



2022 Season

***Note that all dates and events are subject to change again this season.
Stay tuned to event websites and AXCS e-MasterBlasts for updates thru the winter months.***

***Noquemanon Ski Marathon
Lake Placid Loppet
Ski to the Sun Marathon
Craftsbury Ski Marathon
Boulder Mountain Tour
Alley Loop Nordic Marathon
City Of Lakes Loppet
North American Vasa
Mora Vasaloppet
Minnesota Finlandia
American Birkebeiner
Tour of Anchorage
Pepsi Challenge
Yellowstone Rendezvous
Great Bear Chase
California Gold Rush***



xcskiworld.com



From USA
ASM Series 21/22
What A Difference A
Year Makes!

The American Ski Marathon Series consists of 16 of the largest and most popular distance events across the USA. If you are going to get a snapshot of what Winter 21/22 is going to look like for adult XC skiers in our nation — the ASM Series is your first go-to resource.

As we all know, this time last year was offering up a pretty bleak situation. Virtual events were being planned for the majority of ASM races and even most of the events that had a route forward for “live” racing -- COVID case loads over the early winter changed most of those plans.

A year later things look a whole lot better.

AXCS has been researching the latest information from ASM events for weeks now and the overall picture as of press time is really encouraging.

13 of 16 ASM events have already announced that they are officially going forward with 2022 events. Dates and schedules are published plus multiple events have opened registration.

Of the three events not officially announcing their marathon plans, Craftsbury Ski Marathon is probably the closest to a decision (potentially folks out East will have word by the time this issue reaches you!). Both Lake Placid Loppet and California Gold Rush have yet to post event schedule updates for 2022.

Every ASM event website with updated 2022 has posted a COVID plan for this winter. A quick peek at those plans:

--> The races themselves are being planned as more “normal” than not. One interesting addition at several ASM venues is the continuation of an “open track” option from 20/21. You ski the course on specific days with or without support stations or official timing. For folks that are not interested in competition and want to avoid the crowds of “main event” days, this is a really attrac-

tive alternative. Big European ski marathons have featured this additional format for decades with big results. Now it may be catching on in the U.S.!

--> Every effort is being made to keep the event activities outside as much as possible.

--> Whenever inside, skiers are asked or required to use face coverings.

--> Early event plans do differ on how ASM events are handling post-race gatherings. This is probably the most fluid situation for big winter events as weather combined with current COVID case loads will play a huge role in determining the best plan. It is also an area that skiers themselves may use their own comfort levels as a guide.

Of course all best laid plans are subject to change, but right now the ASM Series organizers seem to be adopting a similar approach as 2022 Masters World Cup organizers up in Canmore/CAN. That is, keep high risk areas (indoors and crowds outside) to a minimum. Use face coverings where necessary. Trust that the good news regarding outdoor aerobic events being super safe continues throughout Winter 21/22.

-- End --



Photo: MWC2019



From Norway Avoid The Masters Trap

*The following translated and summarized vintage article by **Inge Scheve** originally appearing on Norway's **SkiAktiv.no** and also was used in the Summer 2013 AXCS Summer Digest Translation and summary exclusively for AXCS media.*

Even though Kristen Skjeldal, a former Norwegian National Ski Team racer with several Olympic medals and World Championships on his resume, is still floating on routine, he will eventually become a regular master. But his training program is still based on the same principles as when he was on the national team.

In winter 2012/13, Skjeldal won his age category at the Holmenkollmarsjen by more than 8 minutes in the very competitive M45-49 category. The year prior he was 8th in the 50K at the Norwegian Nationals in Fauske. How did he manage that, year after year?

"I've never really let myself go. I think that might be part of the secret," Skjeldal says to SkiAktiv.no, admitting that his lifestyle too is sliding towards that of many regular masters.

However, Skjeldal benefits from having an active day job. He currently works at the ski academy in Voss, where he coaches junior cross-country skiers and biathletes. And just like the students, Skjeldal gets to train three days during the school hours. In addition to those

workouts, Skjeldal does a few workouts on his own after hours and on weekends. Combined, this creates a well-balanced training diet, he explains.

Mostly easy distance

"My training program is still based on the same principles as it was when I was skiing with the national team. Most of my workouts are easy distance, and then I do at most two hard intensity workouts on top of that," Skjeldal explains.

"But if you add up the hours, I do a higher percentage of hard workouts now, because I don't have the time to do as much easy distance as I did when I skied full time," he adds.

But there are other differences as well compared to when Skjeldal was representing Norway. While national team skiers train upwards of 20 hours per week certain parts of the year, Skjeldal now has to pay attention to his family and his job on a daily basis.

The masters trap

Skjeldal sees a lot of masters fall into what he calls the masters trap. "The biggest challenge for most masters, is to balance work, family and workouts. You need both time and energy for your workouts, and be smart about the workouts you do fit into the plan," Skjeldal says.

"A lot of masters tend to compensate for lack of workouts by going a little too fast on the easy distance. When you do that over time, you often end up with a kind of stew that's neither easy distance, nor true intensity. The tempo on the easy workouts is too high, which leaves you a little too tired for the hard workouts," Skjeldal explains.

"The intervals are then more like a pace or fast distance workout because you are not quite fresh, and you never get into that groove where you can really push it on the intensity workouts," he notes.

Continued on page 27, right column.



