



The Vetrun



No. 205 OCTOBER 1989

W.A. VETERANS' A.C.

"Registered by Australia Post Publication No. W811 0370."

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TO ACCOMPLISH GREAT THINGS YOU MUST NOT ONLY ACT BUT ALSO DREAM, NOT ONLY PLAN BUT ALSO BELIEVE.

ANNUAL DINNER. Tickets for this great evening are now available, you can get yours from any member of the committee. The Venue is the Nedlands Yacht Club, The Esplanade, Nedlands. From 7pm - 12pm. On Friday 17th November. Cost \$20.00 per ticket (this includes beer) All other drinks are B.Y.O. Come along and enjoy a superb evening of fine food, dancing and convivial company. Get your tickets NOW don't wait till the last minute.

TIME TRIALS. The Time Trial Series for the Patrons Trophies will commence on the 12th October 1989. The first one will be held at McGillivray Oval and will start at 5.30pm, they will then alternate venues between Coker Park each week. Start times will be 5.30pm during October and commencing with the first one in November the time will be 6pm. Will the organiser of the night please ensure that a list of the start times of each event is placed in a prominent position so that competitors can warm up sufficiently, particularly for the sprints. A full programme is printed later in this newsletter. If you are down as co-ordinator for the night and cannot make it, please ensure that YOU find a replacement co-ordinator.

Field Events (Throwing) Training. These will commence on Tuesday the 10th October 1989 at Perry Lakes between 5 - 6pm, approx. and will run for the same period as the time trials.

A.A.W.A. SUMMER TRACK SEASON. The season will open on 7th October at Perry Lakes Track. If you are interested in running track or in field events then contact either Brian Foley (339 2716) or Val Freccott (384 8585) to register. The registration Fee is \$37 for the full year, summer and winter seasons. Please register before the day you wish to compete as you may not be able to register on the day. If you feel that you would like to have a try out before you register you may compete up to three times before you have to register, the cost is \$5.00 for each afternoons competition.

This year a new rule has been introduced for veteran throwers in the field events. Veterans can now throw the implement weight for their age group and gain full points for the club, however it is up to the competitor to notify the officials on duty for each event. There will also be a womens hurdles event at 80m with the hurdles at 762mm (2'6")

We are also required to provide officials each day of competition, if anyone is interested in helping out in this respect if you could turn up before the competition starts and put your name down in the officials book under Vets it would be greatly appreciated.

We are also required to provide officials for the State Schools Track & Field Championships on Saturday 21st and Sunday 22nd October 1989. If you can help would you please contact either Val or Brian.

AUSTRALIAN GRAND PRIX CIRCUIT 1989/90. The first event in this series will be held at Perry Lakes on the 19th November 1989. If you would like to see some of Australia's finest athletes in action don't miss this meeting.

SEMINAR ON OVERTRAINING. (The causes, diagnosis, complications and treatment) This seminar will be held at the Superdrome Lecture Theatre on Friday 6th October 1989 at 7.30pm and will be given by Professor Tim Noakes the author of 'The Lure of Running' and Editor of the 'International Journal of Sports Medicine'. If you are interested in attending this seminar you are requested to register before the night by ringing Anne Johnston on 387 8044. the cost is \$5.00 and supper will be provided.

McCallum Park. We have had reports that there has been a number of break-ins to cars left at McCallum Park whilst the owners have been away on a training run. This has been mainly during the week and Saturday morning, but the committee feel that it would be prudent if members were to make sure that their cars were locked on any runs that we have there.

RAVENS REST RUN. This run is down in the programme as a handicap run. This is now changed to a normal non handicap run.

GUEST SPEAKER. On occasion the club is asked to provide a guest speaker to different organisations, to talk about the club and Veteran Athletics. If anyone is interested in acting in this capacity, the talks are usually given during the day, could they please let the secretary know.

1990/91 PROGRAMME. The programme is now being compiled, if anyone is wishing to host a run during this period would you please let Bob Schickert know as soon as possible. If you are already hosting a run and wish to discontinue it after the current programme finishes would you also let Bob know.

WE EXTEND A WARM WELCOME TO THE FOLLOWING NEW MEMBERS:-

Esther C Healey	1/85, Murray Road, Bicton. 6157	339 8537	04/09/37
Frank Sykes	18, Lynda Crescent, Rockingham. 6168	527 9226	10/04/27
Olive D Cousins	10, Hedges Place, Kewdale. 6105.	277 9625	26/04/37
Michael Cousins	" " " "	" " "	05/10/33

