

WOLFGANG OLBRICH



ULTRA MARATHON TRAINING

TRAINING PLANS | MENTAL TRAINING
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Ultramarathon Training

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Wolfgang Olbrich

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And special thanks go to those whose technical contributions have enhanced and completed this book. I deliberately chose specialists who are active ultrarunners themselves, and I was lucky enough to gain the services of Dr. Hinze, one of Germany's top ultrarunners (3rd ranked German over 100 km in 2009) and President of the German Ultramarathon Foundation.

Dr. Stefan Hinze, born 1963, is President of the German Ultramarathon Foundation, a medical specialist in internal medicine and gastroenterology, and principal consultant at the Medical Clinic V of the Westfalz Klinikum GmbH. Dr. Hinze has been an active, elite level runner since 1990. In 2009, he was ranked third in the German 100 km ranking list and, in the same year, he finished in 10th place overall in the Spartathlon nonstop 152-mile race. His "weak point" is also his area of medical specialization, thus giving validity to his writings on the subject of "Disorders of the Gastrointestinal Tract in Endurance Running."



Holder of a PhD Natural Sciences, Olaf Hülsmann is a member of team of experts of the German Ultramarathon Foundation and German Athletics Association and visiting lecturer at the University of Munich on the subject of Sports Nutrition. While he was studying Nutritional Science and Sport, he participated in climbing and kayaking as well as the odd marathon, but he only took up ultrarunning, especially off-road, three years ago. Even before earning his degree in 2001, he was advising athletes. Since then he has dabbled in different sports such as marathon running, triathlon, weight training and ice hockey, and later also advanced training for coaches, physicians and pharmacists. After successfully finishing a 100-mile race in 2011, his next running goal is a 24-hour-race.



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Dr. Dietmar Göbel, medical specialist in orthopedics and trauma surgery, was an elite youth gymnast and has been running regularly for over 7 years, averaging around 2,500 miles per year. He favors natural trail running and has a marathon best time of 2:55:52 and a 100 km best time of 8:40:28. In 2010 and 2011, he successfully completed the Spartathlon Athens to Sparta nonstop race over 153 miles. He has been a sports physician since 1993 and has also studied neural therapy, chirotherapy, acupuncture and physiotherapy (www.drgoebel-germany.de).



AUTHOR



Wolfgang Olbrich was born in 1968 and is himself a passionate ultra distance runner. As of December 2011, he has completed more than 75 ultra distance races since running the Biel 100 km in 2001, as well as successfully finishing more than 50 marathons. These races have ranged from 50 km races, various multi-day races, to the Spartathlon (153 miles with a maximal time limit of 36 hours).

The author is a German Athletics Federation licensed high-performance running coach and looks after diverse ultramarathon running groups ranging from beginners to junior international level. He plans and leads German Ultramarathon Foundation (DUV) Performance Development training camps, to which up to 30 elite ultramarathon specialists are invited. He is also responsible for all sports and high-performance-related issues concerning the German Ultramarathon Foundation Championships in a voluntary capacity. In 2011, he was twice appointed team manager of the German Ultramarathon team at World Championships (World Ultratrail Championships in Ireland and World 100 km Championships in the Netherlands). One of his protégés, Peter Seifert, set a new German record over 50 km in March 2011 (2h52:26) and also won the German Championships over the same distance.

Furthermore, the author is also team manager of the German Ultramarathon Foundation Running team and is responsible for all training issues and organizing the various ultrarunning events (including a five-day multi-stage race, 300 km and 6.500 HM+, a 48-hour track race and the 73-mile nonstop Kölnpfad trail race around the city of Cologne, Germany). He is also Sports and Race Team Manager of the Nordrhein Athletics

Association, Kreis Köln (LVN-Kreis Köln) and administrator of running groups and walking at the Nordrhein Athletics Association.