Photo: MWC2017



From USA & Canada

The Self-Directed Skier

Written by XC Oregon Coach/Director J.D. Downing

The title of this article refers to something AXCS member and former Canadian and USA National Team Head Coach Marty Hall put down on his AXCS membership renewal form a few years ago under the “club or training group” field. Anyone that knows Marty knows that he is about as straight a shooter as they come — along with being someone that (just guessing) annually supports dozens of Nordic groups far and wide. So your loyal AXCS National Director instantly knew where Marty was coming from with this nugget of wisdom. I also immediately jotted down a note-to-self to make sure to write a little piece on the subject — which you finally see here now.

One of the defining characteristics of Nordic skiing is that it is a sport for life. Although certainly there are many AXCS members that started Nordic skiing well into their adult years, there are probably just as many that at least experienced the sport for the first time as a child or teen. Some of us not only started skiing, but also racing in those formative years and given the tremendous growth of youth/junior programs in the USA over the past quarter century, one would hope that we’ll see a proportional growth in adult racers in coming decades as a result.

One huge key to the U.S. seeing former youth/junior/college skiers continuing to swell the ranks future master skiers is how consistently we see an evolution from “very directed skiers” to “self-directed skiers”. Herein lies the brilliance of Marty’s membership form response.

When we talk about youth skiers, there is little question that the vast majority of time on snow is directed, led, and organized by adults. For kids that cannot ski from home or school, we start with the functional reality that kids need transportation to get onto snow. Further, even for the relatively few kids that have immediate access to reliably snowy wilderness or park areas from home or school, the amount of time they’ll spend on skis will be limited if they don’t have other kids out there with them. It’s one thing for a child to enjoy skiing. It’s

something else for a child to willingly spend hours and hours alone on skis. Groups of kids on snow almost always requires at least a minimal amount of organization — and thus adult direction.

Bump things up a few years and into the middle school and high school years the level of organization continues to escalate mostly because the competition from other activities raises the bar for answering the key question of “why do this sport versus other activities?”.

Decades of data shows conclusively that performance Nordic skiing numbers are the undeniably the most robust in places that have consistently groomed trails nearby paired with solid ski education organizations. Simply having snow isn’t enough to guarantee good numbers of skiers. There needs to be grooming, it has to be reasonably close, and someone needs to be organizing things at least with under 18 crowds in order to see strong numbers.

Thus just like with the little shooters, the principle of “directed skiers” works quite well for both the sport and the skiers themselves. Whether it’s via high school teams and/or club programs, organized groups of 13-18 year olds is the bread and butter of USA participation and development. For skiers and families, all we have to do is look at places around the nation that lack any type of organized youth and/or junior programs to see how hard it is for individual kids to really develop their skills and remain motivated in the sport when they lack the directed element.

Now this is where it gets interesting. One of the things that I have noted in articles for decades now is that one areas of life that Nordic skiing really struggles is the 20/30-something crowd. This is particularly pronounced in the USA of late (say since the turn-of-the-century) since we’ve had such incredible growth in youth/junior numbers.

For a limited number of young adults, staying vibrantly

Self-Directed continued from page 24.

invested in performance Nordic is built in to the machine. Every year there's still a limited number of U.S. college age skiers out there skiing for college ski teams. We also annually have a limited number of young adults from 18 to early 30s at some form of "pro" level whether it's actually at the international level of the elite scene or more of a marathon emphasis.

But compared to past decades and also factoring in the numbers feeding into this age of life, the overall numbers do not add up and lack of self-directed skiers in this 20/30-something age span is arguably a big reason why.

The basic reality is that numbers of skiers from college-age into at least the early 30s are simply no better today (and potentially are worse) than they were in the late 80s when your's truly was an undergrad. For certain, the actual number of varsity and club college programs is far lower today than thirty years ago. The net result is that the phenomena of a self-directed skier has to start much earlier than in past decades. Unfortunately that is a tough sell to many 18-22 year olds. Then it doesn't get better as young adults move into the "what am I doing and where am I going" stage of life from the upper 20s into the 30s. You add all this up and it makes a lot of sense that the numbers of young adults at Nordic events has trended on the light side this century despite massive numbers of juniors feeding into the demographic.

The somewhat good news is that our sport numbers tend to revive when you look at folks in their 40s and 50s. Certainly pure numbers of skiers out on the snow are doing fantastic of late. Financial roller coasters and,

Continued on page 38.



Photo: Berit Flora

Attention Anyone That Has Not Renewed Your AXCS Membership Yet For 21/22.....

You Need To Get Your Renewal In!

For members with expiring memberships as of 10/31/2021, this Fall Digest is your last membership benefit. Your Summer Digest issue had a complete list of members + expiration dates. You can also see the same list right now on:

xcskiworld.com/Dunklee

...Or just contact the AXCS Office.

You are soon to be missing out on exclusive e-MasterBlast emails, the super cool Winter AXCS e-Digest, and then next spring/summer/fall you will be getting a whole lot of nothing about master skiing while your ski buddies are checking the 2022 series e-MasterBlasts and a new trio of AXCS Digest issues!

Don't be that skier missing out.

Visit **xcskiworld.com**. Take care of your membership renewal with no added processing fees charged for membership dues! Remember 3 years is the best deal.

Have a great winter everyone!



From Norway **The Value of Training Races**

*The following translated and summarized article by **Inge Scheve** originally appeared on Norway's **Langrenn.com**, February 2017. Translation and summary by **Inge Scheve** exclusively for AXCS media.*

There are good reasons to add different training events throughout the season and in preparation for your main events. Here is how to get the most out of these training events.

