SKATERS EDGE

AN INFORMATIVE SPEED & IN-LINE SKATING JOURNAL

SEPTEMBER 1995

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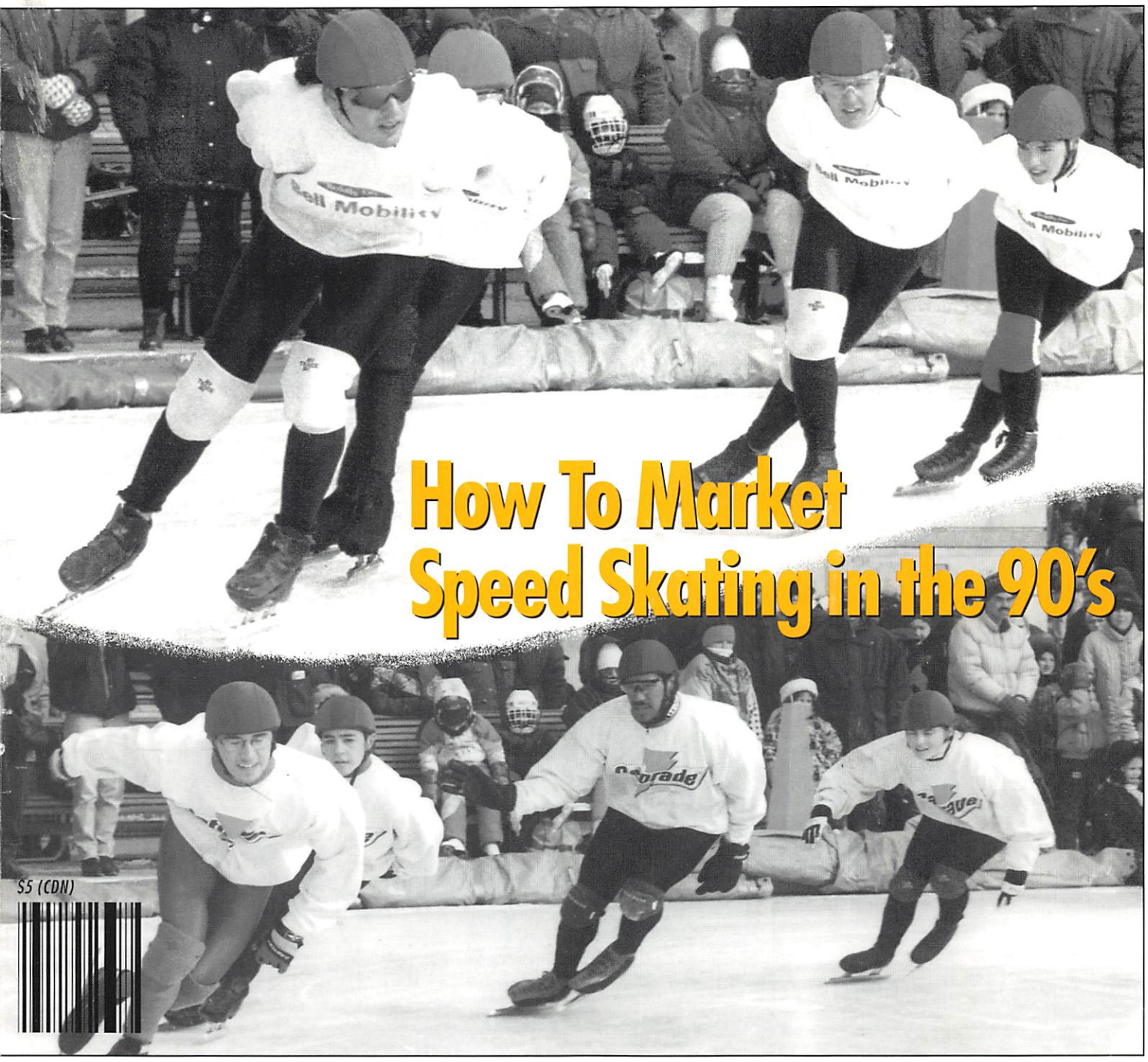
Consistency – Key to Success

