THE AGE PROBLEM IN CANADIAN SWIMMING

by Rick Madge

It probably seems ridiculous to talk about a serious problem in Canadian swimming after their fantastic Olympic results in Rio. Canada won six medals—including one gold—and had an incredible number of second swims. It's the best the country has done in a long time.

But those results are just masking a problem that needs to be addressed right away.

The problem is this: Canada's top swimmers are much younger than the rest of the world, and Canada is getting younger each year.

True, it has some great junior swimmers as well as some great university swimmers, but beyond that, Canada has very little. And the problem is that the vast bulk of Olympic medalists and Olympic finalists are, on average, much older than elite Canadian swimmers.

Put another way, Canadian swimmers are exiting the sport before getting to their prime years.

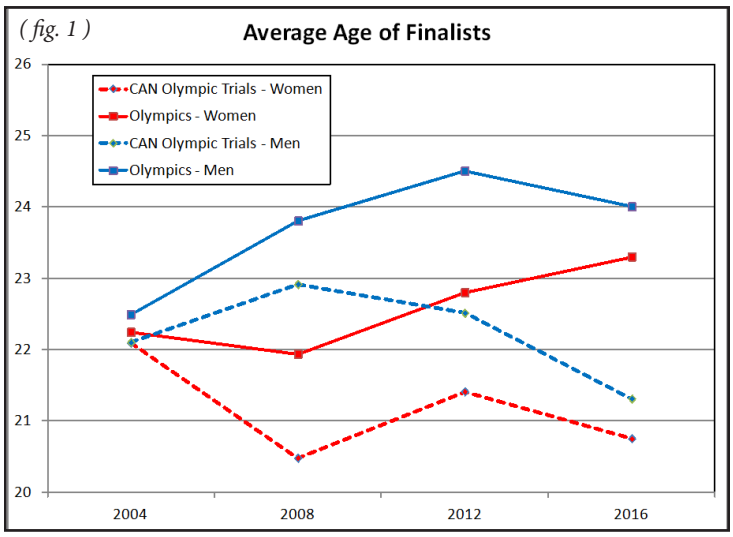
Swimming Canada and its funding partners—including Canadian Sports Institutes, Own The Podium and the Provincial Sporting Organizations—needs to address this now, as well as revisit many of its policies that may have led to this situation. In particular, these organizations need to start programs immediately to assist post-university swimmers in finding employers or sponsors who can allow them to continue in the sport...instead of policies that push them out the door.

For the purpose of this article, these organizations collectively will be referred to as Canadian Swimming Stakeholders.

EXAMINING AGE DATA

Let's take a look at the data. **Fig. 1 ("Average Age of Finalists")** includes Canadian Olympic Trials finalists and Olympic finalists from 2004 to 2016.

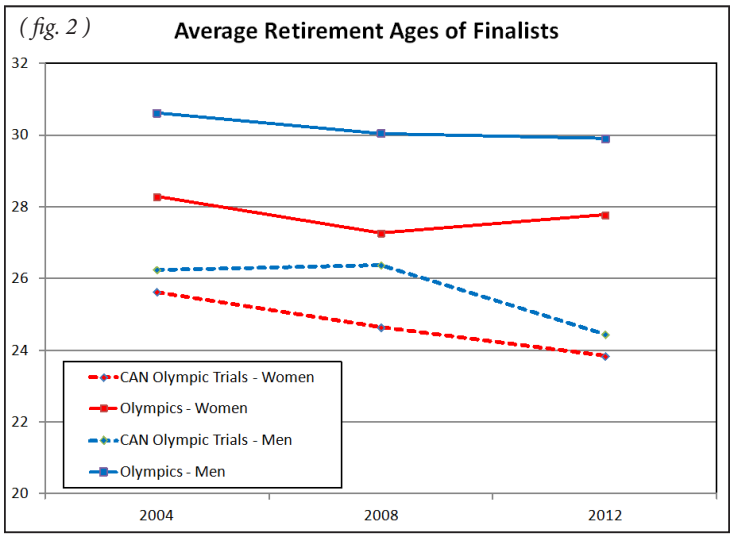
(fig. 1)



What this shows is amazing. In 2004—a truly horrible year for the Canadian Olympic team—the average ages of Canadian Trials finalists and Olympic finalists were very close. Canadian swimmers were statistically the same age as the rest of the world, but clearly something else was getting in the way of elite performances.

Every Olympics since 2004, the age gap has widened to the point that it is now an astonishing 2.5 years! Canada is competing with younger swimmers against a world of older, more mature swimmers.