INTRODUCTION

This book is intended to smooth the way for interested long distance runners to ultramarathon training. After the success of the first edition, published in Germany in April 2011, the third edition is already due for publication later this year, and I am proud and happy that the English version of this book is now available worldwide.

My intention is to provide information about the sport of ultramarathon running and make it accessible to all. This book has deliberately been written in colloquial language, avoiding the unnecessary use of technical terms and jargon. I hope that this book may inspire readers who have never run an ultramarathon to give one a try. Entry-level races of 50 km and 6 hours are perfectly suited for this, as they give an idea of the atmosphere of an ultramarathon, which is also very strongly influenced by the participating runners, who are quite different from the “typical” marathon runner and are often very friendly.

The book contains a number of training plans and tips for beginners to more ambitious runners. I have deliberately restricted the performance level and not included training advice for elite level runners, as in my opinion it is meaningless to give universal training advice at this level. Instead, a serious discussion between coach and athlete is essential to arrive at an effective training plan. Direct collaboration with an experienced coach is definitely recommended. Unfortunately, ultramarathon coaches are few and far between. You can find the contact details of qualified ultramarathon coaches on the websites of your country’s ultramarathon or track and field athletics association. Neither will you find very detailed explanations about the training advice and training forms, as I have assumed that athletes who are interested in ultrarunning already have a few years’ experience of running training and have some knowledge of basic training theory. However, some ideas and explanations were necessary for the sake of coherence.

I hope you enjoy the book!

Wolfgang Olbrich



1 WHAT IS AN ULTRAMARATHON?

There are many interpretations, but there is no fixed distance. The most commonly used definition is:

“An ultramarathon is any race that exceeds the length of a marathon (26.2 miles)”

This statement is not universally accepted though, as the marathon distance itself has only been officially ratified since 1921 by the IAAF at 42.195 km (26 miles 385 yards). Prior to this, differing distances were run, e.g., 40 km (24.85 miles) at the 1896 Olympic Games and 42.75 km (26.56 miles) at the 1920 Olympics.

It is often said that only races longer than 50 km can be considered true ultramarathons. Others say, for example, that a challenging mountain marathon, such as the Jungfrau or Zermatt Marathon, should also be classified as an ultramarathon due to its difficulty.

Others still say that only a race without rest breaks can be called an ultramarathon.

I personally judge my own races by the course length. So, if, for example, during a 6-hour race I cover more than the famous 26 miles 385 yards, I consider this to be an ultramarathon, irrespective of how many rest breaks I have had, as these breaks were in accordance with the race rules. It is like everything, there must be a constant value and the only constant and realistically measurable value is the course length.

I therefore agree with the above definition.





2 THE HISTORY OF THE ULTRAMARATHON

The history of ultramarathon running is not so easy to pin down either.

The first “Marathon” was run by Pheidippides in the year 490 BC, who, according to the writings of the historian Herodotus, had to run from Athens to Sparta in two days to seek help in the war against the Persians. Five hundred years later, Plutarch and Lucian of Samosata, with reference to this and to Heraclides Ponticus, formed the legend, according to which after the victory of the Athenians over the Persians on the Plain of Marathon, this same Pheidippides had run from there into the city, where he reportedly said: “We have won!” upon which he then collapsed to the ground and died.

So if we accept the description of Herodotus, the birth of the ultramarathon predates that of the marathon itself. In this case, if we accept the definition of the ultramarathon from the previous chapter, the definition of the marathon should be derived from that of the ultramarathon! But we don’t want to be that petty.

So, legend has it that Pheidippides ran from Athens to Sparta in less than two days, then back to the Plain of Marathon and from there to announce the victory of the Athenians over the numerically much stronger Persians then again back to Athens. All things considered, we are therefore talking about a running performance of about 311 miles, assuming that the distance from Athens to Sparta is 153 miles and that from Marathon to Athens, 25 miles.

For more than 25 years (and officially since 1983), an ultramarathon race has been held on the route from Athens to Sparta, which follows the historic route pretty closely. The race is the Spartathlon, of which more details are given later in this book, in the chapter “Selected Races.”