A VERY HAPPY BIRTHDAY TO OUR "OCTOBER" MEMBERS

05-OCT-39	STEWART	: Maureen F	turns 50	becomes	W50
06-OCT-24	MORGAN	: Garnet	" 65	"	M65
07-OCT-44	FIELD	: Helen T	" 45	"	W45
08-OCT-46	KLINGE	: Jim	" 43	"	M40
08-OCT-40	THORNTON	: Graham	" 49	remains	M45
09-OCT-40	COSTELLO	: Clare	" 49	"	W45
13-OCT-37	CARTER	: Wes	" 52	"	M50
13-OCT-44	FARRELL	: Phyllis	" 45	becomes	W45
13-OCT-45	SAVIN	: Tom	" 44	remains	M40
15-OCT-14	BAUMANN	: Carlo	" 75	becomes	M75
15-OCT-44	TOUSSAINT	: Serge	" 45	"	M45
17-OCT-39	PRATT	: Bob	" 50	"	M50
17-OCT-44	ROMEO	: Lesley	" 45	"	W45
18-OCT-41	LANDERS	: Brian	" 48	remains	M45
18-OCT-41	SCHICKERT	: Lynne	" 48	"	W45
19-OCT-33	PEET	: George	" 56	"	M55
20-OCT-53	HANNA	: Basil M	" 36	"	M35
22-OCT-37	COWLAN	: Margaret	" 52	"	W50
22-OCT-42	PEART	: William L.S.	" 47	"	M45
22-OCT-39	PELLIER	: John	" 50	becomes	M50
26-OCT-41	SCHICKERT	: Robert M	" 48	remains	M45
27-OCT-42	ROBERTS	: David V	" 47	"	M45
27-OCT-39	SUTHERLAND	: Ian	" 50	becomes	M50
30-OCT-46	SMITH	: Therese	" 43	remains	W40
31-OCT-35	WILLIAMS	: John K	" 54	"	M50

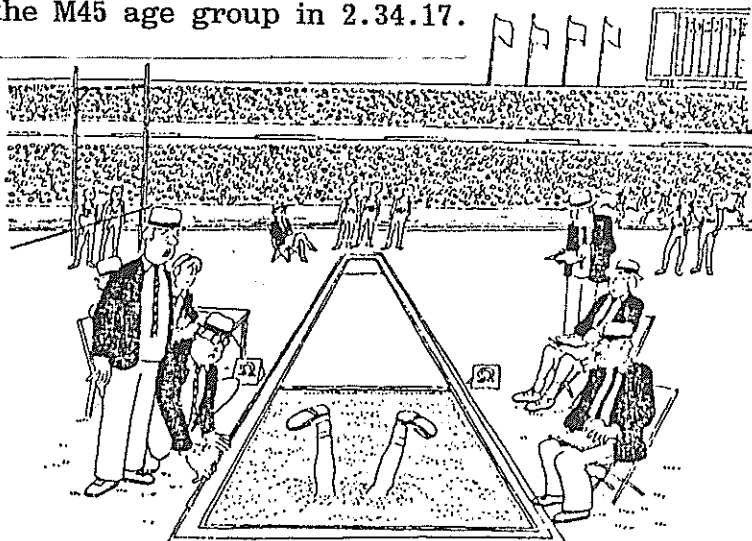
WORLD VETERANS' CHAMPIONSHIPS

In late July the World Veterans' Athletic Championships were held in Oregon USA. The City of Eugene - Springfield was host to the carnival and the people of the area were very supportive of the athletes and the high standard of competition. With a population of 140,000 it was not uncommon to see 8 - 10,000 people at the stadium or along the sides of the road during the marathon and the road running and walking events. The encouragement of the local people was one of the highlights of the championships.

Western Australia was represented by 14 athletes. The events were in 5 year age groups from 35 years for women and 40 for men, to above 90 years. The oldest competitors were more than 90 years, however the bulk of the athletes were in the lower age groups. There were more than 30 countries represented with Australia having the most competitors after the host country, USA. This was also the first time that Eastern block athletes have competed in the games. The championships are held each two years, the next will be in Turku in Finland in 1991. With in excess of 5,500 athletes, the event is the largest track and field carnival held in the world.

Our WA athletes performed very well and most will be looking forward to the next championships. John Gilmour and Frank Smith won gold medals in individual and team events. John broke several world records for the mens 70 years. age group and was one of the outstanding athletes of the championships.

Frank Smith ran consistently well in finishing 6th in each of the 10 k road, track and cross country events and was fourth overall in the Marathon, winning the M45 age group in 2.34.17.

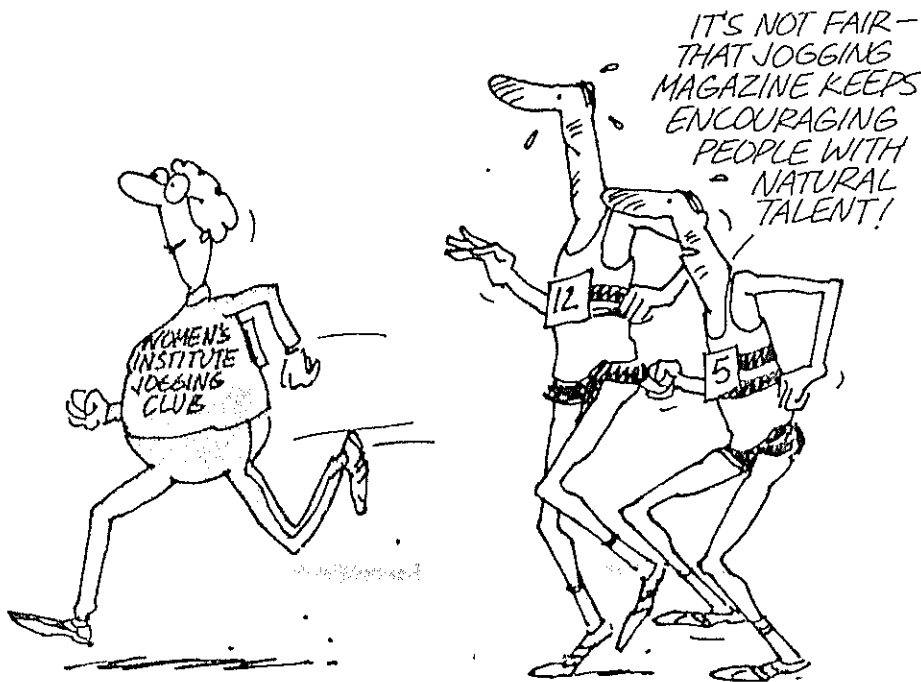


"Yes, he's a good long jumper but I often think his lack of technique lets him down."