For starters, it's fun to do ski races, and it's a social happening. Enjoy the experience and the event with other likeminded people.

Furthermore, training events can contribute to build solid routines and thereby help reduce race jitters and nervousness leading into the main event. At training races, you can establish your own warm-up routines, find out how long in advance you need to be at the venue, how to position yourself on the start line, and how to distribute your energy through the race. If you blow it, it's no big deal.

Finally, training races are great intensity workouts. Many athletes find it easier and more motivating to dig deep when they have a bib on.

Test your equipment

Training races are great opportunities to experiment with wax and gear. Try out different combinations of race wax and practice putting them on correctly. Again, if you miss the wax, it's not the end of the world, and you've gained valuable experience.

We all have good days and bad days, and as we get older it takes a while to get going. If you're forty, or fifty, or sixty-five, the hardest thing is just to get out the door, and then to do it again.

— Meb Keflezighi, Olympic marathon silver medalist

You can experiment with flexes and base structures, shorter or longer poles, and try out how to dress for various temperatures and conditions: different weights of base layers, different styles of gloves, hat or head band, and other variables.

Test nutrition and timing for feeds Training races are also a great opportunity to experiment with race nutrition. It is something entirely different to take a feed at race pace when your heart rate is redlining than to eat the same product during an easy distance workout. Try experimenting with different products and textures during both short and long races. Some skiers can easily chew a bar, some prefer gels or gel blocks, and some like only sports drinks. This is all very individual, so nail down the perfect strategy for your stomach and your energy needs, and adjust accordingly.

Make sure you also figure out the timing of your last meal before the race, and how often you need to feed during the race for different distances. Keep in mind that you need to feed before you feel hungry. For many skiers, this means you will need to feed on a schedule because your regular hunger feelings get suppressed or change in a race situation.

Finally, keep in mind that too much or a too strong feed can be just as damaging to your performance as not little.

Work on technique and strategy

Use training races to hone different elements of tech-

Continued on the next page



Photo: MWC2017

nique and racing strategy. For instance, pick one specific technique or sub-technique, such as double-poling, and practice this at high speed. Practice skiing efficiently in different kinds of terrain, such as uphill or flats, and focus on taking advantage of the terrain types.

And make sure you have an overall training goal for the training race: you can't practice all of these elements in one race, experiment with both wax and structure or test out all the variables at the same time.

Avoiding the pitfalls

One danger with training races, is adding too many of them. Overdoing them can defy their purpose and derail your overall training plan. You end up drained and exhausted rather than motivated, and they can.

Make sure you have a clear idea of what you plan to get out of each training race, and why you pick that specific event.

Don't put too your pride and ego in the training races. Remember that you are doing these in order to prepare for the overall season goal, and that the training races are not the goal.

But if you manage to keep them in perspective and avoid getting caught up in performance/rank, they can provide invaluable experience, routine and motivation.

-- End --



Photo: Dave Ford/Nancy Leland

Strength becomes increasingly important

For Skjeldal, strength workouts have always been a necessary evil. "For me, strength workouts are generally the most boring. Indoor workouts just don't really float my boat," he says with a laugh.

"But strength is just becoming more important to cross-country skiers. Partly because of the way the sport is evolving, and because muscle strength is something you lose with age," Skjeldal says.

As a coach at the ski academy, Skjeldal also notices that it's really important to start the strength training at a young age. At the same time, Skjeldal points out that kids should be careful to not overdo it, especially in max strength.

Skjeldal's training plan recommendations:

For masters who train four to five days a week, Skjeldal would prioritize the workouts as follows:

1 x over-distance workout of 2-3hrs or more

1 x hard intensity workout focusing on 4-5 min intervals

1 x session that's purely a strength workout

1 x workout that you vary between doing a second intensity workout or a shorter easy distance workout, or even add a second strength workout focusing on endurance strength/specific strength outside (such as doublepole distance)

"I am not entirely sure what would be the most beneficial to masters in terms of more workouts on top of these. But I do think most masters would benefit from some specific strength and endurance strength. This kind of strength comes in handy in a variety of situations, but particularly at the end of marathons," Skjeldal notes.

"But you get good at what you work on. I think it's good to combine traditional indoor strength training with some outdoor endurance strength," Skjeldal concludes.

-- End --



From USA & Canada

Three Common Training Mistakes

Written by XC Oregon Coach/Director J.D. Downing

Master skiers tend to be a pretty smart crowd. There are a ton of professionals in the Nordic world with very impressive credentials. But just because someone is brilliant in other areas of life does not necessarily mean that same person is can't work themselves into a ball of trouble when it comes to chasing athletic goals.

The following is a refreshed article written in 2003 with portions appearing in the Fall Master Skier. The mistakes and lessons are just as topical today.

Mistake #1.)

Going Too Hard In Distance Workouts

Virtually every performance skier knows full well about this mistake. You've read the volumes of literature that is available on the importance of doing the vast majority of your distance work at very easy heart rates, typically all or most of the workout in zone one (i.e. basic endurance). You know that lots of really easy distance is needed to build the foundation for your entire fitness program.° You also know that by failing to go really easy you never can go really fast in hard intensity sessions, meaning your most efficient speed ends up being "no skier's land".

Even though we all pretty much know this stuff, what you'll find 90% of the time is folks out running, roller-skiing, and especially snow skiing in distance workouts at heart rates mostly in zone two...and sometimes much higher!

