

Len,

Here are more facts about the history of age grading especially as it pertains to the combined events.

You are already aware of and have written about the early Partridge and Hills work.

Gardner Purdy did some important early work, and published some early tables, with the comparison of events to each other, but did not attempt to introduce age into the analysis.

Chuck Phillips in Washington, DC prepared a pioneering early age grading table about 1982 for most of the running events over a wide age range including youth. His approach was mostly mathematical and it was not sensitive enough to produce realistic results in some areas of the tables. He later expanded the tables to include most events including the field events. However, his approach still produces unrealistic results in some areas, especially in the youth age groups.

Since the use of the standard IAAF scoring tables for combined events was not realistic for older competitors using different implements, Ian Hume, of Canada, prepared a set of age grading tables for the Outdoor Pentathlon which was then the combined event contested in the WAVA World Championships. It was based on past performances in the WAVA World Championships. It was used for several WAVA Championships. Probably because of the extremely small and skewed database (the early WAVA Championships were sparsely contested compared to today) that it was based on, it was badly skewed in certain events and did not compare favorably at all with the existing 1982 IAAF Combined Events scoring tables.

Jim Weed, of Colorado, National Multi-Event Coordinator at the time, made the next advance in combined events age graded scoring by producing full scoring tables for all ages for the Decathlon. He used his extensive knowledge of the Masters Decathlon to manually produce the tables. This approach had the great advantage of not giving any unrealistic results because each event and each age had been carefully thought through to insure that the scoring made sense. His tables replaced the Hume tables and were used for several years of the US National Masters Decathlon Championships.

In 1986, Al Sheahan, founder of the National Masters News, saw that there was a need for all events to be age graded, not just the combined events. There were many reasons for this. One of the most important was so individuals could track their own history of performances by a uniform method instead of just watching the performances get, ever increasingly worse, as they aged and never knowing if they were relatively better or worse than their prime years. Another important reason for age grading was for awards. There was no way that meets could afford to provide significant awards to all age groups but they could provide a single significant award to the best, age graded performance if there were realistic age grading tables available. He thought that it would be a trivial exercise to prepare them. When he checked with WAVA Records Chair, Pete Mundle, he found that Mundle had also saw the need and had been doing work in that direction. So they, with some help from Chuck Phillips, quickly prepared some tables and sponsored and conducted the first "Age Graded" track meet. It was held in Los Angeles in 1986 and was a success, although a terrific amount of work for Al and his helpers. Nevertheless, he did the same thing again in 1987 after working some more on the age grading tables.

In 1988, Bob Fine, then WAVA Executive Vice President, spearhead the effort to improve and standardize a world wide effort by getting the WAVA Council to appoint a WAVA subcommittee for age grading with Al Sheahan serving as its Chair. The primary approach was again experience based but the experience came, this time, from a much wider range of experts. In addition to those mentioned before, Bob Fine himself helped as well as Rodney Charnock of England, Walter Fuchert, Adolph Koch, and Wilhelm Koster of Germany, Viktor Trkal of Czech Republic, Bob Stone, Phil Mulkey, Irene Raschker, Mike Tymn, Norm Green, Rex Harvey, Christel and Gary Miller all of the US were involved in reviewing the tables. The primary method was to present the existing table to each expert and ask them to analyze and point out weaknesses and suggest improvements. These were published in 1988 in booklet form and reprinted in 1990.

Five years later in 1993, Al cranked up the committee again to update and improve the tables. He was encouraged to undertake the effort by Rex Harvey who was, and is, serving as the Chair of the WAVA Combined Events Sub Committee. Harvey saw that the best possible age graded scoring of masters combined events would be by accurate and fair age grading of each of the events to get an age graded performance, which would then be looked up in the existing IAAF Scoring Tables. That way, Masters Combined Event Scores could be directly compared to those obtained by open athletes. Therefore, the scores would be much more meaningful to observers and athletes than if a separate and unique scoring table was used by Masters athletes. It was obvious that the scores would only be as good as the age grading tables. Use of the 1988 tables had pointed out weaknesses here and there and the masters performance data base had grown tremendously though those years giving much more data to work from. So both these WAVA Committees combined their resources and worked closely together to produce the 1994 updated WAVA Age Grading Tables.