The known WA performances were:

Mike Rhodes	800 M H	2.15	1500 M H	4.42
	5000 M	18.07		
Wally Groom	400 m Hurdles F 4th	60.5	Decathalon	
Frank Smith	10 K Road	6th 33.20	10,000 M 6th	32.41
	10 K C.C.	6th 35.37	Marathon 1st	2.34.17
Brian Foley	800 M S.F.	2.08	10 K Road	37.36
	5000 M	17.34	10 K C.C.	41.41
Frank McLinden	10000 M	38.20,	10 K Road	38.36
	5000 M	18.26	10 K C.C.	41.33 3rd Team.
Alan Tyson	800 M	2.43		
John Gilmour	10 K Road 1st	39.09	10000 M 1st	38.49
	5000 M 1st	18.46	800 M 2nd	2.39
	10 K C.C. 1st	42.04	1500 M 1st	5.09
Eileen Hindle	Long J	4th 5.35	Tripple J 3rd	
	80 M	4th 12.43	400 M 3rd	69.07
Erica Mercer	800 M	2.42	2 K Steeple 3rd	8.41
Kath Holland	200 M	4th 27.8	400 M 3rd	62.25
Val Prescott	800 M	3.03,	200 M	31.75,
			100 M	15.6
Jacqui Greenfield	10 K Walk 16th	63.29	2nd Team	
	5000 M	24.37	10 K C.C.	
Lorna Lauchlan	Javelin	10.90	10 K Walk 2nd	65.39 2nd Team
Val Tyson	10 K Walk	72.16	2nd Team.	

BRIAN FOLEY



5

TRACK & FIELD TIME TRIALS 1989-90

		POINTS	COMPETITION		WALK		CO. ORDINATORS			
October	12		M ^c Gillivray	100	3k	3k	Javelin	J. D. WHITAM		
	19		Coker Park	400	5k	2k	Tripple J.	B. FOXEY, R. DAVIS		
	26	100	M ^c G.	800	Discus	10k	5k	D. P. CARE		
November	2		C. Park		3k	Hammer	200	3k	Long J	B. L. SCHICKER
	9	200	M ^c G.	2k	walk	Javelin	800			M. RHODES
	16		C. Park	5k	Shot	400	2k			
	23	1500	M ^c G.	1500	Tripple J.	100	3k			
	30	400	C. Park	1500	walk	Long J.	3k			
December	7		M ^c G.	10k		200	2k	Discus		
	14		C. Park			100	mile	mile	shot	
	21		M ^c G.							
January	4	100	Coker Park	800	Hammer	5k	5k			
	11		M ^c G.	3k	Discus	200	1500			
	18	200	C. Park	2k	walk	Javelin	1500			
	25		M ^c G.	5k	Shot	400	3k			
February	1	1500	C. Park	1500	Tripple J.	100	3k			
	8	400	M ^c G.	1500	walk	Long J.	3k			
	15		C. Park	10k		100	5k	Discus		
	22		M ^c G.			200	mile	mile	Javelin	
March	1		C. Park			400	5k	Shot		
	8		M ^c G.			100	800	3k	3k	Discus
	15		C. Park			200	10k	5k	Javelin	
	22		M ^c G.			100	1500	1500	Shot	
	29									

5.30 p.m. Start in October, 6pm November onwards.

Co ordinators to nominate starting times prior to start of competition.

OCTOBER 1

CLONTARF CROSS COUNTRY

Venue : Clontarf Boys' Home - east of the intersection
of Kent Street and Manning Road in Manning Road

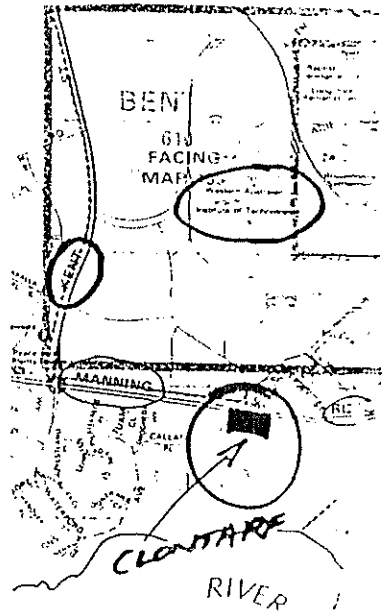
Time : 8 am

Courses 8kms or 4 kms (or 12kms if you like!)
Grass, sand tracks, a stone fence and a
water crossing (!)
Please wear shoes.

Morning tea : Cuppa provided. BBQ facility available.
The Canning River is on the doorstep, so you can
bring a canoe if you like.

Since it's a long week-end, we would appreciate any
help in timing (1), recording (1), marshall (1)

Basil Worner 387 9759 (w)



CHANGE OF VENUE "Hardy's Run "

The event programmed for November 19th has been moved
from Millington Reserve, Karrinyup and will now start at the
Perth Pony Club, Jon Sanders Drive, Herdsman (200m west of Selby
St North). The course is all on limestone tracks although
they are narrow and rough in some places. Two courses will be
available, 1 or 2 laps of 7.00km.