There are many reasons for running long distances. In the past, in hunter gatherer times, it was necessary for survival. Long distances had to be covered daily in the search for food or to escape from being eaten by animals.

In armies all over the world, it used to be common practice to use messengers or couriers, who had to run long distances in order to pass on important news or to ask other states for help.

At this point, I would like to try to give a little more historical background of the ultramarathon than can be found in such sources as Wikipedia.

Ultramarathon running can definitely be traced back to the historical military messengers. As well as the “errand” of Pheidippides, several similar messengers can be found in history, especially Greek history, of course, where we read about a certain Euchidas, who in the year 479 BC wanted to run from his home village to Delphi, covering a distance of about 113 miles in the process.

Philonides, a messenger of Alexander the Great, is said to have run from Sicyon to Elis in under a day in the year 325 BC.

Something resembling the first 24-hour races did not appear until the 16th or 17th centuries, although they were not in a competitive form as we know them today. Instead, they were exhibition runners, or professional runners, who wanted to use their running talents to gain fame and fortune. In June 1754, for example, John Cook from England was between £50 that he could run 100 miles in 24-hours. However, after 12 hours and 60 miles, he was forced to give up.

A real race between two people in the context of a 24-hour race took place in October 1806 in London, when Abraham Wood and Robert Barclay raced against each other. Wood had to run 20 miles more in order to win the race and a prize money of 600 guineas. During the event, Barclay had been supplied by another person with an opium-

containing drink, after which he fell hopelessly behind. Wood went on to win and to complete a distance of about 154 miles in 24-hours.

Subsequently, more and more running events, or rather exhibition running events, were organized, all of which were money-making ventures and usually with only one participant. The term “gentlemen walkers and runners” was coined at the time to describe these athletes.

The first woman to feature in reports was Mary McMullen in July 1765, who is said to have run from Blencogo to Newcastle (about 72 miles) in a day.

2.1 SIX-DAY RACE

Following the era of the exhibition runner and pedestrianism, there was a renaissance of the 6-day race from September 4th – 9th 1980 in Woodside, CA. The winner, incidentally, was Don Choi, with a distance of 400 miles.

One month later, another 6-day race was held in Pennsauken, NJ, which featured the first-ever official performance by a female runner. Sabins Snow took second place overall with 345 miles, behind the above-mentioned Don Choi (397 miles).

In 1982, four 6-day races were held around the world, including two in Europe, in La Rochelle (France) and Nottingham (England). The best results were achieved in Nottingham, where Tom O’Reilly completed an outstanding 576.45 miles, in front of the second overall finisher and best woman, Margaret Goodwin, with an equally world class 514 miles.

In 1984, the Greek Yiannis Kouros was first to break the 1,000 km (621.37 miles) barrier in New York, with 1,023.54 km (636 miles). He is still holder of the world’s best 6-day race performance with a distance of 1,038.83 km (645 miles) set in Colac, Australia on November 22, 2005.

The women’s best 6-day race performance is 550 miles, set by New Zealander Sandra Barwick in Campbelltown, New Zealand in 1990.

In 2010, there were a total of eight 6-day races held worldwide, which were often combined with other races in order to finance the now very expensive chip measuring technology. As well as longer races in which 6-day races can be included (e.g., 10 days, 1000 km, 1,000 miles or even 3,100 miles), the shorter distances of 6, 12, 24, 48 and 72 hours are commonly included in the 6-day races. These performances are usually also recognized as split performances and included as such in the respective ranking lists of the IAU and the respective national ranking lists of the country/ies.

2.2 24-HOUR RACE

The first recorded performance over 24-hours was attributed to Edward Weston who covered 112 miles in a time of 23h 44 mins. Billy Howens covered more than 200 km in 24-hours between February 22, and 23, 1878 in London, England.

In 1958, Wally Hayward broke the 250 km barrier, achieving 256.4 km.