Thousands of pages of earlier age grading work, along with all known Masters performance data was examined, and reexamined to determine trends and patterns. Al Sheahan, after much experimentation, found a particular geometric progression that seemed to predict the aging loss of performance in the running events. It was used as the general basis of the running portion of the 1994 Tables. However, there were many hot arguments and compromises made with all those involved before the tables were consistent across all the distances and all the ages. Most of the work was done with the male data as it was, by far, the most abundant. The Female tables were done as an offset of the Male tables with adjustments as required. The field events were studied much more closely than ever before and are much more fair and consistent than earlier tables.

The 1994 tables still show weaknesses in certain areas. This is due primarily to "new" events, like the Women's Pole Vault and Weight Throw for which there was very little data available at the time. Other problems arose because of rejection of certain master's performances that were considered "drug assisted" and or questionable because of other discrepancies.

These 1994 Tables were subsequently adopted by WAVA as the official scoring method for WAVA Combined Events scoring and, likewise, most countries around the World also adopted the method and the tables. Although they are used throughout the world for many reasons, the Combined Events are the only official use of the Tables by WAVA.

The Tables are scheduled for updating around the year 2000. There is more and more data available everyday, and more powerful computers to organize and analyze it. WAVA intends to build on past work and do a better job than ever on the new tables.

hope this is helpful to you. Rex Harvey

AL,

How much did I lie?

Rex

Age-Graded Results

by Roger Rebber

RUNNER X, a forty-year-old financial advisor, finishes the Acme Widget 10K thirty seconds ahead of his nearest competition, 64 year-old retiree Runner Y. Mr. X gets the Masters (40+) trophy and two round-trip tickets for a romantic getaway to a Pocono Mountain Retreat. Mr. Y gets a certificate for coming in first against those within five years of his age and goes home, somewhat disappointed.

The above scenario was once common in organized racing, but the field of Masters runners is leveling as the practice of age-grading results becomes more common. While still awarding trophies to the first across the finish line, the NYRRC is now publishing age-graded results on its Website (www.nyrrc.org).

What is age grading and where did it come from?

To find our answer we must look to the World Association of Veteran Athletes (the world governing body for Masters track and field and long distance running, not a group of military veterans who happen to enjoy sports). After extensive research, compiling and comparing data, WAVA came up with the first age-grading tables and published them in 1989. The tables were updated in 1994 and will continue to be updated every five years to maintain as fair and accurate a scale as possible.

Two Ways To Age-Grade

The WAVA tables can be used in two ways to compare different aged runners' results. The first way determines your performance level percent (PLP). Your PLP is calculated by comparing your time to a standard for your age and sex. These percentages are interpreted at right.

The NYRRC now shows runner's PLP in the final column of published website results in time order for men and women.



Advocates of age-graded results believe they level the playing field.

A second way to age-grade results is to age-adjust times. This is accomplished by readjusting a Master runner's time to that of an Open runner by using an age factor. The factor, found in the WAVA tables, expresses the rate of decline based on age.

For example, a 53-year-old woman runs a 10k in 45:18. The W53 (her age and sex group) factor for the 10k is .8545. By multiplying 45:18 (or 2718 seconds) by .8545 a new, age-graded

time of 38:43 (or 2323 seconds) is created. The newly calculated time can now be compared to any other runner's adjusted time, no matter how old or young they are.

Age factors do not only benefit older runners. This form of age-grading can also be used to compare times of young runners to that of peak adult runners.

The NYRRC also publishes an age-adjusted time and place for each runner in its website results.

While the age-graded information does not determine award winners at NYRRC races, the WAVA tables serve as one more way to compete against other runners and one's self.

26 May 96

To: Wilhelm Köster

From: Rex Harvey

Subject: Indoor Hurdles Age Factors

Wilhelm,

I received your letter of 13May96 asking for the age factors for the 55 meter hurdles and sprint. I am sorry but the answer is not short or simple. We included Age factors for both the 55m and the 55 m hurdles in our 1994 work. However, there are complications.

55 Meter Dash

If you are preparing the new edition of the "green book", for the combined events, and you are including the Indoor Heptathlon for men, you should careful to point out that the correct distance is 60 meters, not 55. However, some facilities are just too small and the 60 meter cannot be run so we need to include both the factors and the scoring tables for the 55 meter. Also, unfortunately, some old (and some new) American, and maybe other, indoor tracks are marked in yards not meters. Since 60 yards is approximately 55 meters (55 meters is only 5.5 inches (13.6 cm) longer than 60 yards) I have always seen the two treated as one and the same. While this is not absolutely correct, it is the practice. Here are the 1994 WAVA age factors for the 55 meters. I would point out that these have not been officially approved by the WAVA Council as they have not been part of a Combined Event up to this time. However, they have been approved by the WAVA Stadia Committee under Bill Taylor.

