



Equity for Antique Athletes: An observation relative to masters age groups

Lon Kilgore PhD

Age groups exist in sport to control for the maturational effects of aging on the human body, youth through senescence. They intend to level the playing field for youth and masters athletes. Age group barbell sports for older athletes, masters, has been around since 1974, originating in Weightlifting and then spreading over to Powerlifting. The structure of age groups has, and still varies quite a bit by sport and organization. In Powerlifting there are two common age group stratification conventions:

USA National Governing Body Divisions

1A	40-44
1B	45-49
2A	50-54
2B	55-59
3A	60-64
3B	65-69
4A	70-74
4B	75-79
5A	80-84
5B	85-89
6A	90-94
6B	95+

International Governing Body Divisions

M1	40-49
M2	50-59
M3	60-69
M4	70 and older

If Powerlifting performance decays slowly between 30 and 50 (see table below), amounting to only a few percent of the open world records, then the international standard of one decade age groups can be warranted. However, after 50 the rate of performance loss occurs rapidly and someone age 50 can have a much higher baseline capacity, on the order of 10% greater than a person aged 59. The difference in physiological and powerlifting performance capacity becomes wider with passing decades. From age 50 onwards the use of internationally adopted 10-year-long age groups places older lifters at a severe disadvantage compared to the lifters early in their tenure in the same 10 year age group:

<u>Age</u>	<u>Open World Record</u>	<u>Age group related disadvantage</u>
30	100% capacity	
40	-3% capacity	-3% disadvantage over 30 year old
50	-7% capacity	-4% disadvantage over 40 year old
60	-17% capacity	-10% disadvantage over 50 year old
70	-27% capacity	-10% disadvantage over 60 year old
80	-53% capacity	-26% disadvantage over 70 year old

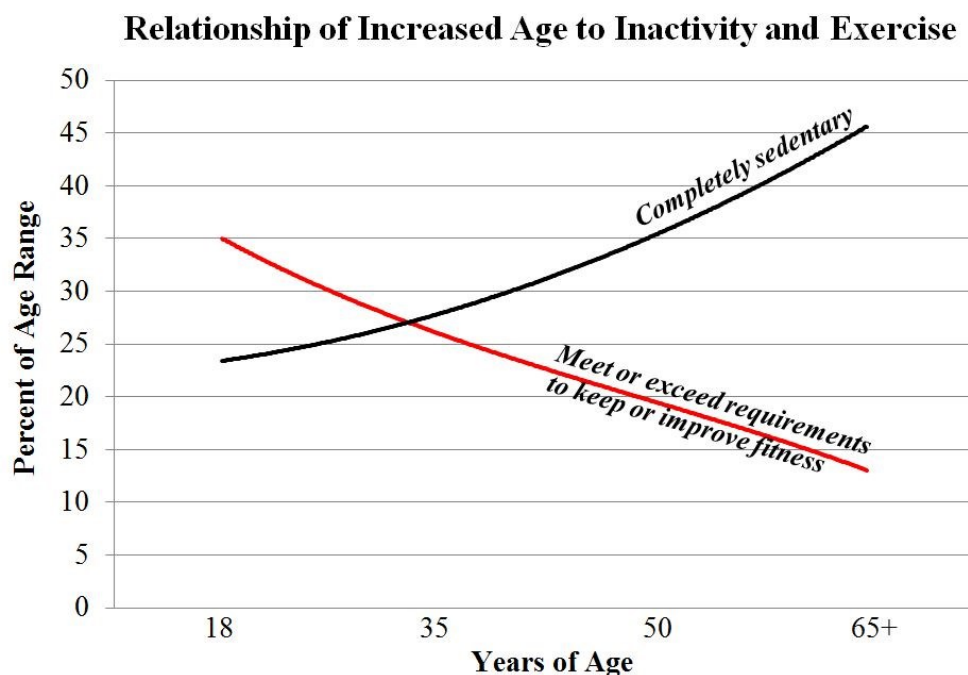
In respect to international competition and fairness to athletes, this argues for the adoption of the five year age groupings used at the national level in the USA for powerlifting, which is nearly identical to that of national and international weightlifting competitions (weightlifting's lowest age group is 35-39, International Masters Weightlifting Association).

In CrossFit competitions, the highest age group starts at 65 years of age and has no upper limit. This means that age groups are stopped at the point where the most rapid decrements in strength, endurance, and mobility start. Every competitor of about 69 years of age and older are competing at a large disadvantage. However and ultimately, the 10 year age group spans in powerlifting and the conglomeration of everyone over 64 in a

CrossFit competition into a single group is an operational issue, not one really based on performance equity across age groups.

The number of active competitors in the oldest age groups is comparatively low and sport governing bodies will tend to exclude age groups or combine age groups to control the number of competitors in any competition. Having 13 5- year age groups times 23 weight classes (12 male and 11 female, USA Powerlifting) means that a masters powerlifting event can have 299 individual age/weight class divisions. Attracting competitors from all age groups and all weight classes to create a deep field across the board is not the norm in powerlifting, weightlifting, or CrossFit (age grouping only, no weight classes). Tracking such a complex performance data set requires, time, effort, and resources. Operating such an event and providing awards is costly. To reduce required time of competition, manage competitor load on event conduct and venue limitations, and to create a more economical event some organizations implement mechanisms to limit the number of competitors. The international convention for powerlifting uses only 16 weight classes (8 male and 8 female, International Powerlifting Federation) in only 4 masters age categories. That results in only 64 age and weight class combinations to be contested in an international masters powerlifting event. This produces a large reduction in organizational and financial stress on event organizers. However, international masters weightlifting has been providing 14 age divisions across all male and female athletes for decades, international masters powerlifting can do the same.

Cutting age groups and classes does not provide an equitable playing field across the ages. But it does give us a playing field. While the international powerlifting (and CrossFit) age divisions are not perfect, the only way to improve age equity across the lifespan is to get more and older individuals into competition. That has been historically a massive challenge.



For many decades, data suggests that right at the time the average population becomes eligible for masters competition (35-40 years of age) there begins a significant increase in the percentage of those who choose to become totally sedentary (black solid line). At the same time there is a dramatic reduction in the percentage of the population that actually goes to the gym or trains (red solid line). In order for governing bodies or competition organizers to feel comfortable in offering a better spectrum of age groups, we have to flip the lines in the above graph (sedentarism down, participation up), or at least flatten both line slopes. CrossFit has had a

great and beneficial influence in getting masters aged trainees to become active in the gym, stay more active, try weightlifting, and try powerlifting. Since CrossFit's inception, the number of masters competitors has grown in both barbell sports. But only one driver of change is not enough. Both barbell sports and the fitness community as a whole need to piggy-back on CrossFit's strides forward and make masters programs that are widely available, effective in purpose, easy to navigate, affordable for fixed income older retirees, fulfilling for the competitor, and not a financial black hole for event organizers and volunteer staff. Changes will not be front loaded, it will only be after the older age groups start to be heavily participated in that we see adjustment of age groups to reflect the reality of physiological and performance decay with age.