4 Legana Avenue,
Kingsley WA 6026.

CHANGE OF ADDRESS

With effect from Wednesday, July, 26, 1989, the new address of

Mr Robert E. Sammells and Mrs Maureen L. Sammells

will be

6, Plover Way,
Kingsley WA 6026

Telephone 309 2293

1. Road Walk.

Jack Collins arranged for a 7.30 a.m. start for this event so Dick Horsley, as official starter, time-keeper, judge and recorder, and a very cheerful bunch of walkers lost 30 minutes more sleep than they usually do. They looked just as cheerful when they finished as all were very pleased with their performances. Margaret Stone and John Mison are commended for their exceptionally good times.

M40		W40	
1. John Mison	1:55.06 (R)	1. Jo Stone	2:41.11 (R)
M75		2. Jill Midolo	2:43.28
1. Jack Collins	2:45.10	W45	
		1. Margaret Stone	2:22.57 (R)
		2. Anne Leisboer	2:45.10
		W50	
		1. Jacqui Beaumont	2:45.02 (R)

2. Road Run.

A relatively small field contested the event this year. This could be attributed to a variety of factors; people not back from Oregon, others recovering from the Peoples Marathon, the WAMC South of the River Classic on the same day, or the 'flu, which few managed to avoid. Whatever, the sharp competition seen in the past was generally missing due to the lack of depth in most age groups.

Congratulations to all of the age group winners and to Margery Forden and John Gilmour on their course records.

M35		M60	
1. Chris Brockwell	1:19.16	1. Merv Moyle	1:42.29
2. John Ferris	1:22.34	2. Paul Morrissey	2:11.04
3. John Brown	1:23.25	M65	
4. Wayne Pantall	1:23.31	1. Derek Drayson	1:47.11
M40		2. Stuart Hicks	1:49.14
1. Ron Scott	1:29.32	3. Frank Usher	2:14.03
M45		M70	
1. Bert Carse	1:15.12	1. John Gilmour	1:25.47 (R)
2. Bob Schickert	1:22.56	2. Ed Strickland	1:51.04
3. Rob Raymen	1:23.57	W45	
4. Jim Greenfield	1:28.42	1. Margery Forden	1:37.10 (R)
5. Alan Croxford	1:32.44	W50	
6. John Pellier	1:33.12	Ann Turner	1:52.31
7. Fraser Deanus	1:35.36	Visitors	
8. Rod Stewart	1:37.09	1. Peter McGoldrick	1:16.26
M50		2. Chris England	1:21.39
1. Joe Trovato	1:30.47	3. Hugh McKeown	1:24.52
2. Richard Harris	1:31.41	4. Ric Cole	1:28.06
3. Bill Crellin	1:37.36	5. A. Hollingsworth	1:36.10
M55		6. Gordon Holmes	1:55.41
1. George Schaffer	1:29.12	7. Barry North	2:06.53
2. David Carr	1:37.11		
3. Brian Aldrich	1:43.30		
4. Basil Worner	1:49.27		
5. Patrick Sheerin	1:51.03		
6. Selby Munsie	2:06.53		

3. One Lap (11K approximately).

A largish number of people opted for the shorter distance. These were:

1. Ted Maslen	M50	45.19	11. Alan Pomery	M55	1:00.41
2. Arnold Jenkins	M45	45.59	12. Rob Davis	M50	1:00.57
3. D. Caplin	M50	47.06	*13. Michelle Boyle	W40	1:02.10
4. Hamish McGlashan	M50	51.25	14. Alison Aldrich	W45	1:02.12
5. Erica Mercer	W45	56.30	15. Gordon Florence	M55	1:02.49
6. John Pellier	W45	58.10	16. Ann Deanus	W45	1:06.26
7. Ray Lawrence	M60	59.01	17. Ernie Moyle	M60	1:08.64
8. John Russell	M50	1:00.02	18. Bridget Carse	W45	1:19.51
9. Margaret Warren	W50	1:00.12	19. Gaby Ralph	Vis	1:20.00
10. Morris Warren	M50	1:00.13	20. Sheila Maslen	W50	1:21.12

* Walked

4. Championship Records.

These have not been printed for a while so here is an up-to-date list for future reference. Brilliant times, aren't they?

a. Road Walk.

W35 Joy Sanger	2:37.56	31. 5.87	M40 John Mison	1:55.06	3. 9.89
W40 Jo Stone	2:41.11	3. 9.89	M50 Jeff Whittam	2:37.56	31. 5.87
W45 Margaret Stone	2:22.57	3. 9.89	M75 Jack Collins	2:37.56	31. 5.87
W50 Jacqui Beaumont	2:45.02	3. 9.89			

b. Road Run

W30 Colleen Milbourne	1:37.50	20. 8.81	M35 Tony O'Hare	1:14.32	23. 9.79
W35 Jill Chambers	1:23.54	24. 6.84	M40 Hank Stoffers	1:12.11	24. 6.84
W40 Margery Forden	1:37.54	2. 6.85	M45 Hank Stoffers	1:12.56	29. 5.88
W45 Margery Forden	1:37.10	3. 9.89	M50 Maurice Smith	1:17.39	24. 6.84
W50 Lorna Lauchlan	1:46.05	24. 6.84	M55 Barry Evans	1:25.13	2. 6.85
W55 Lorna Lauchlan	1:58.03	25. 5.86	M60 John Gilmour	1:20.10	30. 8.81
W60 June Strachan	2:04.16	31. 5.87	M65 John Gilmour	1:22.20	31. 5.87
			M70 John Gilmour	1:25.47	3. 9.89

MUSSEL POOL MUSTER 10/9/89

It was a pleasure to have 62 participants in the "Mussel Pool Muster" which didn't really take place at Mussel Pool!