Since 1997, Yiannis Kouros of Greece has held the absolute world's best 24-hour performance with 189 miles, set on May 4 – 5, 1997 in Adelaide, Australia.

The absolute world's best women's 24-hour race performance is credited to Mami Kudo of Japan, who ran 158.09 miles December 12 – 13 in Taipei.

In 1979 Germany, Fritz Marquardt who in was the first individual runner to complete what was intended since 1970 to be a 24-hour team relay race. He went to the start saying that he was a “one-man relay.”

From then on, individual runners were also allowed to enter relay races and in Germany also, a 24-hour race scene developed. In the neighboring Netherlands, a 24-hour race used to be held in Apeldoorn for individual runners from 1984 until 2007.

Development at the US Championships has been patchy and unfortunately the results list is not available for every single year (see Table 1). However, it is hoped that the development will be positive here. Since such famous trail runners as Jurek and Karnazes have made very successful attempts over this distance, it could definitely be of interest to other runners.



Table 1: Comparison of the development of participant numbers at German and American 24-hour race Championships.

Year	Participants GER	Men	Women	Participants USA	Men	Women
2011	137	104	33	93	67	26
2010	134	101	33	146	101	45
2009	115	91	24	107	83	24
2008	95	77	18	51	35	16
2007	119	90	29	83	59	24
2006	108	89	19	79	55	24
2005	114	95	19	78	59	19
2004	84	67	17	Missing		
2003	75	59	16	Missing		
2002	101	86	15	161	129	32
2001	64	49	15	148	119	29
2000	109	89	20	161	125	36
1999	74	59	15			
1998	71	57	14			
1997	67	62	5			
1996	72	61	11			
1995	58	48	10			
1994	56	46	10			
1993	59	48	11			
1992	53	43	10			
1991	60	59	11			
1990	53	45	8			
1989	57	50	7			

The US record over 24-hours is held by Scott Jurek with 165.7 miles, set in Brive (France) in 2010. The US women's record holder is Connie Garder, who ran 145.26 miles in Grapevine, Texas, in 2007.

On the international scene, 24-hour race championships have been held since 1992, under the aegis of the International Association of Ultrarunners (IAU). It had been staged until 2010 as the World and European Challenge, but since 2011 it is officially called a World Championship. This was officially ratified by the IAAF and the WMA, which can be seen as the official recognition of the distance.

Table 2: World Championships/World Challenge - events

Year	Event	Men	Women	Overall	Kilometer Men	Kilometer women
1990	Milton Keynes/Great Britain	41	12	53	267,543km	237,861km
2001	Verona/Italy	35	19	54	275,828km	235,029km
2003	Uden/The Netherlands	95	44	139	270,087km	237,052km
2004	Brno/Czech Republic	93	48	141	269,085km	237,154km
2005	Wörschach/Austria	119	57	176	268,065km	242,228km
2006	Taipei/Taiwan	75	33	108	272,936km	237,144km
2007	Drummondville/Canada	90	53	143	263,562km	236,848km
2008	Seoul/South Korea	103	55	161	273,366km	239,685km
2009	Bergamo/Italy	119	62	181	257,046km	243,644km
2010	Brive/France	151	78	229	273,708km	239,797km

Table 3: World Champions

Year	Men's World Champions	Women's World Champions
1990	Donald Ritchie/GBR	Eleanor Adams-Robinson/GBR
2001	Yiannis Kouros/GRE	Edith Berces/HUN
2003	Paul Beckers/BEL	Irina Reutovich/RUS
2004	Ryoichi Sekiya/JPN	Sumie Inagaki/JPN
2005	Anatoli Kruglikov/RUS	Lyudmila Kalinina/RUS
2006	Ryoichi Sekiya/JPN	Sumie Inagaki/JPN
2007	Ryoichi Sekiya/JPN	Lyudmila Kalinina/RUS
2008	Ryoichi Sekiya/JPN	Anne-Cecile Fontaine/FR
2009	Henrik Olsson/SWE	Anne-Cecile Fontaine/FR
2010	Inoue Shingo/JPN	Anne-Cecile Fontaine/FR