Getting the Most out of Strength Training



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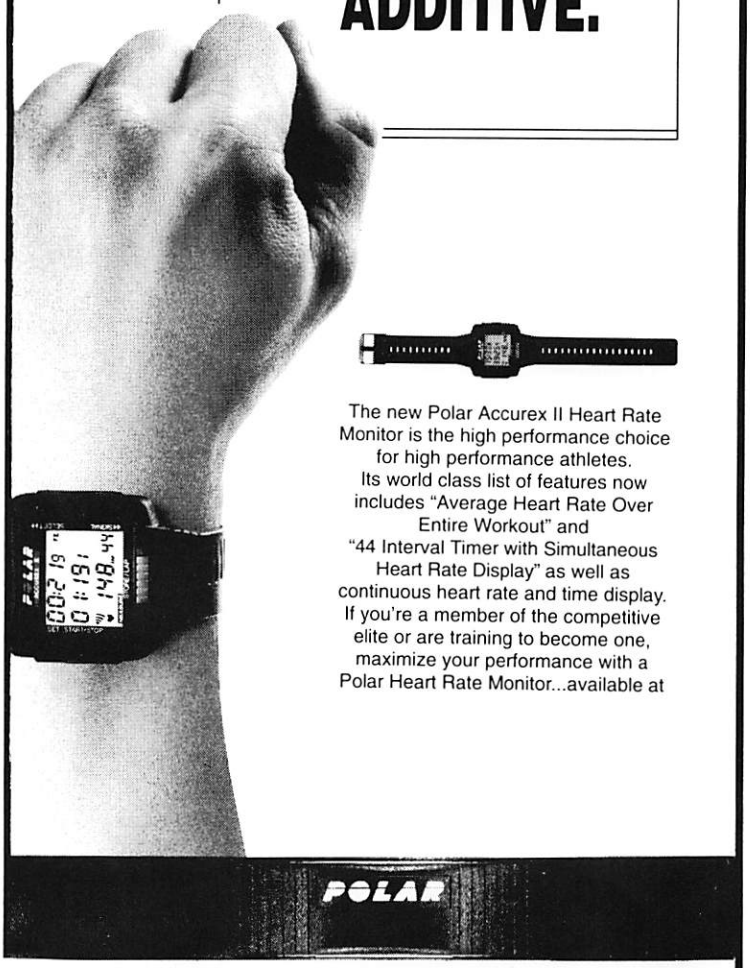

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PACIFIC
SPORTS MEDICINE
TACO

How to market Speed Skating in the '90s

by Jerry Suhrstedt

It takes a real gutsy person to march in to a local merchant and ask for $300 just because you like speed skating and you think that your prospective donor should like it too. OK... raise your hand if you own your own business. Now raise your hand if you have ever received a call on the phone, or a knock on the front door from some local organization with their hand out. Almost every one of you has had the proverbial... "we are asking for only a small donation to our something or other club... and sir this is a tax deductible donation." Yeah, yeah... of course it's tax deductible. I have to have money before I can deduct tax!

I happen to own a retail shop myself and I get calls almost twice a week from local baseball teams, local police fund, and whoever else needs money. Guess who gets dead presidents out of my pocket? You got it... zippo! Not because I don't like to help people now and then but because I simply don't have the money to just give out. Now let's try a different approach... someone calls me from a local bowling club and is selling advertising in their program for an upcoming competition. Over 500 local people will see this program and for only $75 I get a full page ad. Now I'm not only interested in the ad... but I'll even throw in two $20 gift certificates as prizes! See the difference? You have to sell our sport as if it was product. It has to be packaged! You wouldn't buy corn from some guy with it held in the palm of his hand... but you would buy a can of Del Monte' corn from the store. Why? Because it was packaged and because you've seen commercials telling you that Del Monte' corn is good.

I started promoting long before I was involved in speed skating. I am currently the coach of the Tacoma Speed Skating Club way up here in the left hand corner of the map, and it wasn't my coaching skills that lead me to the above conclusion. From about 1987 to about 1991 I was an air personality at a radio station here in Seattle. I had the opportunity to be involved in promotions, audio production, copy writing and several other radio type duties. One thing that I learned is that about 99.99999% of all humans only see and hear about 10% of what is presented to them. Ok... maybe a little exaggerated. When I was writing ad copy for a local client for a 60 second radio spot, I would mention the client's company name a minimum of 8 times. EIGHT TIMES?? Yup... 8 times. You might think that in 60 seconds 8 times sounds like overkill. I kind of had this rule that I used when on the air... first I would tell the listener that I am about to tell them something... then I tell the listener what I want to tell them... then I tell the listener what I just told them. See what I'm getting at? Next time you're driving to work and you're stuck in traffic... listen to some radio commercials very carefully and count. The point here is, when you are selling someone on speed skating, your club or your next speed meet, keep in mind that they are only hearing and seeing about 25% of what is being presented to them.