One interpretation to this data is that young Canadian swimmers are pushing older Canadian swimmers out of the Olympic Trials finals. **Fig. 2 ("Average Retirement Ages of Finalists")** addresses this interpretation by looking at the



average retirement age of finalists from the 2004, 2008 and 2012 Olympics and the Canadian Olympic Trials.

The difference here is even more dramatic. Elite Canadian swimmers are retiring far earlier than elite international swimmers—even in 2004. By 2016, we can see a retirement difference of four years for the women and five-and-a-half years for the men. Clearly, Canada's lack of older swimmers is due to the fact that its swimmers are retiring far earlier than the rest of the world. In fact, they are retiring at about the age that elite international swimmers are just reaching their prime!

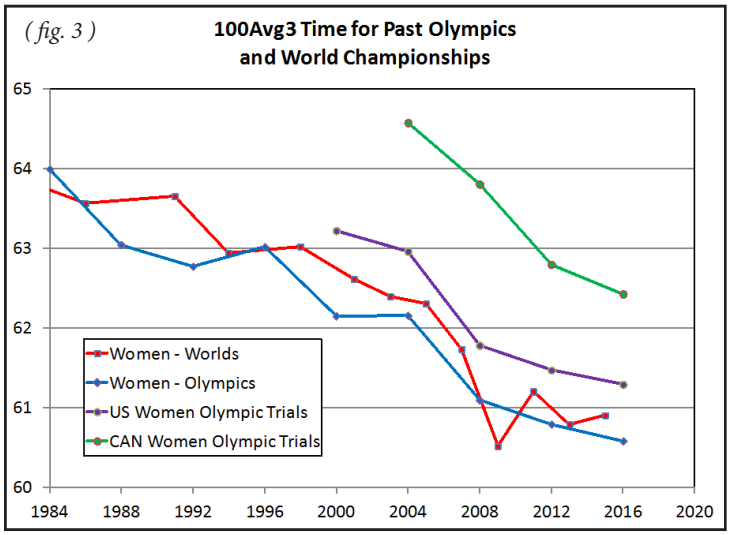
AUTHOR'S NOTE: *It may look like the average retirement age of Olympic finalists is decreasing slightly. However, I couldn't include any swimmers who had not yet retired (and there were a LOT). A quick look at the data while estimating retirement ages for continuing swimmers suggests that the average retirement age is probably increasing slightly.*

EXAMINING PERFORMANCE DATA

The next step was to see if this lack of older swimmers was affecting Canadian performances. After all, Canada did win five medals in Rio and had an enormous number of second swims and finalists.

In my recent blog post, "Are Swimming Performances Starting to Stagnate?" (see https://coachrickswimming.com/2016/09/01/are-swimming-performances-starting-to-stagnate/), I developed a new method to analyze the performances at a swim meet, and then developed a single number for each gender to quantify those performances. This metric, called 100Avg3, takes the average of the top three times for each Olympic event, converts this average to 100 meters, and then averages all of these times to get the 100Avg3 time for the meet.

Fig. 3 ("100Avg3 Time for Past Olympics and World Championships") applies this method to the Canadian and American Olympic Trials and includes my Olympic and World Championship calculations from my blog post.



We can see the world gradually getting faster, with a significant drop during the brief "shiny-suit" era (2008-09). And we can see the U.S. Olympic Trials tracking world times very closely.

In 2004, Canadian women were about 2.4 seconds per 100 meters slower, on average, than the rest of the world. This probably explains the poor performance in Athens. But since 2004, we see a significant improvement in performance times, with the gap to the rest of the world getting smaller. By 2016, Canadian women were only 1.8 seconds per 100 meters slower, and were competing at the level the world was at in the early 2000s. This improvement is quite encouraging for Canadian Swimming.

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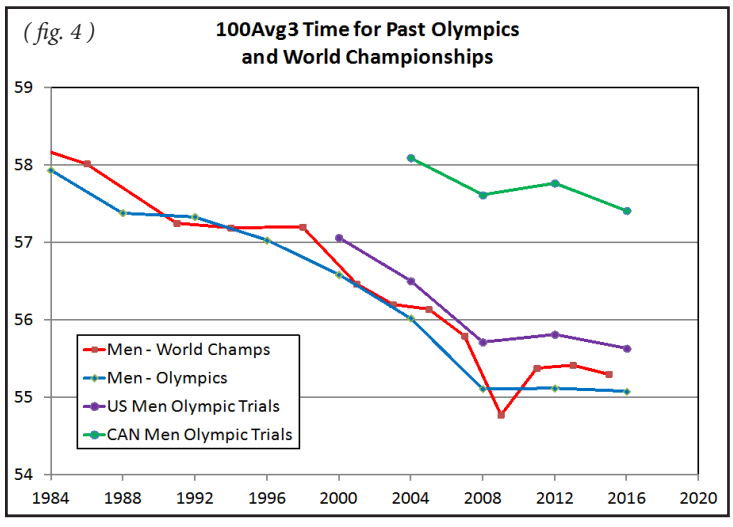

