Joplin RoadRunners

Hi,

At the Joplin RoadRunners, we often "age-grade" our results in order to better appreciate the effort you made, taking into account your age and gender.
It is obvious that a 10-year old boy, a 25-year old man and a 64-year old (or young) woman, all running the same time in the very same race, should be regarded as similar.

This is why we "handicap" your time to show the relative effort it took for you to achieve this result. Various other sports use a handicap system (think of golf) to match beginners and professionals. Running has a handicap system as well, called age-grading.

Not familiar with age-grading and how this is different from the more familiar age-group awards? Not to worry, here is a little explanation.

Read this to understand how special an award this really is and why, at the Joplin RoadRunners, we list and award your age-graded results whenever possible.

Hope to see you at one of our future races!

Henri Coeme
President
Joplin RoadRunners

Age/Gender Performance Grading

What is the difference and why does JRR uses age graded performance ranking aside from age group awards?

(by Henri Coëme)

Age group awards are a modern-day addition to traditional racing. Since the Greek Olympics and until fairly recently, only overall winners (men) were crowned. Even after women were admitted to the Olympics in 1900, the laurels went only to the winners (gold, silver and bronze). Most larger races around the world still only award top prizes. One of the largest European races, the Brussels 20K, with about 40,000 athletes each year and a race I have run a number of times, awards a first male and female award; nothing else.

Only a few years ago (1969 to be precise), the terms Master Running (age 40) and Age Groups made their entrance in racing. This was a blessing for a lot of older and very young runners since those would normally not end up in the top pack. Imagine being a 53-year old woman and ending up 2350th at the above-mentioned Brussels 20K, a very good result by any measure, but basically lost in the pack (and lost in the national newspaper, the next day, which lists every single participant in an extra edition).

But with the dawn of group awards, you could now just be the best in your age/gender group. USATF groups are organized in 5- or 10-year brackets, and by gender, listing the best in that particular category.

So, then how does that differ from age/gender grading?

Age/gender grading is a system, used by the World Masters Association (WMA) to create an even playing field between all ages and both genders. Since age differences matter especially at ages over 40, it is understandable how this system would be used for US Master races.

The age/gender grading is based on the understanding that men and women in their 20-30's reach their peak racing performance. Ages younger and older are slower at similar distances. To create a level playing field, each runner's chip time is given a "handicap-factor" which improves with the age difference from these peak years. Adjusting the runner's time with this handicap factor provides an *age-adjusted time*. This is the time you would have run had you made a similar effort in one of your own peak years.

In addition to this age-adjusted time, a runner's chip time can also be calculated as a % of the world's top time for the same age and gender.

For any given distance,

$$\text{Age graded (AG) \%} = \frac{\text{Your time at this distance}}{\text{The best possible time of someone of your age and gender}}$$

E.g. Lets take a 5K race

- ✓ A 25-year old man receives a neutral handicap-factor of 1 (i.e. no handicap at all since he is in his peak-performance years). Let's say he runs a time of 23:00. His age-adjusted time is 23:00 x 1 = **23:00**
  This is running at **54.86%** of the world's best performance speed (=AG%) for a 25-year old (which is 12:37).

- ✓ A 53-year old woman (beyond her peak performance years) has a handicap-factor of 0.8292.
  Let's say her time was 27:35. That makes her age-adjusted time 27:35 x 0.8292 = **22:52**.
  Her AG% is **63.02%** of the world's fastest speed for a 53-year old woman (which is 17:23).

- ✓ A 69-year old man (well beyond his peak performance years), gets a handicap of 0.7402.
  If his race time was 28:22, this makes for an age-adjusted time of 28:22 x 0.7402 = **21:00**.
  He ran at **60.11%** of world's fastest speed for his age and gender (which is 17:03).

The age-adjusted time allows runners to compare themselves with their own previous performances at that same distance.

The age-graded % allows runners to compare yourself to any other runner, man or women of any age, and at any distance.

So, in the above example, even though the 25-year old won the race, the 69-year old man should be proud for setting a great age-adjusted time. He can compare this time of 21:00 with any other age-graded time he ever ran or will run at the 5K and set an *age-adjusted PR* at any age.

The 53-year old woman has the best age graded % (AG%). She put in the best relative performance of all 3 runners since she ran at the fastest relative pace (when compared to the fastest woman in the world of that age).

So, how would you compare the performance of these 2 runners?
Both are recent MO record holders in the 2-mile for their age/gender, set at one of our annual Pumpkin Run.

➢ **Lynlee**: 5-yrs old (F) - MO record in 23:34
Handicap factor: 0.725
Her age-adjusted time: 23:34 x 0.725 = 17:05
AG% = **52.83%** (because the world's best 5-year-old girl runs 12:27)

➢ **Dave**: 91-yrs old (M) - MO record in 30:24
Handicap factor: 0.4104
His age-adjusted time: 30:24 x 0.4104 = 12:29
AG% = **63.38%** (because the world's fastest 91-year-old guy runs 19:16 – believe it or not!)

So, even though Lynlee left Dave behind in the dust by a full 7 minutes, and even though Lynlee's record was impressive just because of her young age, it was Dave's record that took slightly more of a relative effort.

So, now back to our question, why do the Joplin RoadRunners use AG% instead of (or in addition to) age-group results?

Age groups are great if you have enough runners in each age group. Age group awards become somewhat nonsensical in smaller races where you have just a few runners in each age group. There are a few solutions.

1. **Set standard age groups with awards to top-3 in each age group**
   USATF age divisions are -14, 15-19, 20-24, 25-29. 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85-89, 90+ for both male and female.
   If you have more kids in the race, you can add more categories in the lower ages. If you have no participants in the upper ages, you could drop those.

2. **If this creates too many groups, you could consider 10-year groups**
   -19, 20-29, 30-39, 40-49, 50-59, 60-69, 70-79, 80-89; 90+ for both male and female
   and adding more groups at the lower end or fewer at the upper end as needed.
   Even so, in small races (under 50 runners), you still end up with too few participants to make the award significant.

3. **Set 10-year age groups with awards only to the top (one) runner in each age group**
   This still leaves you with about 14-18 awards. Not only would this still mean deluding the value of the award, but it would also be an unfair advantage for age groups with just 3, 2 or even just 1 participant (what is the value of the group award given to the only 40-49 year old participant?).
   It would be an unfair disadvantage to those groups that are well represented (how would like to be the second woman in the 30-39 age group which is over-represented with 6 runners, in a race with less than 50 participants?)

4. **Set age-graded awards as well as group awards**
   We do this now for most of our races that are well attended. However, for smaller races, this quickly ends up creating an over-abundance and watering-down of the value of awards (in addition to the cost). In addition, you don't want to award anyone twice, so the calculation is quickly becoming quite complicated and the end-result is unnecessarily confusing.

5. **Set age-graded awards only**
   In this scenario, everyone - regardless of their age, gender or number of runners in their specific age group - has an equal chance to earn a performance award, based on their individual and relative performance of the day.
   In the above 5K example, the 53-year-old woman gets the first AG% prize, the 69-year old man the second

price and the 25-year old the third prize. And if the 25-year-old is the overall winner, he'd get the overall prize only.

Once the races get over 100 participants, age groups are beginning to make sense, first in 10-year brackets, then later in 5-year brackets with races of 200+ participants. Even in those cases, it is valuable to know your age-adjusted time and AG%, to make a fairer comparison with your younger self and with all other runners.