Thank you again for your support - we hope the run was a bit of fun amongst some pleasant spring bush.

Tom Savin and Marg Forden were the overall winners in the long course and Joe Stickle and Joan Pellier won over the short course. Tom Savin (10.225 kms) combined accuracy with speed to come closest to guessing the long course (10.205kms).

Patrick McGonigle (10.26), Dave Roberts (10.37), Jim Greenfield (10.3), Joe Trovato (10.333), Arnold Jenkins (10.120), John Crawford (10.17), Kev Martin (10.10), John Pellier (10.123), Marg Forden (10.125), John Ferris (10.1) and Rob Boggs (10.250) all came remarkably close and Ron Potter (10.18) looked as if he might have repeated his success of 1988.

Judy Hill's guess of 5.325 kms was closest to the actual 5.463 kms for the short course, but Toni Frank (5.25 kms), Rebekah Healey (5.2 kms) and Ken Eatt (5.346) were close to the target.

We were pleased to see some "new" cross country runners in Tony Speechley, Vic Waters and John Crawford joining some of the "old stagers" like Kev Martin, Ken Whistler, Dave Roberts, Bob Sammells and Mike Khan, all of whom performed well on what many described as a "good, fast course".

It was great to see our senior members, Duncan Strachan, Arthur Leggett, Derek Drayson and Frank Usher enjoying their run, and it must be some sort of a record when June Strachan finished the short course and then took off to complete the long one! Well done!

Also good to see other husband/wife combinations and we noticed Nora and Mike Berry, Bob and Lynne Schickert, Rob and Phyllis Farrell, Vic and Jackie Beaumont, John and Irene Ferris.

Of course there were also Sue Jones and Keith Forden with Merv and Marg respectively. Sue and Keith couldn't run but we appreciated their help as we did Leo Hassam (recorder, "flagger" and photographer), Barrie Thomsett and the tireless Bryan Hardy (Bryan was not actually "tyreless" - he brought his bike and spent an hour picking up flags!).

Thanks to all our helpers, including Fred Hagger, who was substitute "numbers man".

M35		M50		M65	
John Ferris	39:03	Bob Sammells	41:56	Derek Drayson	54:04
Wayne Pantall	41:19	Kev Martin	42:42	Duncan Strachan	55:58
		Joe Trovato	43:30	Frank Usher	63:44
		Ron Sutton	49:23		
		Merv Jones	50:15		
		John Crawford	50:56		
				W40	
M40					
Tom Savin	37:43			Margaret Birks	47:44
Mike Khan	45:44			Phyllis Farrell	62:28
Rob Boggs	43:39	M55			
Peter Hill	42:57	Mike Berry	51:38		
		George Peet	50:47	W45	
		Ken Whistler	51:46	Marg Forden	47:09
M45		Patrick Sheerim	54:38	Lynne Schickert	69:45
Bob Schickert	38:41				
Dave Roberts	40:52			W60	
Arnold Jenkins	41:52			June Strachan	63:45
Jim Greenfield	43:36				
John Pellier	44:12			Visitors	
Rod Stewart	46:26			Pat McGonigle	40:58
Tony Speechley	47:01			Des Cormican	42:36
Vic Waters	47:29			Jason Calvert	43:11
Ron Potter	47:39			Stephen McCarthy	44:51
Rob Farrell	55:59			Pauline Wiltshire	51:16
Barrie Thomsett	70:30				



M70

SHORT COURSE

Arthur Leggett 29:22

Esther Healey 29:56
Sue Lekias 31:58

W55

Nora Berry 33:16

Visitors

Hugh McKeown 22:19
Rebekah Healey 30:22
Lisa Hamersley 31:58

Walkers

Bob Chalmers 36:25
Lesley Romeo 38:09
Lois Smith 42:33
Colin Chalmers 42:35

W35

Irene Ferris 34:22

W40

Toni Frank 34:20
Jacki Beaumont

W45

Joan Pellier 28:09

M45

Peter Cole 26:02
Ken Eatt 29:15

M50

Joe Stickles 25:10

M55

Vic Beaumont 28:10
Jeff Whittam 30:58

How to make sure your Achilles tendon doesn't turn out to be your Achilles heel

by Douglas Clement, M.D., with Tim Padmore

The familiar jet roar filled my ears, and the invisible hand of acceleration pushed me gently back in my seat. I was about to spend the next 12 hours in airplane seats, crossing two continents and an ocean to an academic conference on sports injuries in Vienna. I didn't know it then, but I was sowing the seeds of my own sports injury.

It was midmorning when I finally arrived in Vienna, just about time for my run. I was stiff from the flight and looked forward to running so that I could loosen up. Two hours later, I had changed into a sweat suit and set off on a 10-kilometer run around the *Ringstrasse*, a run that promised beautiful scenery as well as some welcome exercise. I was running easily and felt good, so I was surprised when, after three kilometers, I noticed a niggling, burning pain above my right heel. The pain continued, and before long I realized what it was. I had, after all, been there before.

The diagnosis: Microtearing and inflammation of the Achilles tendon—and at least a partial rupture down the road if I continued running as I was. It was a diagnosis I have made on hundreds of other athletes and on myself.