I can hear the whining and groaning as I type this. Something along the lines of "but if I actually workout with my heart rate in zone one I'll be crawling". Anyone that has been in one of my clinics or camps knows my automatic quickie response. DEAL WITH IT.

The extended answer is that you don't have to lock yourself in to only zone one for every minute of distance. It's very common to have a heart rate "drift" on uphill sections in which even a disciplined skier sees the

heart rate climb out of zone one and slide into zone two. The problem is when this drift becomes habitual to every workout, every hill, and (

An easy rule of thumb is to gauge the amount of zone one based on the length of the workout. For example, a one hour run or ski could be 60/40 zone 1 to 2 without problems. However, a three hour run/hike or ski should be very nearly 100% zone 1. Bottomline: The longer you go, the more zone one utilized.

Mistake #2.)

The Paradox Of Heart Rates

Let's say you go out for a rollerski, you are fit, you feel fine (maybe you feel really good), but your heart rate is just jumping through the roof. You may also find that your heart rate is out of synch with your respiration and perceived exertion. Meaning, your heart rate says you should be hurting but you aren't really breathing that hard and don't feel gassed at all.

The natural reaction in this situation is to assume that something is wrong with the system. You may think

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Photo: MWC2016

you have an illness coming on, you may have a worry about overdoing things. Now you could be right. Sometimes a quickly elevating heartrate does indicate those things. But often if there is a "bug in the machine", the high heartrate will manifest itself in an AM heartrate test or on recovery days.

The interesting thing is that often when you have a rocketing heartrate with a "good feel" on a normal workout, that can be a tipoff that your body is receptive to training stress...or that it has completed an overcompensation period and may be ready for peak efforts. When these situations occur during the training year, often the best thing you can do is be disciplined, keep your heartrates in the appropriate zones, and feed your body a healthy dose of hours because it is ready to absorb that load.

If you want to peak, the best thing to do is conserve that "good feel" and don't waste that window of opportunity to real sky those heartrates. Very c

Conversely, what will often screw folks up is the total opposite of a quickly elevating heartrate. In this situation a skier will go out for a threshold interval session and they can't get their heartrate up without absolutely killing themselves. Although you'd think the low heart-rate would be a good thing, when you cannot get heart-rate to jump even at max effort, this often indicates the system is very tired and/or out of whack.

The tricky thing is knowing when you are at one end of the spectrum or the other. Having a good feel for your body is a big help but it also requires understanding this heartrate paradox exists in the first place.

Mistake #3.)

Mis-Handling The Zone Four Eyedropper

One of things that makes me the most nervous when talking about training with athletes is the subject of old school zone four training. The definition of different training zones are often shifted around by the physiology community. But I tend to go with the definitions from the 80s/90s within the American College of Sports Medicine as well as the Norwegian Olympiatoppen programs.

Within those notable groups, zone four would usually be defined as a handful of beats above LT and spanning perhaps 10 beats further. Zone four would be the maxi-

mum sustained effort range. Basically the HR's you'd see in a super hard 5-10km effort.

It is something about the beast within a performance XC skier (any age) that fuels the mind and body into a willingness to take on zone four. Once a certain fitness level is reached, the job of a coach is most often leashing this beast so that zone four work is applied only in the right amounts and periods. Properly applied, anaerobic work can make you ripping fast. Done the wrong way or in too high a quantity, a season can be ruined in

Since training plans differ so much on how much is enough, the most generalized way to avoid a mistake is to accept a few simple rules.

a. Most people can operate for around 6-8 weeks regularly implementing high levels of zone four work. After that optimal time period, performance tends to decline and the skier can quickly be at risk for health problems and the symptoms of overdoing it. It is for this reason that a coach like myself will call for delaying implementation of zone four intervals as long as possible into the training year.

b. It is easy to forget that nearly every race represents a zone four workout. Thus, if you are racing 2-3 times each month in the winter, you don't have to add much more than 1-2 zone four workouts per month to be considered at a high level of zone four work. Now reread item "a".

c. The amount of high level intensity that can be absorbed and that can benefit a given skier is highly individual and is directly impacted by age/training levels. Typically, a younger skier that has many years of tremendously high volume levels will have a greater capacity to increase the amount and frequency of zone four training. You'll see this in a number of elite World Cup training plans.

The problem for master skiers is that unless you have 8-12 years of 700-800 hours a year in the tank -- plus a 20/30-something body -- you have absolutely no basis for comparison. Maybe you can indeed benefit from a bit more high intensity (or maybe not)...but you have to realize that whatever the design, your plan has to be built around your body and lifestyle. Not someone decades younger that is a full-time, world-class elite skier.

-- End --

Leaving A Legacy

XC skiing and racing in the USA is held together by non-profits just like AXCS. Regardless of the economic picture, every one of these non-profits is supported by donations and memberships.

Although our sport largely dodged the worst of the March/April virus shutdown, we are not yet out of the woods on this “adventure” -- so there is going to be a lot of needs in months ahead in our sport.

If you are in a position to do so, it's a perfect time to create a living legacy by setting up a decade-long gifting plan with all the XC non-profits you'd like to help. Every contribution makes a difference.

Further, many AXCS members do regular estate planning. If you have not already, please consider carving out space for some of the amazing U.S.-based XC ski non-profits in your estate plans.