All statistics were obtained from the statistics database of the German Athletics Association at: http://statistik.d-u-v.org/overview_champions.php



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Table 4: European Championships/European Challenge-Events

Year	Event	Men	Women	Overall	Kilometer Men	Kilometer Women
1992	Apeldoorn/ Netherlands	46	11	57	250,698km	231,008km
1993	Basel/Switzerland	103	23	126	259,265km	243,657km
1994	Szeged/Hungary	46	14	60	261,122km	231,482km
1996	Coucon/France				259,922km	231,049km
1997	Basel/Switzerland	65	19	84	249,039km	236,284km
1998	Marquette/France	104	18	122	267,626km	226,457km
1999	Verona/Italy	34	9	43	262,324km	223,763km
2000	Uden/Netherlands	97	28	125	259,273km	225,418km
2001	Apeldoorn/Netherlands	113	23	136	260,559km	226,634km
2002	Gravigny/France	53	22	75	267,294km	232,284km
2003	Uden/Netherlands	83	35	118	270,087km	237,052km
2004	Brno/Czech Republic	80	40	120	259,064km	235,012km
2005	Wörschach/Austria	89	46	135	268,065km	242,228km
2006	Verona/Italy	22	11	33	254,774km	229,452km
2007	Madrid/Spain	39	14	53	257,358km	233,307km
2009	Bergamo/Italy	97	50	147	257,042km	243,644km
2010	Brive/France	125	58	183	263,841km	239,797km

Table 5: European Champions

Year	Men	Women
1992	Helmut Schiecke/GER	Sigrid Lomsky/GER
1993	Helmut Dreyer/GER	Sigrid Lomsky/GER
1994	Janos Bogar/HUN	Sigrid Lomsky/GER
1996	Ferenc Györi/HUN	Marie Bertrand/FR
1997	Vladimir Tivikov/RUS	Irina Reutovich/RUS
1998	Lucien Taelman/BEL	Marie Mayeras-Bertrand/FR
1999	Yiannis Kouros/GRE	Irina Reutovich/RUS
2000	Lubomir Hrmó/SVK	Irina Reutovich/RUS
2001	Paul Beckers/BEL	Irina Reutovich/RUS
2002	Jens Lukas/GER	Edith Berces/HUN
2003	Paul Beckers/BEL	Irina Reutovich/RUS
2004	Lubomir Hrmó/SVK	Galina Eremina/RUS
2005	Anatoli Kruglikov/RUS	Lyudmila Kalinina/RUS
2006	Vladimir Bychkov/RUS	Irina Koval/RUS
2007	Anatoli Kruglikov/RUS	Lyudmila Kalinina/RUS
2009	Olsson, Henrik/SWE	Anne-Cecile Fontaine/FR
2010	Ivan Cudin/ITA	Anne-Cecile Fontaine/FR

All statistics were obtained from the statistics database of the German Athletics Association at: http://statistik.d-u-v.org/overview_champions.php. The results list from the year 1996 is incomplete.





2.3 100 KM

The origins of ultrarunning in Europe can definitely be traced to the 100 km, and the Biel 100 km (Switzerland) in particular is the oldest 100 km race. It first took place on November 13, 1959. Although back in 1892 in Geneva (Switzerland), 173 participants started in a 100 km race, of whom 63 managed to finish within 24-hours), this was a one-off event.