	30	35	40	45	50	55	60	65	70	75	80
Men	1.0000	.9877	.9555	.9244	.8943	.8652	.8365	.8052	.7700	.7309	.6877
Women	1.0000	.9836	.9472	.9120	.8777	.8445	.8116	.7762	.7368	.6936	.6463
	85	90	95								
Men	.6402	.5883	.5319								
Women	.5947	.5389	.4782								

55 Meter Hurdles

This is more complicated. Age factors exist for the 55 meter hurdles, but they are such that they automatically adjust, not only for the age, but they also correct the time to the 60 meter hurdles. This was necessary because scoring tables only formerly existed for 60 meter hurdles. This is the same sort of thing as in the throwing events where the age factor must not only correct for age but also must correct for the fact that the implements are getting lighter as one ages. Again you need to be very careful to point out that the correct distance is 60 meters not 55 and that 60 meters should be run whenever possible.

Now that scoring tables exist for the 55 meter hurdles, the existing 55 meter hurdle age factors need to be changed. I will contact Al Sheahen, the chair of the WAVA Age Grading Sub-Committee, and we will do that as soon as possible and get it to you after it has been approved by Jim Blair. When do you need the information in order to make your publication date?

Weight Throw

The age factors for the weight are correct as published in the 1995 WAVA Handbook. They will give a true age graded performance for lookup in the new scoring tables that V. Trakal prepared. Like all throwing event age factors, they account both for aging and for the lighter weights as one ages. We can now forget the .9308 factor was formerly used only so that the Shot Put scoring tables could be used since no Weight tables existed.

I must say that the women's weight throw factors are getting too generous now that so many women are doing this event and they are improving quickly. The 1994 age factors were based on performances up to that point which were not very good. This will need to be corrected in the next update

of the Age Factors (about 2000). The method used to generate the age factors is based on actual performances and will automatically pick up the improvement and will lower the age factors accordingly.

Scoring Table Error

I have just discovered an error in the 55 meter hurdle scoring formula that you forwarded to me from Viktor Trkal. There must be a typo somewhere because it doesn't make sense. The American record for the men's 60 meter hurdles is 7.36 by Greg Foster. That would be worth 1149 points on the IAAF scoring table, a reasonable figure. The American Record for 55 meter hurdles, which I assume to be a slightly worse performance is 6.89 by Renaldo Nehemiah. Using the new formula that you sent me, that would be worth 2517 points ($54.5278 * (14.25 - 6.89)^{1.92}$ power). This is at least double what it should be. Something is wrong. Will you please double check your correspondence with V. Trkal to see if a number got mis-read or transposed? The 60 meter hurdle World record of 7.30 by Jackson is worth 1165 points.

A double check of the women's scoring formula also looks questionable. The 60 meter American record is 7.81 by Kersee worth 1174 points. The 55 meter American record is 7.37 also by Kersee and was set only two days apart. It is worth 1344 points on the new scoring formula. That is quite a bit of difference. The 60 meter hurdle World Record of 7.69 by Narozhilcnko is worth 1202 points. This says that Kersee's 55 meter hurdles is worth quite a bit more than the World record at 60 meters. I doubt that.

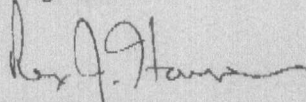
A double check of the men's 55 seems out of line also. The 60 meter American record is 6.41 by Cason and it is worth 1103 points. The 55 meter American record is 6.00 by McRae and it is worth 1322 points on the new scoring table. Quite a bit of difference as I would expect the 60 to score higher as many more people do it than the 55. The 60 meter World record is held by Cason.

Here is a double check of the women's 55. The 60 meter American record is 6.95 by Devers worth 1198 points. The 55 meter American record is 6.56 by Torrence worth 1421 points which seems out of line, but not nearly so far as the men's 55 hurdles. The 60 meter World record of 6.92 by Privalova is worth 1208 points.

I checked out the weight throw scoring formula when I first got it and it seemed very reasonable. I guess I should have checked out the running formulas also, because they certainly do not look correct as I have them at this time. I didn't think to question the running formulas.