There was an important difference between this time and the first time that I realized I had injured an Achilles tendon, nearly 25 years earlier. In those days, Achilles injuries were very common and were feared because recovery was slow and uncertain. In contrast, on that day in Vienna, I knew exactly what to do and was confident that in a month or so I would be as

ACHILLES TENDONS: THE EARLY WARNING	
✓	Nagging, burning pain
✓	Morning stiffness in the Achilles tendon
✓	Tender spot on the tendon just above the heel
✓	Thickening nodules on the tendon
✓	A grating sensation when you flex your ankle
✓	Failure of your body to recover from Achilles pain

Achilles tendon injuries are still an important part of my practice at the Sports Medicine Clinic at the University of British Columbia. About 6.5 percent of the running injuries we see are traced to the Achilles tendon, and studies in the mid-'70s fingered the Achilles tendon in 11 to 18 percent of running injuries. There are no reliable statistics from the 1950s and earlier, but I'm sure the figure must have been much higher, perhaps as high as 25 percent.

The Anatomy and Physiology of the Achilles Tendon

There has been a revolution in our understanding of the Achilles tendon, in treating injuries to it and, especially, in preventing injuries. The Achilles tendon is a tough, elastic cable through which the muscles of the calf transmit force to the foot and propel the runner forward. It has to be tough, because it absorbs a pull of

two to three times the body's weight 1000 to 1200 times each mile. With proper training, that's something the Achilles tendon can manage well enough. But often the tendon has to absorb other forms of abuse.

Each person runs differently. Few have bodies that are perfectly efficient running machines, and many are peculiarly vulnerable to running injuries. Every runner has heard of "overpronation?" Pronation, an inward rotation of the foot after heel strike, is normal and necessary. It enables the foot to absorb the shock of contact with the ground and adapt to irregularities in the terrain. During running, the heel hits the ground on its outer side, with the inner side of the sole lifted. Then the foot rotates until the inner edge of the sole is flat on the ground. Meanwhile, the ankle flexes and the front of the foot turns outward. All these motions reverse themselves when the body passes over the foot—or they should.

The next phase is supination, in which the lower part of the ankle locks and the foot turns into a rigid lever for takeoff. The Achilles tendon and the muscles of the calf go into action, extending the foot and driving the runner forward.

Achilles Problems

Problems arise when pronation lasts too long. Suppose that when your ankle and heel are vertical, as is common, the front of your foot slopes sideways so that your big toe is up in the air. This is called forefoot varus, and it means that when you pronate, it will take a little longer for your big toe to find its way to the ground. In other words, you will overpronate. Meanwhile, the rear of your foot will continue to rotate, your ankle will tilt past the vertical, and the Achilles tendon will be pulled off-center. What happens then—and we've confirmed this with high-speed motion pictures—is that the tendon whips back and forth like a plucked bowstring. Sixty-one of 109 runners we studied who have had Achilles tendon injuries had moderate or severe forefoot varus, indicating its importance in Achilles injuries.

There's more. Your tibia—the big bone in your lower leg—rotates as the knee flexes, then rotates back as the knee extends. The tibia also rotates during pronation and rotates back during supination. As long as the rotations are equivalent, there's no problem. If they aren't—and they won't be if you overpronate—then the tibia is twisted at each step. That can cause stress fractures. It can also, we believe, hurt the Achilles tendon.

The twisting imparts a wringing action to the tendon. Just like wringing out a dishrag, the twisting squeezes blood from the sheath that protects the tendon and nourishes it through its blood supply. The sheath is generously laced with blood vessels, except in a narrow region two to six centimeters in length, located above the point where the tendon attaches to the heel. My colleagues and I find it very significant that this region is also the most common location of Achilles damage.

Other Causes

But overpronation by no means exhausts the list. In 82 cases studied, we also identified one or more training errors that would have placed extra stress on the Achilles tendon: a sudden increase in mileage, a single severe workout, an increase in intensity, hill training or return from a layoff.

My Vienna run was an example of a training error. I ran when I wasn't in condition to do so. I had been running two to four times a week and was fit enough, but sitting in that airplane seat all night had caused my feet to swell. The accumulated fluid, still present when I went for my run, exerted pressure that interfered with blood circulation in the tendon and, I believe, precipitated the first microscopic tears that led to the injury.

In 41 cases we studied, we noted a lack of adequate flexibility in the calf muscles. You should be able to flex your foot through an arc of 35 to 40 degrees to avoid unnecessary strain on the Achilles tendon. If calf muscles are tight, you can compensate by bending your knee more.

Eleven runners we studied wore shoes inadequate for their running. But don't conclude from this that footwear is only a minor factor in Achilles tendon injuries. On the contrary, the revolution in footwear over the past 30 years is the most important single factor in lowering the incidence of Achilles injuries. In the '40s and '50s, shoes were primitive, little more than a bit of canvas attached to a rubber sole. When I was running competitively, finding a good shoe required major effort. I had to trace an outline of my foot on paper and send it off to London, and six months later the shoes arrived in the mail—ready for a painful six-week break-in period. Adidas produced the first well-designed, ready-made shoes in the mid-1950s. Today, a couple of dozen manufacturers produce quality running shoes.

A number of other things can produce Achilles injuries. One is inappropriate medical treatment. In the past, many Achilles injuries were treated with injections of steroid drugs, which reduce inflammation but also retard healing. These injections were sometimes followed by relapse or complete rupture.