The Biel 100 km race was initiated by officers in the Swiss army, led by Colonel Franz Reist, Urs Spörri and Hans Brönnimann. It involved running on a large circuit around the city of Biel. To start with, there was a time limit of 24-hours. Since then, the time limit has been reduced to 21 hours. As before, a military march over the same distance is incorporated into the race, in which soldiers have to march wearing their uniform and kit. Thirty-two runners took part in the inaugural race in 1959, of whom 22 reached the goal. In the heyday of the Biel 100 km, there were more than 3,000 participants. In recent years, apart from the 50th edition in 2008, where 2,348 runners participated, participation levels have tended to range between 1,000 and 1,300. This makes the event the most popular 100 km in Europe, and possibly even in the world. In the meantime, other ultrarunning events have sprung up that are more popular in terms of numbers (Comrades, Two Oceans Marathon or the Ultra Trail Tour Mont Blanc).

The first USA national championships were held in New York on February 27, 1993, with 35 athletes participating (25 men and 10 women). The 100 km road course was unremarkable both in terms of the number of runners and the level of performance.

In fact, not until the last US Championships were very good results of under 7 hours produced. This was brought home quite clearly to the US team at the World Championships in Winschoten, Netherlands, in 2011.

Table 1: Development in participant numbers at German and US Championships in 100 km road races

Year	Participants GER	Men	Women	Participants USA	Men	Women
2011	48	40	8	23	18	5
2010	N/A			22	12	10
2009	94	69	25	no NC		
2008	134	104	30	21	15	6
2007	107	86	21	30	19	11
2006	231	191	40	no NC		
2005	166	137	29	no NC		
2004	114	89	25	partial		
2003	80	63	17	no NC		
2002	102	79	23	no NC		
2001	97	64	33	33	25	8
2000	111	88	23	35	25	10
1999	157	128	29	no NC		
1998	99	79	20	partial		
1997	118	97	21	43	36	7
1996	196	161	35	no NC		
1995	100	85	15	no NC		
1994	171	139	32	no NC		
1993	151	127	24	80	67	13
1992	176	149	27			
1991	157	128	29			
1990	217	184	33			
1989	198	170	28			
1988	157	135	22			
1987	293	256	37			

Table 2: IAU World Championships since 1992 [1987]

Year	Event	Men	Women	Overall	Winning Time -M	Winning Time- W
1987	Torhout/Belgium	75	8	83	6:19:35h	8:01:31h
1988	Santander/Spain	156	15	171	06:34:41h	7:30:49h
1989	Paris/France				6:47:06h	8:07:41h
1990	Duluth/USA	98	27	125	6:34:02h	7:55:08h
1991	Firenze/Italy	1073	74	1147	6:35:39h	7:52:15h
1992	Palamos/Spain				6:23:35h	7:44:37h
1993	Torhout/Belgium	169	46	215	6:26:26h	7:27:19h
1994	Yubetsu/Japan				6:22:43h	7:34:58h
1995	Winschoten/Netherlands	171	51	222	6:18:09h	7:00:47h
1996	Moscow/Russia				6:32:41h	7:33:10h
1997	Winschoten/Netherlands	105	48	153	6:25:25h	7:30:37h
1998	Nakamura/Japan				6:30:06h	8:16:07h
1999	Chavagnes en Paillets/ France	95	47	142	6:24:05h	7:33:02h
2000	Winschoten/Netherlands	153	41	194	6:23:15h	7:25:21h
2001	Cléder/France	94	52	146	6:33:28h	7:31:12h
2002	Torhout/Belgium	138	40	178	6:34:23h	7:37:06h
2003	Taipei/Taiwan	102	47	149	7:04:57h	8:04:47h
2004	Winschoten/Netherlands	141	61	202	6:18:24h	7:10:32h
2005	Yubetsu/Japan	71	27	98	6:24:15h	7:53:41h
2006	Seoul/South Korea	69	47	116	6:38:27h	7:28:56h
2007	Winschoten/Netherlands	76	47	123	6:23:21h	7:00:27h
2008	Tuscany/Italy	103	56	159	6:37:41h	7:23:33h
2009	Torhout/Belgium	79	47	126	6:40:44h	7:37:24h
2010	Gibraltar/GBR	92	46	138	6:43:44h	7:29:05h
2011	Winschoten/Netherlands	96	50	146	6:27:32h	7:27:19h