Will you please double check with V. Trkal, as maybe I'm looking at something wrong. I will leave it up to you to decide if we have enough of a problem for you to contact Torsten to try to stop him from publishing the new scoring formulas in the 1997 WAVA Handbook. The Weight throw formulas look OK and should be published but definitely not the men's 55 hurdles and maybe not the women's 55 hurdles and maybe not the men's and women's 55 dash as they all seem to score 100-200 more points than equivalent 60 meter performances. I'm hoping that I've made some silly error and that everything is OK.

Regards



Rex Harvey
Member, WAVA Stadia Committee

Copies: Jim Blair
Torsten Carlus
Al Sheahan



NATIONAL MASTERS NEWS



The official world and U.S. publication for Masters track & field, long distance running and race walking.

Sept. 28, 1996

Dear Chuck:

How goes it? I hope you're still at the same address and things are going well for you and your family.

The Age-Graded concept has been out there for several years, and is gaining acceptance among many people, I feel. Some have rejected it, but that was to be expected. We're still pushing it in NMN. Jerry figures the AG %s when he writes most of his stories. The tables are included in the computer program which some meets use.

Enclosed is a letter from John Resman. He seems to have a point. Can you answer him with a copy to me?

Many thanks,

Al Sheahen



2113 Northview Lane NE
Rochester, Minnesota 55906
September 25, 1996

National Master News
P. O. Box 2372
Van Nuys, CA 91404

Dear Sir,

I recently purchased the 1994 Age-Graded Tables for use in scoring road races. While I was using the tables to score a 5K and a 10K race, I noticed some inconsistencies in the tables. The inconsistencies I noticed were in the Men's and Women's Running Event Age Factors for 5K in the 8 - 19 age group.

The following table shows the published age group factors and calculated age group factors. The calculated age group factors were determined using the published time standards.

Age	Men		Women	
	Published	Calculated	Published	Calculated
8	.7809	0.786819	.7731	0.777478
9	.8177	0.823878	.8177	0.822415
10	.8496	0.856043	.8553	0.860173
11	.8772	0.883842	.8866	0.891699
12	.9011	0.907861	.9125	0.917756
13	.9216	0.928657	.9337	0.939111
14	.9393	0.946383	.9509	0.956372
15	.9543	0.961581	.9647	0.970231
16	.9671	0.974462	.9756	0.981254
17	.9779	0.985316	.9841	0.989801
18	.9868	0.994252	.9907	0.996309
19	.9925	1.000000	.9956	1.00128

Two obvious differences exist for the 19 year old factors. The men's 19 year old time for the 5K running event is published as the same as the open class time yet the age factor is not 1.0000. The women's 19 year old time for the 5K running event is shown as slightly faster than the open class time, so the age factor should be greater than 1 (which it isn't).

Is there something wrong in my calculations or is there an inconsistency in the tables? If there is an inconsistency, which table is correct? I have been using the table of times as a basis for my calculations for race scoring.

I didn't notice any inconsistency in the 10K age factors. A cursory check of the 8K age factors for the under 20 ages shows some inconsistencies.

Thanks for your help in resolving my question and for your efforts in publishing the tables.

Sincerely,

John Resman



NATIONAL MASTERS NEWS



The official world and U.S. publication for Masters track & field, long distance running and race walking.

April 9, 1996

Willie Loedoloff
PO Box 36659
0102 Pretoria
South Africa

Dear Willie:

Thank you for your letter of 23 March. By the time this arrives, I will probably be in Durban. We're meeting there from April 14-21. I'll be staying at the Crowne Plaza Holiday Inn. Regrettably, I have to fly home immediately and am due to depart from Johannesburg on April 21 at 6 p.m. on South Africa Airlines to New York City.

To your comments:

- 1) You may well be right in your assessment of the age 8-18 tables. I did not have time to check Chuck's work. If you have time, I suggest you develop your own set of factors, providing our committee with some back-up data to support your factors. This would be a major contribution and could be included in the next revision of the tables.
- 2) We've determined road runners reach their peak between ages 20-35. There are many examples of top road racers hitting their best times and winning races after age 30. Carlos Lopes' 2:07:11 at age 38 is but one example. Even Linford Christie, at age 33, ran a 9.87 100. At age 33, Carl Lewis long-jumped 8.70. (See page 49) Lopes also ran 27:17 10K at age 37, and 13:16 5K at age 37. Maricica Puica ran 3:57.73 at age 35 for 1500.
- 3) Re the difference between men and women, we found that the open women run about 11% slower than the men, starting at about the 800 and going through the marathon. It's quite consistent. So we began with that. As you can read in our lengthy discussion on page 47, we first planned to give the women the same factors as the men. Why not? Is there any evidence that women age faster than men? We couldn't find any? Yet we fudged a bit and gave the women an extra 5-20% "push" based on their performances. We couldn't give any more, or we would have pushed Palm and Welch over 100%. They set the standard for the women. We concluded that the women simply haven't yet performed up to their capabilities, with those notable exceptions, plus Puica, Parts, Tibbling, Ivanova, Schneiderhan, etc. Again, see page 49 for the 100% performers. (As an added note, the current Russian, now about 43, Podopoyeva (sp?) is off the charts. We threw her out, because she is too outstanding, and would have made all the women's standards tougher if we'd included her. Conclusion: women can do better than we thought.
- 4) Re the 60-80 groups, we used Romain, Payton Jordan, Derek Turnbull, Jack Greenwood for these groups. Jordan in particular, at 75, was a model.



The WAVA factors DO increase gradually from age 35 or so, and decline greater, percentagewise, with each year in a consistent manner. We didn't find enough conclusive evidence to chart a "fall-off-the-cliff" at age 67 or 68. Jordan disproved that theory, as did Utes, Davies and others.

- 5) We further had a couple of performers in the 80+ category to anchor us. The USA's Ed Benham we gave about 95-97%. Scotland's Duncan McLean, at age 88, ran a 16.3 100m. That's 100%, our standard. He confirmed the time with a 16.5 at age 89, another 100%. We actually made the 100m standards/factors tougher at the upper age groups than other events, based on McLean. If we relaxed the other events more than we did, it wouldn't make sense. The only possibility is that we should throw out McLean as abnormal. We considered that, but many of us remember seeing him in action; there was no doubt as to his age. So we felt we had to leave it in. This, naturally, made the factors tougher for the 80+ age groups (especially with Benham's performances factored in). So again, our conclusion is that it IS possible for 80+ men (and, by inference, women) to perform well, even though only a few have ever done it. We conclude it's possible for 80+ athletes to do well if they can survive life's other infirmaries, which, of course, most can't.

So basically what I'm saying is we stand by our product unless someone else can offer more compelling evidence to the contrary.

- 8) We went to different factors for different race distances to be more accurate. (In the 1989 book, we used the same factors for 5K-25K). But the data shows that the longer the distance, the better the older runner does, and the tables reflect that, no matter if it's a small distinction.
- 9) I do not see your comments as a negative approach. I see them as constructive criticism, which is why I'm spending so much time replying. However, your conclusions are not backed, in my opinion, by enough data. They are your opinions, and may well be proven correct in the future, which is why I urge you to pursue them with added data to back you up, if you can find it. If you can provide the Committee with better data, naturally the next revision will reflect such data.

Sincerely,



Al Sheahan

PO Box 36659
Menlo Park
0102 PRETORIA
Republic of South Africa
23 March 1996

Al Sheahen
c/o National Masters News
PO Box 2372
Van Nuys, CA 91904
USA

Dear Al

I must thank you for your letter dated 22 January 1996 which I received during February. I must also thank you for the complimentary copy of the 1994 Age-graded Tables. This is a monumental work and it is with some hesitancy and due deference that I hereby venture my comments.

May I first try to give some background. Menlo Park is a suburb of Pretoria, which as you may know, used to be the capital city of South Africa.

I have not worked on the 1989 WAVA tables; I worked from first principles based on data which were available to me using a method which is repeatable and appeared to be simple and realistic. I only used the WAVA 1989 tables as reference for the purpose of comparison. I did not have the 1994 version at hand at any stage.

I did not have anything worthwhile on the age group 13 to 18, and had to do some extrapolating. This will be the main reason for the difference between my 13 to 19 and Chuck Phillips' 8 to 19 factors. I believe he is too hard on the youngsters and he expects too much of especially the 8 to 13 year olds who should in fact not be allowed to run a 21,1 km race or longer. The factors for the longer distances are irrelevant and should not have appeared in the tables at all.

As I am an enthusiastic amateur rather than an administrator, I would hesitate to serve on such a sophisticated instance as the WAVA Age-graded Subcommittee. I am 68 years old but still working full-time as a professional engineer. If you really believe that I can make a contribution towards an acceptable universal solution, I may be available. Should you want to contact me when you are in South Africa, you would be able to reach me at code 012 telephone 421 3500 during office hours or code 012 telephone 472 965 after hours.