Photo: XC Oregon

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Dunklee



JESSIE JIGGINS

2018 GOLD MEDALIST

podiumwear 



From Norway *The Best Glide*

*The following translated and summarized article by **Inge Scheve** originally appeared on Norway's **Langrenn.com**, Winter 2017. Translation and summary by **Inge Scheve** exclusively for AXCS media.*

AXCS Editor: The following article was mistakenly stashed away in the AXCS archives (meaning: a digital folder was put in the wrong spot) and only now is coming to light.

The interesting thing about this article is that whereas the world of glide waxing has changed a great deal since this was written -- fluorocarbons are no longer in production or distribution with any European company -- the new "green" lines offer similar types of scaled product lines (scaled by performance and cost). There are also both glide hot wax and liquids in the new green lines just like a half decade ago. Rub-on blocks seem to be the only part of the high end glide wax picture that has yet to make the jump from the fluoro age to the green age.

AXCS is taking some editorial license in this particular article by substituting a few 21/22 options instead of former fluoro-specific glide waxes originally referenced. The overall waxing messages remain intact.

What products do you need, and how do you use them? The short answer is: not very many, and experiment with them frequently – when nothing is on the line.

Norwegian national team head wax coach Knut Nystad recommends that masters experiment with different kinds of glide wax and toppings throughout the winter, so that they know their products well and know how they perform at different conditions. That is the best starting point for choosing the right combinations when it really matters.

However, the Nystad also emphasizes that you don't need to own every product on the market. In fact, you don't even have to own any at all if the main goal is to

take care of your skis and make sure they last for many years. If that's the case, all you need is a block of regular paraffin glide wax.

"If you are looking to take proper care of your skis, all you need is a soft paraffin wax and a cold (harder) glide wax. With those two glide waxes, you're covered for 90 percent of the conditions most people encounter," Nystad says, and explains:

"CH-type glide waxes are great for basic training, and the (green equivalent) of the old LF glide wax is fine for most races. You don't need to match the speed of the former high-fluoro glide products."

But a lot of masters have more than an average interest in glide waxes and topping products, skis, base structures and the waxing process. If that's you, it's time to look closer at the different options, and higher end products will be a natural part of your wax selection.

"Mid-range waxes are great as base layers for higher end powder and liquids. Mid-range wax can also be used alone as race wax," Nystad says, emphasizing that there are several considerations that play a part.

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Photo: Dave Ford, MWC2016

"It's not always better just because it's more expensive. It's about choosing the right product for the given conditions, and when you recognize the differences, you will start to notice a difference between using a powder or liquid topping as opposed to just straight up mid-range wax," he says.

A little bit of luxury Nystad still recommends sticking with one line of products and learn how to use them in different conditions. Back in 2017, Nystad would recommend a few items of luxury to the typical competitive master skier, pointing to two powders that in the fluoro true work horses even on the World Cup. "With those two powders, you were covered for almost all conditions," he explains.

Circa 2021/22, skiers and technicians are going to need to learn which of the new green products offer a similar type of wide range and outstanding reliability.

What about high end liquids? Nystad explains that this depends on the application and the conditions at hand.

"Liquids are often used on top of a powder. They tend to be slightly less expensive, but can be just as good in many cases," Nystad says, emphasizing again that there are several factors that play in and that it's all about being meticulously methodical.

"People fight for days over what's better. The only way to know is to test. And if you have a lot of products, you need a lot of calibrated test skis in order to derive any-

thing certain from the testing. That's a lot of work and most people don't have the resources, time or interest in doing that right," he says.

And finally, Nystad points out that if you are using high end products such as powders, liquids, or other toppings, it's important to have separate brushes and grooming tools for these products and keep them physically separate from your other tools and glide waxes.

The waxes are hopefully safer for people and the environment these days, but the same principles of separate equipment simply allows the higher end stuff to remain "pure" in a wax room where lower end wax is going to be more commonly used.

-- End --

Help AXCS Recruit New Members!

Not only is it a huge help when existing members keep your membership current every year, but you can also make a powerful difference for the association by annually helping to recruit new AXCS members.

AXCS is the best value in the XC ski world (*we've looked!*). Plus now looking ahead to the "home" MWC2022 in Canmore, potentially dozens of brand new members will enjoy the best value if they join AXCS now for three years.

Both for your personal renewal or for the new friends you recruit to join, everyone's easiest route to sign up is to visit **xcskiworld.com** with no added processing fees charged for membership dues!

Thanks everyone!



Photo: Phillip Violett, MWC2019



From USA

Is Good Ski Training Compatible With Other Sport Seasons?

Written by XC Oregon Coach/Director J.D. Downing

AXCS Editor: A version of this article appeared in the 2003 Master Skier fall issue.

At virtually every camp and clinic I've coached at over the past decade, at least one master will ask at some point about compatibility between "really good" ski training and other serious sport ambitions/seasons over the course of the year. The universal concern is that by engaging seriously in other sports (i.e. triathlon, cycling, running, etc), developmental progress in skiing will be slowed or hindered.

My answer to these questions is always some version of "it depends on what you want and how you do it". Unlike juniors/young adults, masters are not in a lifestyle or age-related developmental cycle that puts significant pressure on developing abilities within a fixed age range. For example, with juniors the entire universe sometimes starts revolving around Junior Nationals or high school State Championships that by rule they can only ski for a handful of years. By comparison, for masters there is little difference in reaching a personal best at 40, 50, 60, 70 years, etc.. As long as it is a meaningful personal achievement, who cares when you do it? In many respects, the older the master, the more significant every milestone can be.