The men's chart (***see Fig. 4, previous page***) shows a drastic difference. In 2004, Canadian men were two seconds higher than the world 100Avg3 time, and that difference has increased since then. The gap is now sitting at 2.4 seconds. Canadian men are now competing at the level the world was at in the late 1980s, and the improvement trend is not encouraging for Canada.

Whatever led to improvements for Canadian women since 2004 has clearly not worked for Canadian men. The big question is why Canada's men are doing so much worse than its women?

MEN AND WOMEN

The answer lies in the difference between how men and women compete. Women generally compete on aerobic fitness and strength/weight ratio. The limited testosterone in their bodies limits their overall strength, so years and years of strength training can only have limited benefits.

Men, however, compete primarily on the basis of strength. Testosterone levels much higher than women allow men to build far more muscle, and that additional muscle must be trained before it's effective. It's the reason why teenage boys can look muscular, but, in general, have significantly less power than equally muscled men.

To illustrate this difference in training time required to reach elite levels, **Fig. 5 ("Medals by Age")** breaks down the Olympic swimming medals from 2004 to 2016 by age.

# of Olympic medals from 2004 to 2016 won by swimmers who were	Women	Men
18 or younger	16	3
19 to 20	28	21
21 to 26	95	100
27 to 28	9	22
29 or older	8	10
NOTE: not including relays; 156 total individual medals available for each gender		*(fig. 5)*

Notice the incredible difference between men and women in the 18-and-under age bracket. The difference decreases noticeably for 19- to 20-year-olds. Then the bulk of the medalists are pretty evenly distributed for the ages between 21 and 26. Lastly, there is a slight increase in men's medals over women for the older ages, but clearly women can still win their share of medals when 27 or older.

This table shows that women can compete at an elite level at ages much younger than men, while still competing in the older age ranges as well. From the Canadian point of view, this explains how 16-year-old Penny Oleksiak was able to perform so incredibly well, and why Audrey Lacroix at age 32 was still able to get a second swim in the women's 200 fly. It also explains why Canada's young male teenage stars, such as Javier Acevedo, had trouble breaking through.

CANADA AT RIO

Fig. 6 ("Rio Performances") takes a look at how Canada did in Rio. There are several things that can be concluded from this table.

Rio Olympics Women	Second Swims (Age)	Finals (Age) - Place
50 FR	C. Van Landeghem (22)	
100 FR	P. Oleksiak (16) Van Landeghem (22)	P. Oleksiak (16) – 1st
200 FR	K. Savard (23) B. Maclean (22)	
400 FR		B. Maclean (22) – 5th
100 BK	K. Masse (20) D. Bouchard (25)	K. Masse (20) – 3rd
200 BK	H. Caldwell (25) D. Bouchard (25)	H. Caldwell (25) – 3rd
100 BR	R. Nicol (23)	R. Nicol (23) – 5th
200 BR	K. Smith (22)	K. Smith (22) – 7th
100 FL	P. Oleksiak (16)	P. Oleksiak (16) – 2nd
200 FL	A. Lacroix (32)	
200 IM	S. Pickrem (19) E. Seltenreich-Hodgson (21)	S. Pickrem (19) – 6th
400 IM	E. Overholt (19)	E. Overholt (19) – 5th
Men		
50 FR	S. Condorelli (21)	
100 FR	S. Condorelli (21) Y. Kisil (20)	S. Condorelli (21) – 4th
1500 FR		R. Cochrane (27) – 6th
100 FL	S. Condorelli (21)	*(fig. 6)*

First of all, the Canadian women are certainly doing much better than the men. But notice that nearly all of this success is coming from women who are 23 years old or younger.


[Photo Courtesy: Vaughn Ridley/Swimming Canada]

» PENNY OLEKSIAK

Canadian women are clearly benefiting from the fact that younger women can compete at the elite level more easily than men. But it also shows that Canada has a huge hole in the program in terms of older female swimmers.