Another possible cause of injury is gout. Patients with gout develop painful, inflamed joints caused by sharp uric acid crystals. Uric acid is a product of normal metabolism, but gout sufferers have more of it than normal, enough to make crystals form. Increased acidity makes crystallization more likely, and we know that acidity increases around the microtearing that is thought to initiate Achilles tendon injuries. In fact, uric acid crystals have been found in a ruptured tendon.

There are also a few other relatively rare conditions that can cause Achilles problems. Bony deposits can form in the tendon after partial tearing and sometimes following surgery. Child athletes who run may irritate the growth center in the heel and develop a bony ridge where the tendon joins the heel. Arthritislike diseases can also bring on tendon disorders.

Men seem to be more vulnerable than women, especially older men. In our study, men accounted for 78 percent of the people with Achilles injuries. Of 1650 runners with injuries of all kinds, only 60 percent were male. The mean age of the men with Achilles injuries was 39 years, however, compared to 24 years for the women. We attribute the high incidence of Achilles tendon injuries in middle-aged men to the loss of tendon flexibility and strength that occurs with increasing age.

Avoiding Injuries

Preventing Achilles tendon injuries is a matter of recognizing our vulnerabilities—our Achilles heels, so to speak. Obtaining a good shoe is of primary importance and is an easy task. The heel lift should be 10 to 12 millimeters, to reduce stretching of the tendon. The heel itself should have a moderate flare to stabilize it against rocking—too much flare can be a problem, but shoe manufacturers seem to have learned this lesson. The heel counter should be well-made, perpendicular to the sole and snugly fitting to stabilize the heel against sideways slipping, which could force the tendon to pull off-center. The sole should be flexible at the base of the toes; if it is not, leverage

on the Achilles tendon is increased.

Runners can choose shoes to compensate for individual peculiarities in their running styles or body types. Varus alignments can be corrected by a wedged midsole or by a midsole with a graded density. Runners with flatfeet, high arches, knock-knees or bowlegs can consider investing in a medically prescribed orthotic device (custom orthotics cost \$130 and up). Recently, however, we have found we can modify the shoe's insole for about one-third the cost. We feel that interest in customizing shoes will increase, and that custom running shoes will become as common as custom ski boots.

Avoiding training errors is a more difficult undertaking than finding a good running shoe—but it's just as important in preventing injury. The key phrase in training is "adaptive recovery," which means stressing your body repeatedly, followed each time by a period of relative rest. Your body recovers during the rest periods, and if the timing and intensity are properly adjusted, muscles, tendons and bones super-compensate, becoming stronger and more flexible than before. By avoiding excessive fatigue, you greatly reduce the likelihood of injury. A typical training program for a non-competitive runner might include running three to five times a week, alternating with days of relative inactivity.

Modifying Your Training

Changes in your training program should be introduced gradually and with appropriate recovery periods. Hill running, which stresses the Achilles tendon because of the prolonged toe-off forces, is one example of a potential problem area. Any change of running surface can be a problem: road camber, rough ground, hard roads and the superb traction afforded by all-weather tracks have all been implicated in Achilles tendon disease. The stress of training should be reduced when a runner is under stress from another source: For example, a student should cut back on training during exam week.

There are psychological factors to take into account. An athlete enjoying a hot streak has a natural instinct to try to do more and more. Like the mythical figure Icarus, who melted his wings when he flew too near the sun, the athlete can blow it by overdosing. And it may be that male vanity has something to do with the high incidence of Achilles injuries in middle-aged runners. Our bodies age, but our perception of ourselves doesn't—being young at heart isn't the same as having a young heart, bones or tendons. If a 40- or 50-year-old man wants to use his body as if it were 20, he must either maintain it through constant activity or reintroduce activity very gradually.

Every running program should include stretching exercises, especially exercises to increase the flexibility of the two major calf muscles, the gastrocnemius and the soleus, both of which link up to the Achilles tendon. Leaning into a wall with one leg held straight stretches the gastrocnemius, which attaches to the thigh bone. Doing the same exercise with the leg bent and the gastroc slack stretches the soleus muscle, which attaches below the knee.

Categorizing Injuries

Achilles injuries are classified according to severity in a natural progression. The injury starts with microtearing, referred to as tendinosis. If there is no healing, the injury can progress to partial or total rupture. If the sheath of the tendon becomes inflamed as well, the diagnosis is termed peritendinitis, sometimes referred to as tenosynovitis.

Gradually building pain signals microtearing in the inner tendon; when you get up in the morning, your Achilles is stiff and painful. The pain diminishes as you warm up and may disappear while you run. But when you cool off, the pain comes back and you're even stiffer the next day. After a week, you are likely to find the pain can't be overcome by the warmup. The site of the tearing, typically a spot about the size of a dime, will be exceedingly tender.

When an Achilles tendon injury is triggered by an isolated incident, I immediately suspect partial or total rupture. Total rupture is often dramatic—there may be an audible "pop," and the sensation has been described as similar to being hit with a golf ball or being shot. Other injuries can produce some of the same symptoms as injury to the Achilles tendon: For example, stress fractures of the heel or fibula, inflammation of other tissues around the heel, compression of a nerve, and fluid accumulation or tears in the muscles of the calf.