On the other hand, there is something to be said for being able to really put a whole lot of time and effort into

improving technique, fitness, racing skills, etc. within relatively concentrated periods. One big reason is simply motivation. It can drag down the most upbeat skier to still be struggling with basic technical or fitness issues a decade after starting the sport. Other reasons might be having the opportunity to really focus on a particular AXCS Nationals, World Masters, or marathon PR.

Whatever the situation, the endgame in this debate is that if you want the best odds at the fastest technical/physical ski progress possible, you will make your year round training program as ski-specific as possible. At the same time, absolutely nothing prevents the average master from ultimately reaching his/her goals in skiing while also devoting considerable time and energy to other sports. It just may take a bit longer.

A few pointers.

Accept The Speed Of Your Progress

If you put away your skis in the early spring and don't even give skiing a passing thought until the late fall, you aren't going to get in a lot of specific dryland workouts such as ski imitation on foot (i.e. ski walking and light bounding), rollerskiing, and non-winter, on-snow workouts.

The advantage for a ski-specific skier is much greater at lower levels of technical and physical development so it isn't unusual to see World Cup skiers (Carl Swenson from the U.S. was an exceptional example in the 1990s) branching out to other sports after they have put in 8-10 years of massive ski-specific hours. At some point, the "just like riding a bike" formula kicks in.

For the multi-sport master, one key is thus to simply accept the progress you make with the hours you do put in. If you only work on ski-specific skills for 3-5 months a year, accept what progress you can make in that time. Understand that it often will take longer to develop

Continued on the next page



Photo: The Loppet Foundation

skills, but that if doing multiple sports makes you a happier athlete, that's perfectly OK.

100% Focus When You Do Have Ski-Specific Time

One practical thing you can do to help minimize slowed progress is to make darn sure that the time that you do have to devote to skiing is as efficient and productive as possible. Since multi-sport athletes often aren't hurting for cardiovascular development (either in base or upper capacity), your focus once you turn to skiing should be on implementing as much in the way of ski-specific strength and technique-intensive workouts as possible.

Start by trying to incorporate as many ski-specific elements as you can into your early fall other sport workouts. For example, a runner or triathlete can toss in short field circuits into an

Another good tip is to really mentally focus on what you are doing even if you switch into "a skier" only for 10-30 minutes a week. I've seen remarkable progress from folks that only do 1-2 short ski-specific workouts in the summer simply by having those workouts be very focused on proper body position, full extension, nice snappy motions, etc.. Occasional workouts with a ski coach or training group can really make this focused time easy to manage...even when the rest of the time you are purely focused on your next event in your other sport(s).

Once you make the full transition to "autumn ski time",



try and get in several rollerski and/or ski imitation foot sessions every week heading into the snow season in addition to several strength sessions. When in the gym or at home, isolate strength exercises that will give you the greatest bang for your skiing buck. You likely won't have time for an elaborate strength plan so just concentrate on a simple approach of building reps and sets with low loads at each session.

Avoid the mistake of trying to "make up for lost time" by overdoing hours or trying to ramp up the intensity of your ski-specific period. This is back to the acceptance game. You aren't going to be able to cram 4-5 months into 4-5 wee

Every Minute On Snow Is Precious

When the snow falls is where a multi-sport athlete really needs to pay attention. Few skiers have snow out the door five months a year so this means you are battling both a deficit of ski-specificity in training as well as lack of snow time. This isn't insurmountable by any means but it does take discipline and focus to overcome with the best possible results.

Since my college days (2 hours away from snow in the California Central Valley), I've always maintained that when you have limited snow time, your best bet is to focus on distance and technique when on snow. This is all the more the case if snow is at altitude because you

A multi-sport athlete with an on-snow weekend at their disposal is going to be best off by getting in as many... easy (mostly zone 1) hours...as possible focusing on good technique the entire time. One weekend approach I've seen work very well for masters is to go for long workouts in the early AM (2-4 hours sustained easy skiing), take a nice long midday break, and then head out in the late PM for a much shorter session (45 -90 minutes) isolating specific technical drills and incorporating a bit of specific strength (i.e. skiing without poles in terrain or impulse repeats on a gradual hill).

So that you don't become one dimensional with your ski speed, another good tip is to incorporate r

The bottomline is that you want every minute on snow to count. It's very difficult to focus on technique if you are coughing up a lung...so SLOW DOWN and make

Continued on page 37, lower right.



From Sweden **Many Masters Are Overloading**

The following translated and summarized article by **Erik Wickström** originally appeared on Sweden's **Vasalöparen**, No 1, 2017.

Translation and summary by **Inge Scheve** exclusively for AXCS media.

For years, preparing for a ski marathon meant gorging on carbs. This is changing.

You need to step up to the start line for a marathon with your fuel tank topped off, but eating heaps of pasta is no longer considered the ticket, according to Anton Järnberg, who is the team chef for the top Swedish marathon team Lager 157 Ski Team.

"There has been a significant change among the elite skiers over the past few years," Järnberg says, pointing out that where skiers used to stuff themselves with pasta, they now tend to go easier on the carbs. Normal diets, more sports drinks

The demanding race schedule for the Ski Classics explains some of the changes in preloading strategies. "Now we have several long and hard races both in January and February, which makes it much harder to

squeeze in a serious carbo loading regimen. And the skiers noticed that they race just fine in both 50K and 70K events even on just their normal diet.

Additionally, their training programs are different now than just a few years ago. The elite marathon skiers often do four-hour double-pole workouts at race pace several times a month. They didn't use to do that, and therefore their energy systems were not as dialed for this," Järnberg explains.