Secondly, the limited success on the men's side is generally coming from young men, although Ryan Cochrane, 27, finished sixth in the 1500 free. Interestingly, Santo Condorelli had three of the five Canadian men's second swims, but is actually U.S.-trained and can compete for Canada on the basis of his Canadian-born mother. Since he isn't a product of the Swimming Canada system, it's almost unfair to include him in the analysis. Without him, Canadian men only had two second swims.

Given the generally young age of elite Canadian men and the tendency for elite international men to be older, it may not be surprising that Canada had limited success on the men's side in Rio.

POSSIBLE CAUSES OF CANADA'S EARLY RETIREMENT PROBLEM

After reviewing the data in Figs. 1-6, it's only natural to speculate as to why Canada has a problem of keeping its swimmers in the sport as long as other countries around the world.

The problem is seriously hurting all ages on the men's side, and while Canadian women are certainly achieving success, the data suggests that keeping Canada's elite women in the sport longer would certainly bring even more success.

Here are four possible reasons as to why Canadian swimmers are exiting the sport far too early:

1) The sport's infrastructure in Canada doesn't support swimmers past university age. Once a swimmer has finished college, he or she is faced with limited options. Generally, universities will allow post-university swimmers to train with them, but not all of those teams are geared toward international swimming. The competition season is filled with university meets, while elite swimmers need to get to international meets.

Another option is for swimmers to go to one of the few Canadian super clubs, where they will be expected to compete at international meets. However, there aren't many such clubs, and finding one in the same area as a potential job market can be difficult.

The key here is that the swimmer must be either independently wealthy, or he or she has to find a job **(see #2 below about funding problems)**. But the job needs to provide adequate pay plus frequent time off for training and swim meets. And if at all possible, it should provide some experience to assist the swimmer in his/her post-swimming life.

To make things worse, even universities are not fully on board with supporting athletes. Many university athletes in challenging programs (e.g., engineering) report that no special consideration is given to athletes when there's a conflict between a big athletic competition and tests, exams or assignments.

Possible Solution: Canadian Swimming Stakeholders need to do far more to assist swimmers during their post-university life. They need to assist swimmers in the process of finding appropriate jobs that will provide the flexibility required to compete at an elite level, and possibly even provide them with useful experience for their post-swimming life.

They should also be more active in assisting swimmers to find corporate sponsorships so that the swimmer doesn't have to make that "eat-or-swim" decision.

2) The Canadian Swimming Stakeholders made changes in the last

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[Photo Courtesy: Rob Schumacher/USA Today Sports Images]

» SANTO CONDORELLI

quadrennial toward funding and team selection on the basis of a multiple priority system, including an important one that favors younger fast swimmers over post-university faster swimmers. This "trending time" criteria places even more arbitrary obstacles in front of post-university swimmers who are already facing difficult job/training tradeoffs. Ignoring Canadian Trials champions and/or taking away national funding just pushes older swimmers out of the sport.

The worst part is that there is no guarantee that these younger swimmers will ever get faster than the older ones they replaced. It's all a bet on the part of the Canadian Swimming Stakeholders—and one that often has unfortunate consequences for the defunded swimmer.

Here's an example: Zack Chetrat of Toronto won the 200 fly at the 2014 Canadian Swimming Trials. However, Chetrat, who was 24 at the time, wasn't selected for the British Commonwealth Games team. Instead, Canada selected Evan White, 18, and Gamal Assaad, 19, who were each three or more seconds slower than Chetrat. And while both White and Assaad swam well at the British Commonwealth Games, neither made finals. To his credit, Chetrat didn't quit, and in 2015, he was selected to the Pan Am Games team and ended up with a silver medal and a Canadian record at the Games.

But not everybody is so fortunate. Some defunded swimmers in their early 20s responded by quitting. The case of Matthew Swanston, for example, is well known. As a multiple-time Canadian champion in backstroke, Swanston ended up leaving the sport in anger after too many slights on the part of Swimming Canada.

The impact of this funding/team selection policy on older swimmers in Canada has been devastating. Rather than face that type of treatment, they pre-emptively exit the sport and look for a job so they can start their "real life." The result is that Canada's few older elite swimmers are often self-funded or family-funded.

Possible Solution: The Canadian Swimming Stakeholders fully need to embrace the philosophy of adequately supporting the fastest swimmers in Canada—regardless of age. These swimmers need to be celebrated and funded, where possible—not demoralized and set adrift.

At the same time, the Stakeholders should continue to provide a solid development and acknowledgement program for younger swimmers with a promising future, while being aware that fast swimmers in their mid-teens don't always end up being fast swimmers in their mid-20s .