I plan to participate in Durban in 1997, but with my luck I will be at the wrong end of my age group as I will turn 70 shortly after the Championships.

I have the experience of more than 12 years of competitive running from the age of 55, and with a university B.Sc degree in civil engineering I feel that I have the background to see things in perspective, and that I am qualified to comment on a subject which I have given a lot of thought.

Without going into too much details my main criticism will boil down to the notes hereafter.

8 - 14 year age groups

It is very hard to believe that kids in this age group can do a marathon race or longer; the age-grading factors are unrealistic and too high.

In my experience there is not much of a difference in the performance of boys and girls in this age group. This fact is also borne out in the WAVA tables.

14 - 20 age groups

I believe the WAVA factors are too harsh. Also, the difference between male and females in this age group should become noticeable. Athletes in this age group are still immature and their bodies are not hardened for the marathon and ultra-distances, and I would be surprised if these factors can be regarded as correct or even realistic.

20 - 30 age groups

To the best of my knowledge road runners reach their peak between 25 and 30, although in the very long distances like our own Comrades Marathon over 90 km, they still give top performances during the first years in the thirties.

In this age group, as in all the older age groups, there is a marked difference between the performances of male and female runners. I cannot agree that the negligible difference between the male and female runners as reflected in the WAVA tables is realistic.

30 - 40 age groups

The factor of 1,0000 has been taken too far up in the WAVA tables. There is a definite decline after the age of 30 - 32. This is maybe not so noticeable in the runner who started running seriously at a later stage of his life. It is a fact that a runner who starts running seriously at the age of 30, will peak at age 34 to 36. If the same runner started running seriously at age 25, he would have peaked at around 28 to 31. I am sure that his peak at 28 - 31 would be better than his peak at 34 - 36.

40 - 60 age groups

In general the WAVA factors appear to compare well with my own figures, except that the difference between the WAVA male and female factors is too small.

60 - 80 age groups

Up to 60 the decline is still not too fast but after 65 to 67 the rate of decline speeds up. This statement is based not only on my own experience but has been confirmed by Derek

Turnbull, who is now 69 years old. I met him personally while on a visit to New Zealand at the end of 1995, and he made a statement to the effect that he has been slowing down very fast over the last few years. The WAVA factors do not reflect this tendency.

From the performance by Erik Ostbye at age 56, it looks as if my figure of 0,856 would need a small upwards adjustment of 0,47% to 0,8600, while the WAVA factor at 0,8686 would need a downward adjustment of 0,99% to 0,8600. While my figures for the age of 56 might appear to be on the low side, I believe that especially from 65 upwards the WAVA factors are too high. The following comparison may show what I mean.

<u>AGE</u>	<u>MY FACTORS</u>	<u>WAVA FACTORS</u>	<u>FACTORS BASED ON RECORDS KNOWN TO ME</u>
65	0,766	0,7975	0,789
70	0,702	0,7541	0,690
75	0,626	0,707	0,605
80	0,545	0,655	0,485
85	0,464	0,5964	0,360
90	0,383(extrap)	0,5262	0,25(??)
95	N.A.	0,4317	0,318
100	N.A.	0,2758	N.A.

It is obvious that although my own factor could possibly be on the low side for ages under 65, it is more realistic for all the older ages. I would also state categorically that factors for age 85 and older should be taken with a pinch of salt, and that the WAVA factors are highly unrealistic, if possible at all.

My main criticism of the WAVA tables can be summed up in the following general statements:

(a) The difference in factors for male and female athletes is much more than the difference indicated by the WAVA tables. If you compare world record times for instance in the standard marathon, you would see what I mean.

(b) Age grading is NOT an exact science and there is not a scientific formula by means of which one can calculate age factors. Any formula used by myself, WAVA or anybody else, can only be termed as empirical, based on data of some outstanding performances. It is therefore an exercise in hairsplitting to quote factors to four decimal places, or even three as I have done.

(c) Different factors for different race distances for the same age complicate the whole business of age grading and is not acceptable to the ordinary athlete or administrator, especially because there is no way to prove that any of these factors are "correct".