The Lager 157 skiers, with Britta Johansson Norgren and Fredrik Byström being the best known, eat fairly much like they always do even leading up to the 90K Vasaloppet.

"Our skiers generally eat more or less their regular diets prior to big marathons, which in effect will have a pre-loading effect, given that they reduce the amount of training hours leading up to the long races. But they do drink about one liter of strong sports drink during their light workouts both on Friday and Saturday prior to Vasaloppet (which is always scheduled for the first Sunday in March). This is the same drink that they take during the race. But overall, the skiers do far less loading now than a few years ago, and from what I see, this is the going rate for other long-distance teams as well," Järnberg says.

Järnberg also points out that it is often easier for the skiers to drink a little more than to eat more, and points out that with skiers now taking off so fast when the gun goes off, you can't afford to step up to the starting line feeling stuffed.

It's rare to deplete

Earlier, it was quite common for athletes to do a carbo depletion period prior to races such as Vasaloppet. In this period, which was typically at the beginning of the week leading up to the event, athletes would do both hard intensity workouts and high volume, but eat very



Photo: Skifire (Argentina)

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little carbs. Then they would eat substantially more carbs during the last days prior to the event.

"There are studies indicating that this strategy increases the body's ability to store carbs. However, this preloading strategy has more or less been abandoned, one reason being that the risk of getting sick or too run down prior to the event is too high," Järnberg says.

B.Y.O.B.

Bring your own beverage – for masters as well as elite skiers, Järnberg recommends focusing more on staying hydrated and fueled during the event.

"A lot of masters do too much preloading. I've seen a lot of recreational skiers who eat one plate of pasta after the other, and while they don't have the same pressure to ski fast right off the line, I would argue that the majority of them would benefit from eating more like normal leading up to the race," he says.

The elite skiers have about 20 feeding stations for the 90K course from Sälen to Mora where they take drink feeds. Additionally, many of them also carry their own bottle to make sure they can get a feed when they need it. The same is a good idea for masters as well.

"I would absolutely focus more on hydrating enough during the event, and I recommend that masters carry a water bottle belt or a camelback. Change your bottles often, or refill your bottle at the feed stations, and make sure you drink frequently. Some skiers also like eating something solid during the long races, such as bananas, sports bars or bread, and if that works for you, that's great. It's also a good idea to make a plan for what you plan to take at the different feed stations, which also can help break up the race and motivate you to make it to the next station," Järnberg says.

-- End --

***The night before the race:
This is not the time to think on all the technique adjustments you think you need to make, how you would have trained differently, or how you wish you could ski like someone else. After the races, write it all down and think back on what worked for you, and what you can do to improve. But right before the race? This is the time to reflect on all the things you kick ass at. Know your strengths. Be ready to use them. Focus on the things you can do, and believe that you have the power to do them well!***

— Jessie Diggins, an American skier that knows a whole lot about kicking ass. She is also now technically eligible to be a master skier :-).

Multiple Sports Continued from page 35.

every minute as productive as possible.

When You Are Skiing — You Are A Skier

Finally, avoid a common tendency to rationalize ineffective training and so-so race results by using the adage "well, my main sport is such-and-such, I just ski for fun". As a coach I absolutely hate it when I hear that type of talk.

If you have skis on your feet and you are out on snow, you are a skier.

With 48 years in the sport, I've yet to find a skier that wanted to ski inefficiently or wanted to add effort/time to a race. No one has ever come up to me and said "I want to learn how to suffer more on skis". It simply does not matter if you've got ten months, ten weeks, or ten days to devote to skiing better or faster — make that time count.

Taking part in multiple sports is a wonderful way to stay fit and focused on personal goals year round. It need not mean making ditching your XC dreams and it certainly doesn't mean you need to minimize what you can accomplish with the time you devote to the sport.

-- End --



Photo: MWC2017 Klosters

of course, the pandemic have been somewhat bizarre assets in terms of promoting Nordic skiing overall. What hasn't been quite as great are event numbers. Climate change (meaning: consistent snow nationwide) would be the absolute number one culprit in limiting how much progress is made in numbers at races.

Regardless of the big picture numbers, when skiers get into their 40s they tend to be far more willing to accept at least the basic premise of being a "self-directed skier". Skiing at younger adult ages tends to be directed in a more social dynamic if someone isn't actually training on skis. But as we get into the lower rungs of middle age, skiing on our own terms becomes somewhat more acceptable. That theme only tends to strengthen over time.

If you wake up most winter mornings with a plan for your ski day that you have planned or at least picked out from hundreds of different options — you are a self-directed skier. If you take care of your own equipment, your own transportation, your own trail fees, your own pre/post skiing nutrition/hydration — you are a self-directed skier. If you design what, when, how, where, etc. of your overall ski seasons — you guessed it, you are a self-directed skier.

Now since it was founded in 1998, every ski year AXCS constantly urges skiers around the XC ski world to form and join masters groups. The social dimension of joining together with other skiers is a powerful force for motivation, fun, and just plain meeting other great people



Photo: Gina Campoli, Norway

with similar interests. When it comes to taking part in events, it's also just a whole lot more fun to ski a lot and travel around to races with other skiers.

The downside to groups is leadership and organization. If someone or several someones aren't "directing" things, groups easily fall apart or lose cohesive energy. Far too often I'm seeing situations where otherwise fantastic leaders for masters groups get sidetracked by demands from events, youth, or junior interests. Certainly there are valid reasons to support all of these "other" interests — but it is a pity that masters often lose out as a result.