Surgery is the preferred treatment for total rupture. The surgeon must trim off the frayed ends and suture the tendon together, usually reinforcing the join with tendon material borrowed from another part of the leg. Surgical treatment of partial rupture is often indicated as well. There are two basic operations. One is called tenolysis or "stripping," in which the tendon sheath is simply slit open. This relieves pressure buildup inside and allows the tendon to regenerate. The second operation is more elaborate, involving removal of degenerated tendon tissue. It's a clean-out operation in which soft, mushy tissue is cut away to clear the decks for regeneration.

Surgical complications are always possible because blood vessels and nerves can be damaged. One of the most vulnerable is the sural nerve, which runs beside the Achilles tendon. On rare occasions, sural nerve damage kills feeling in the outer edge of the foot, a result known as "anesthetic foot."

Alternatives to Surgery

Surgical complications are one reason doctors have been eager to find more conservative ways of treating Achilles injuries. Another, of course, is the hope of finding even more effective treatments. When I hurt myself in Vienna, I adopted a simple strategy, prescribing for myself an anti-inflammatory drug (*not* a steroid), extra stretching exercises and a modified running style. For the next few weeks, I ran more flatfooted, looked for softer surfaces and avoided hills. Before running, I did friction rubs; afterwards, I rubbed my heel with ice.

Our study of Achilles injuries was designed to measure the benefits of this kind of conservative treatment. Cases of total rupture or severe partial rupture were referred to a surgeon, but the remaining 109 cases were treated conservatively without surgery, similar to the way I treated the injury I incurred in Vienna. In addition, patients with varus alignment were given an orthotic device to correct their gait.

The Role of Exercise

The key to quick recovery is exercise. If we want an injury to heal, we want to move the injured area—but not too much. The first step is often a week or 10 days of "modified rest," which means sharply reduced training with gentle stretching exercises, perhaps supplemented by swimming or cycling. We then prescribe a running program in stages of increasing difficulty until the athlete returns to the pre-injury level of activity. We suggest that the injured athlete start by running on alternate days beginning with one kilometer on day one and increasing by one kilometer on every third run.

We expect the soreness to increase on the active day, but the rest days allow for recovery, and if the training intensity is correct the soreness will gradually decline. If it doesn't, the level of training on the active days should be cut back.

This is another application of the adaptive recovery principle of training. Can you safely apply this therapy on your own? If you catch the injury early, there is really no reason not to—as long as you recognize that you must apply the exercise in a grad-

ual fashion and that you must make adjustments to reduce the strain on the Achilles tendon, such as avoiding hills and wearing proper shoes.

The only drug you should prescribe for yourself is ordinary aspirin, but remember that aspirin can cause bleeding in the stomach and intestine. Also, it tends to exacerbate gout and may aggravate a gout-triggered injury.

My colleagues and I often prescribe non-steroidal anti-inflammatory drugs such as Naproxen or Ibuprofen for the first week or so to reduce pain and make it easier to introduce exercise. These drugs are no riskier than aspirin. Drugs such as Indomethacin and Phenylbutazone are used less often now because of their side effects, and steroid injections should be avoided totally because they delay healing.

Placing the injured limb in a cast should also be avoided, because immobilization results in loss of strength. Physicians are beginning to realize that even in the treatment of fractures it is best to allow as much movement as possible, supporting the tissues only enough to prevent further damage.

Too often, recovery is delayed or jeopardized by enforced rest. Not long ago, a patient whose ankle had been sprained a month before came to me on crutches. Someone had told him to use crutches, and on crutches he stayed. By that point, he should have been nearly recovered, but instead he was crippled by the enforced inactivity.

The fitness boom is based on a recognition that our bodies function best when they work hard. Our bodies evolved that way to serve the needs of our remote ancestors. The pain of injury told primitive man to take time out, but necessity forced him to go back to work almost immediately. Our bodies evolved according to that pattern, and it became the prescription for quick recovery. It remains so today. *

April 1984 / RUNNER'S WORLD



SPOT THE 10 DIFFERENCES

DEJOGGERACER

JOG PLACIDLY amid the cars and waste, and remember what ease there may be in silence.

AS FAR AS POSSIBLE, be on good terms with other athletes. Make your runs fast or long, but listen to others, even those triathletes; they too have their story.

AVOID loud and aggressive harriers; they are a vexation to the spirit.

IF YOU COMPARE yourself with others you may become vain or bitter, for there will always be faster or slower runners than yourself.

ENJOY your achievements as well as your plans. Keep interested in your PB's, however humble; they are real possessions in a runner's changing fortunes.

EXERCISE CAUTION in cross-country runs, for the bush is full of broken ankles and grazed limbs. But let this not blind you to what beauty there may be there.

MANY PERSONS strive for faster times, but everywhere there are those with excuses. Be yourself. Especially do not feign crook tendons.

NEITHER BE CYNICAL about fitness, for in the face of all your sore muscles and disappointments, it is an end in itself.

TAKE KINDLY the counsel of the coach, gracefully admitting that he was right—again!

NURTURE strength of body, but do not distress yourself with over-training. Many breakdowns are born of fatigue and loneliness. Beyond a wholesome discipline, be gentle with your body.

YOU ARE A CHILD OF THE ROADWAY, no less than the bikes and the cars. You have a right to be there. And whether or not it is clear to you, no doubt your training is unfolding as it should.

THEREFORE, be at ease at the start, no matter what race you may choose to contest. And whatever your aspirations, in the noisy confusion of the start, keep peace with your soul. With all its aching bones and broken dreams, it is still a beautiful lifestyle.

—Ian Bennett