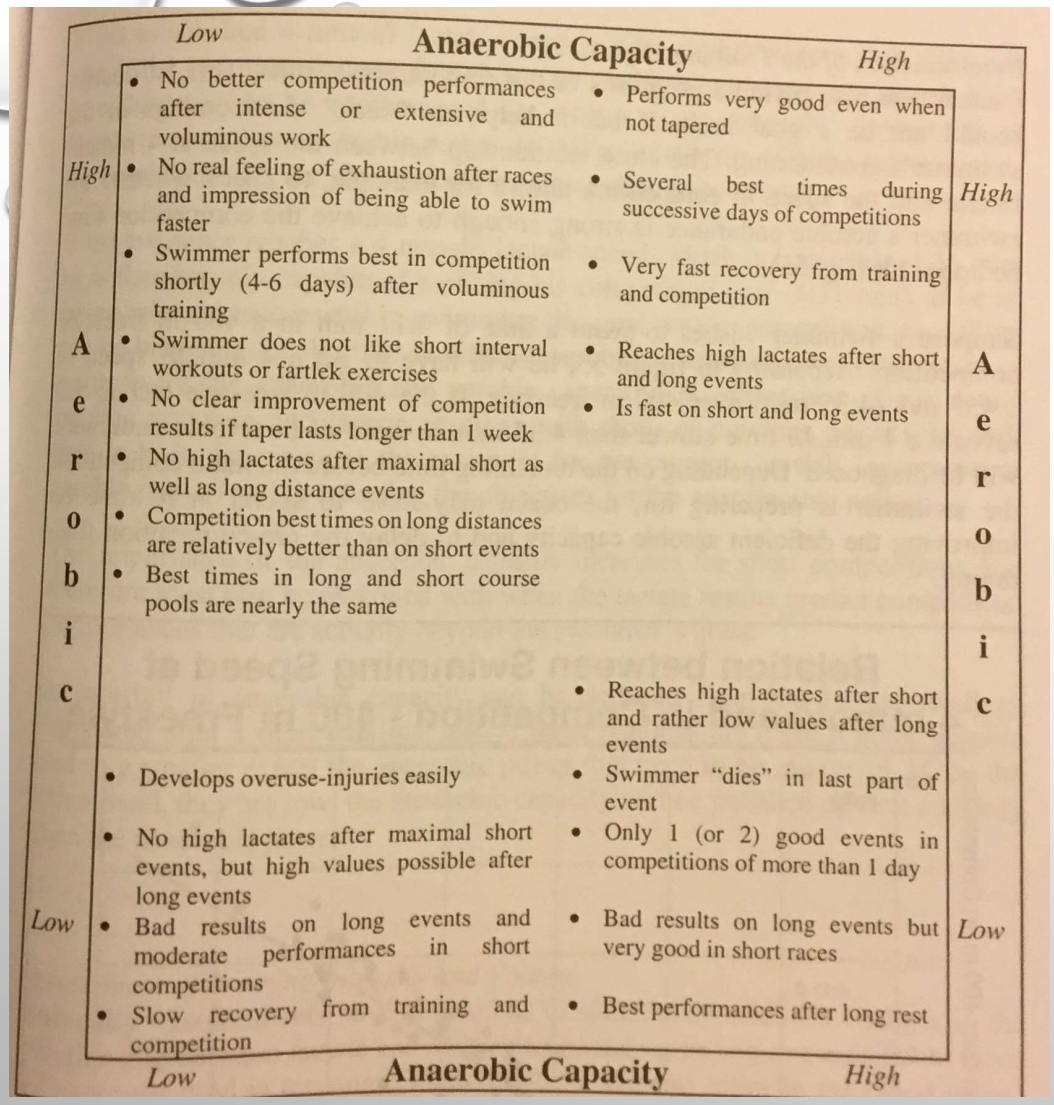
Sivu 1 Sivu 2

POLARIZED TRAINING

- WHAT DOES IT MEAN?
- QUANTITY
- QUALITY
- BALANCE
- SPEED

STRENGTH TRAINING

- HOW NECESSARY IT IS?
- WHY?
- WHEN?
- WHAT?
- TO WHOM?
- SPORTS SPECIFIC OR GYM?
- MUSCLE GROWTH?



Aerobic	Anaerobic Capacity: Low	Anaerobic Capacity: High
High	• No better competition performances after intense or extensive and voluminous work	• Performs very good even when not tapered
	• No real feeling of exhaustion after races and impression of being able to swim faster	• Several best times during successive days of competitions
	• Swimmer performs best in competition shortly (4-6 days) after voluminous training	• Very fast recovery from training and competition
	• Swimmer does not like short interval workouts or fartlek exercises	• Reaches high lactates after short and long events
	• No clear improvement of competition results if taper lasts longer than 1 week	• Is fast on short and long events
	• No high lactates after maximal short as well as long distance events	
	• Competition best times on long distances are relatively better than on short events	
	• Best times in long and short course pools are nearly the same	
		• Reaches high lactates after short and rather low values after long events
	• Develops overuse-injuries easily	• Swimmer "dies" in last part of event
	• No high lactates after maximal short events, but high values possible after long events	• Only 1 (or 2) good events in competitions of more than 1 day
Low	• Bad results on long events and moderate performances in short competitions	• Bad results on long events but very good in short races
	• Slow recovery from training and competition	• Best performances after long rest

TALENT, HOW ARE WE DIFFERENT?

Picture, Jan Olbrecht, Science of winning, p.135

POWER RELATED TO WEIGHT

HTTP://EODG.ATM.OX.AC.UK/USER/DUDHIA/ROWING/PHYSICS/WEIGHT.HTML

	Weight	2000m	W/KG	6000m			**2km korjattu**				**6km korjattu (23.11.2019)**		6k ennätys		W/KG
Allar	95	349,3	5,453	1136,9	0,981818	0,99694	**350,372**	05:50,4	0,981818	0,99694	**1140,389**	19:00,4	1130	18:50,0	4,407368
Tönu	103	346,7	5,223	1135,6	0,915254	0,98532	**351,8652**	05:51,9	0,915254	0,98532	**1152,519**	19:12,5	1124,9	18:44,9	4,131068
Johann	84	673	5,143	1179,1	1,090909	1,014637	**663,2914**	06:04,4	1,090909	1,014637	**1162,09**	19:22,1	1179,1	19:39,1	4,721429
Kaspar	95	353,5	5,368	1163,9	0,981818	0,99694	**354,5849**	05:54,6	0,981818	0,99694	**1167,472**	19:27,4	1146	19:06,0	4,229474
Juri-Mikk	91	363,5	5,132	1174,8	1,018868	1,003126	**362,3671**	06:04,6	1,018868	1,003126	**1171,138**	19:31,1	1174,8	19:34,8	4,098901
Sten-Erik	102	361,9	4,637	1165,9	0,923077	0,986722	**366,77**	06:06,8	0,923077	0,986722	**1181,589**	19:41,6	1162,4	19:22,4	3,795098
Andrei	97	354	5,196	1176,3	0,964286	0,993945	**356,1565**	05:56,2	0,964286	0,993945	**1183,466**	19:43,6	1136	18:56,0	4,248454
Kaur	95	357	5,168	1207,5	0,981818	0,99694	**358,0956**	05:58,1	0,981818	0,99694	**1211,206**	20:11,2	1167	19:27,0	4,010526
Hamish Bond	88	344	6,250		1,048544	1,007948	**341,2876**	05:41,3	1,048544	1,007948					
POLM4x	92,2	357,3			1,007463	1,001242	**356,8566**	05:56,9	1,007463	1,001242					