But a concept that I'm increasingly embracing and preaching these days is that it is fully possible to enjoy the benefits of self-direction (aka: you do what you want, when you want, where you want) and also enjoy the social and motivational aspects of at least a lightly-directed group. Really the key, as with most areas of life, is striking a sustainable balance.

I would maintain the XC Oregon club system we've used for many years now here in Bend, Oregon is a very good example of a sustainable balance between self-direction and group interaction. Within our XCO Friends system I provide annual training templates (directed) that are not only highly-customizable, but I actually insist that skiers make all the changes they want to fit their own winter reality (self-direction). Out on the snow, outside of family trips, Camps and junior coaching demands on my time, I try and keep to a schedule of offering 1-2 workouts most weeks of the winter. These workouts are usually based on loosely-scripted plans (directed), but both techniques are welcome anytime and skiers don't have to be doing the same thing for it to work. For instance, we'll often have some folks working on technique while a few others are pounding out intervals (self-directed).

There are more pieces to the XC Oregon puzzle, but overall I think we've struck the type of sustainable balance that allows adults to run their own self-directed show while also having a little bit of help at key points.

For all the other self-directed skiers out there, I'd urge you to explore ways to branch out and be part of something more in the Nordic world when you can — all while still holding on the benefits of being your own self-directed skier.

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Preparing For Canmore: Notes For Low Land Folks

If you are lower elevation skier, the most important thing you can do to prepare for the moderate elevation of Canmore (roughly 4,500 feet) is to get elevation out of your head. It is an undeniable fact that loads of master skiers have traveled "up" to elevation for decades now and had amazing performance results. You can as well, but you need to do a bit of homework over the next three months.

Yes, if you have several weeks extra travel time and budget to spare, you can travel to either Canmore or a wide range of Western USA or Canadian high altitude venues and do your own pre-MWC2022 training and adjustment "camp". Three weeks at any elevation at or higher than 4,500 feet would be the gold standard to feel perfectly at home on the Canmore trails. But reality says this isn't going to be in the cards for most lower elevation AXCS members.

The other end of the spectrum is fully possible. That is using a trick many elite level athletes and coaches follow which is to show up as close to the first altitude performance as you dare. Doing this effectively "tricks" the body into just blowing thru any altitude impacts. Given that Canmore is easily reached via air from throughout North America in an average of just a few hours with a max of just two hours time change, it is totally possible to fly into Calgary either the day prior or possibly just 36 hours prior to your first race.

The "short timeline shock" method will often work for up to 72 hours so it's not farfetched that it'll work all the way from the Opening Ceremony out to the Monday, March 7 short races. So it is worth considering.

Finally, remember that racing at modest elevation for lower elevation skiers is really more of a matter of adjusting your race style than anything else. When you are at home in Anchorage or the Twin Cities or New England, you can get away with HR and respiration spikes and rarely pay a price. Imagine banging really hard out of the gate or pounding a move on a steep hill at lower elevation. You breath really hard for maybe 20-60 seconds, but a really fit skier will generally settle down in oxygen-rich areas fairly quickly and all is well.

Now at altitude, those same spikes can easily set off what could be called a type of "hypoxic panic". The athlete feels short of breath and then they start to freak out because that feeling doesn't resolve the same as back home. You can see where that leads. The feeling of short breath will be much less of an impact in Canmore than places above 6000 feet -- but the real priority is not to let it happen at all.

One immediate trick is to pull back 1-2 notches on your top end speed at the start and in the first third of climbs. Once again, if we were doing the Worlds at truly high altitude then you would REALLY have to hold back top level effort to avoid the short breath feeling. But at 4,500 feet a small adjustment will do wonders.

It's also worth borrowing from the biathlon world the art of controlled heart rates and respiration. You don't have to get nearly as good at these techniques as real biathletes, but with a little bit of practice you can certainly get good enough to fight off hypoxic panic at moderate elevation venues.

Prior to the MWC2022, work on doing a series of mock race starts followed by 1-2 minutes of extended race effort skiing with the lowest heart and respiration rates possible while still building good speed. You can also do a set of uphill intervals where you attempt to keep HR and respiration values even while posting slightly negative splits. Basically you want to teach yourself how to keep calmer than normal even when pushing hard. You take those techniques into the MWC2022 and you'll own the Canmore trails just like your backyard trails.

-- End --



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Carpe Diem

Given what we all have experienced over the past couple years, there is simply no better way to sum up the best approach for this entire winter than "seize the day".

Taking advantage of every single day our bodies will cooperate with our ambitions and dreams. It wasn't the spectre of a horrible virus that was needed to learn this lesson. Every year we all experience the essential urgency that we use our bodies to the fullest as much as we can, when we can -- or else.

Appreciating all of our family and friends that join us (or let us go) out into the sunshine and snow. After all, what good is the very best day imaginable on skis if we don't have others that we deeply care about with which to share the joy?

Appreciating how truly precious this gift of our shared home is -- and how much work it will take for the gift of snow to continue into the future.

Yes, AXCS is fully invested in getting absolutely every possible member up north this March to take advantage of a Masters World Cup on North American snow. But really the most important message out of this Fall Digest is to get all of you out the door and onto the snow wherever and whenever.

Go out and play people.

Right now.

Have a safe and healthy winter everyone!



Photo: Alberta WC Society/B. Gibson