3) Canada is one of those few countries that has established artificially lower qualifying times to swim in the Olympics (or other major championships). As far as I can tell, these times roughly correspond to somewhere around 12th- to 16th-place at the World Championships from the year before. The rationale of not bringing anyone who doesn't have a reasonable chance for a second swim may sound harsh, but it's legitimate.

However, the ripple effect is enormous. Swimmers know that you not only have to place in the top two at the Trials—something every swimmer is fully prepared to address—but you also have to swim a truly world-class time in the finals. Putting such artificial, but significant roadblocks in front of swimmers may tip the risk/reward balance in favor of exiting the sport and starting their non-competitive swimming lives. And this decision to exit the sport will affect everyone around that swimmer as well.

Putting this in perspective, Canada only fielded two male swimmers in two events in Rio—the 50 and 100 free. In six other events, Canada fielded one male swimmer...and in five more events, it didn't field any swimmers.

The bottom line is that the harder it is to make the team, the lower the chance that a swimmer will commit to the years of hard training and put off their life in order to take that risk.

This is the exact opposite of generating excitement and emotional connections in the sport.

Possible Solution: Get as many swimmers into major international competitions as possible. Find the money however possible. When this happens, the excitement of being in a major championship ripples through the whole swimming community.

4) Changes by Swimming Canada in the last quadrennial also involved drastically lowering Age Group Nationals (AGN) qualifying times, requiring swimmers to make three times just to swim in the meet.

In 2012, the AGN meet had roughly 1,800 swimmers in attendance at the four-day meet, and that certainly strained the ability of the meet organizers to make things run smoothly. Swimming Canada responded the next year with the changes previously mentioned.

To many, the changes seemed like a bit of an overreaction, but necessary nonetheless. But the underlying problem was that the changes resulted in a meet in which there weren't even enough qualifiers to fill some finals!

It now appears that this meet may be cancelled permanently, in favor of a junior nationals-type meet.

There are three repercussions from these AGN qualifying changes:

• The big meet format created a "depth machine" for Canadian Swimming. Qualifying for this meet galvanized not just the swimmers in attendance, but the swimmers in their home clubs. This created a huge amount of excitement in age group swimming, and was the focal point of the year for many.

The drastic changes by Swimming Canada created a meet roughly one-third the original size, sending a massive message of failure to age group swimmers as well as the other swimmers in their home club. If you didn't make the new times, you just weren't good enough. Age group swimming survives on excitement and the contemplation of the possible. The changes seriously hurt that.

• The new qualifying requirements benefited early-maturing swimmers and genetically-gifted swimmers, and they penalized late-maturing swimmers. The problem is that Canada's age analysis shows that swimmers don't reach their peak until their early- to mid-20s, and can swim at an elite level into their 30s. Is it reasonable to think that pressured, early-maturing swimmers will stay in the sport that long...or that discouraged, late-maturing swimmers will stick around to see if they can make it big?

• The tougher qualifying times put even more pressure on young swimmers to train even harder in order to make those times. This grinding effect may, indeed, push some swimmers to higher levels, but it can also lead to burnout. And Canada doesn't have a large enough population base to grind swimmers and hope they will remain in the sport a decade later.

Possible Solution: It may be too late now. But if possible, Swimming Canada should reinstate qualifying times for Age Group Nationals that allow as many swimmers as possible into the meet. The ripple effect of that excitement will galvanize the swimming community.

The Canadian Swimming Stakeholders should also develop methods of ensuring that late-maturing swimmers aren't left out of the excitement. Fast age-groupers are great, but Canada needs these potential future stars in the sport for at least another decade or more.

SUMMARY

The data clearly shows that Canadian male and female swimmers are leaving the sport far too early. The lack of older elite male swimmers has been devastating in the country's international performances.

And while the women are doing much better than men in international competitions—mainly because women can compete at an elite level at a much younger age than men—Canada is still losing out on the benefit of having its female swimmers stay in the sport longer. Remember, Canada should want its elite athletes staying in the sport until their late-20s or early-30s. And it is nowhere near that right now.

The Canadian Swimming Stakeholders need to acknowledge and investigate this problem as soon as possible. Policies should be revisited, and an honest evaluation carried out to determine the real effects.

Just as importantly, the Stakeholders also need to start programs to assist post-university swimmers in finding suitable employment that enables them to swim as well as enhances their post-swimming careers. And they actively need to seek out corporate sponsorships for post-university swimmers. ◄

About the author:
Rick Madge is head coach of the Mighty Tritons Aquatic Club in Milton, Ontario, Canada, and is a former Canadian national swim team member (many decades ago). He's also an engineer, and he uses his love of science and his love of swimming when writing his CoachRickSwimming.com blog.