(d) The rate of deterioration of the human body with age cannot be predicted with any degree of accuracy, but one can accept that the rate of deterioration as reflected by age

factors will be the same for a specific person, irrespective of the race distance. I therefore state categorically that for each age, only one factor should be applicable to all distances. It was therefore a waste of effort to calculate a factor for each race distance at each age. Perhaps WAVA should have taken the average of the 14 columns to arrive at one particular factor for each particular age. Nobody would be able to prove them wrong.

(e) I do not have too much experience of short distance track and field events, and would be unable to comment on that. I do however have the gut feeling that the same factors used in the road-running section could be applied to track and field items. This is logical as the rate of deterioration of the body is the same irrespective of whether you try your hand (or foot ?) at ultra-distances or at high jumping.

I trust that you do not see this as a negative approach and an effort to detract from the great work the compilers of the age-graded tables had done. I do however feel that they should develop the system further to arrive eventually at a universally acceptable and uncomplicated set of factors which could be applied with success to all levels of competitive running.

I believe that a lot has still to be learned, and for that reason I will continue with what I have been doing over the last eight years and try to update my figures as new facts become available.

Again, thanks for your kind reply to my letter of last year.

Yours sincerely



Willie Loedolff



NATIONAL MASTERS NEWS



The official world and U.S. publication for Masters track & field, long distance running and race walking.

January 22, 1996

Willie Loedolff
PO Box 36659
0102 Menlo Park
South Africa

Dear Willie:

This is a reply to your letter of 13 September 1995 re age-grading. I'm sorry for the delay in replying.

Thank you for your interest and your calculations re the age-grading process. From your letter, I gather that you're working from the 1989 WAVA tables. As you may know, we've revised them (1994 revision) and I'm sending you a complimentary copy, under separate cover, for you to peruse. The revised version is substantially more accurate than the first printing.

The tables have been getting wide use in the USA and Britain, as you know if you're a subscriber to National Masters News. Many races which award masters prize money are now basing their awards on age-grading so as to be fair to older runners.

When you receive the tables, I'd be interested in your opinion. Generally, your factors on page 5 labeled "Annexure 3" are virtually identical to the WAVA revisions up to about age 65 when yours become easier. WAVA based its 65+ tables on performers such as Derek Turnbull, Ed Benham, Payton Jordan and a few other top athletes. It's a difficult area since the data isn't as great as for the younger male runners.

I notice you also did factors for age 13-19. One of our committee members, Chuck Phillips, did factors for ages 8-19, which are much tougher than yours. I did not supervise or verify Chuck's figures, but just put them in the book at deadline time to have something. If you wouldn't mind, please look these 8-19 factors over, see how they compare with yours, and perhaps, modifications for the future.

suggest

If you accept, I would like to invite you to be on the WAVA Age-Graded Sub-Committee, of which I am chair. I'll be in Durban with the WAVA Council from April 15-20, 1996 and again next year in Durban for the 12th WAVA World Veterans Championships. I'm not sure where Menlo Park is, but perhaps you're planning on participating next year in Durban.

Meanwhile, we can keep in touch by mail.

Sincerely,

Al Sheahan
P. O. Box 2372 • Van Nuys, CA 91404

Phone: (818) 981-1996 • FAX: (818) 981-1997



PO Box 36659
0102 Menlo Park
Republic of South Africa
13 September 1995

Al Sheahen
c/o National Masters News
PO Box 2372
Van Nuys
CA 91404
USA

Dear Sir

I am actively involved with road running and veterans athletics and was referred to you by Roger Robinson of Wellington New Zealand after I have made enquiries about an article on age grading which appeared in New Zealand Runner.


I have been working on a system of age grading here in South Africa for some time and was most interested in an article on the same subject received from Roger Robinson. I have been working more or less along the same lines as reflected in the article and as it may be of interest I take the liberty to forward a summary of what I have done as well as a short article which is an illustration of the system on which I have been working.

I have experience of long distance running (10 km to 100 km), Veterans Athletics (800 m to 10000 m), and Cross Country races over the last 12 years (I am turning 68 in November). I have been monitoring race results over the past 9 years, and I believe that I am qualified to some extent to state that the age grading table which is the basis of my system is realistic and can be applied with confidence. The contents of the articles should explain how I arrived at the age grading indices.

I am confident that a similar approach can be followed for field items (javelin, shot put, discus, high jump etc) but because this is not within my field of experience, I have not given it much thought.

I trust that you may find the enclosed articles of interest and that it may be of some help to update the WAVA tables should anybody find it necessary to do so.

Regards


Willie Loedolff