We can all thank Bonnie and Dan for the rain of publicity that they have brought to speed skating as a whole, as it makes all of our jobs a lot easier when making our next presentation. More people are just plain aware of what speed skating is and what we do. Now if we could just get the difference between long track and short track inscribed in their brains!

I recently attended the Jr. World Short Track Speed Skating Championships in Calgary. Awesome event!! While attending,

More people are just plain aware of what speed skating is and what we do.

Now if we could just get the difference between long track and short track inscribed in their brains!

I also had the chance to attend an I.S.U. Seminar with Mark Gagnon, Nathalie Lambert, Cathy Priestner, Jacques Thibault and a slew of other coaches from around the world. One of the many subjects that was discussed was marketing short track in the '90s. While most of the information was directed at higher level events and such, I think that most everything that we talked about can apply to any local club, association, whether it be long track, short track or even inline speed skating.

If I may borrow the following outline from a very distinguished guest at the seminar, Mr. Peter Sisam-Vice President, Broadcasting of the International Management Group in Toronto Ontario. Thanks Peter!

The following outline is some basic information that can help you the next time you are trying to sell advertising on your safety mats, selling sponsorship for your local meet or anytime you are trying to sell the sport. The outline was based around short track but most of the information still applies to all speed skating.

MARKETING SHORT TRACK OR "SPREADING THE WORD"

First off.. let's dispel some nasty rumors about short track

- Perception: "roller derby"?
- Image: Mixed
- Just exactly *What are the Rules?*
- Are there any Referees?

Don't take for granted that everyone knows what speed skating is about. You have to explain in detail what short track is vs. long track and what are the rules, etc.

OK YOU ACCOUNTANT TYPES...LET'S PUT TOGETHER A BALANCE SHEET!

Short Track Speed Skating's Assets -

- Olympic Sport
- Can be done in any rink or arena
- Equipment fairly limited to: Skates, Helmet (Compared to Hockey, etc.)
- Participation not limited by Age or Size of Athletes
- Great Recreation and Exercise
- Very Fun and Exciting
- International Skating Union (ISU) Credibility
- No Performance Judges! Races with clear cut Winners
- Communities of all sizes participate
- International Sport
- Very Television friendly
- Spectator friendly
- Involvement of High Profile Athletes

OK... TIME FOR THE BAD STUFF.

Short Track Speedskating's – Liabilities -

- Image likened to "roller derby"
- Public understanding and knowledge about the sport is limited
- Ice time is pricey and hard to find
- Grass Root Development needed
- Poor Television coverage
- Minimal Promotion and Publicity
- Minimal sponsors
- Minimal Overall Participation

One very important rule that you learn in

marketing is that *"Perception IS Reality"* We know that short track is far from roller derby... but if the public perceives it as roller derby... guess what? It's roller derby in their minds. Well, so much for the negative stuff. Where do we go from here? As a former radio broadcaster and a general nut for promotions, I recommend the next part should be a blue-print for your marketing plan. This is high powered marketing information and WILL produce results! Simply add these points with some consistent time and energy and I guarantee more of whatever you are striving for.

"SPREAD THE GOSPEL"

1. Total Information Package: What, Where, When, How
2. Fun Video Instructional Program
3. Build a Database: Research, School & Recreational Centres
4. Press & Public Relations (Very important to make friends with these people!)
5. Showcase each of your Events-Hosting
6. Profile your Hot Athletes to Sell the Sport
7. Build Pride: Olympic Goals of Local Athletes
8. Referee & Coach Training Program
9. Sponsors: "One Stop Shopping" for your Sponsors-possible TV Coverage; Signage (This is what we call Hosting); Free Tickets to your Event for Sponsors; Free Program for Sponsors; Special Reception with Athletes.
10. Promote and Advertise
11. Call the (OSSA) and/or (CASSA) to help. They exist to help you!

"OK.. NOW FOR THE HARDEST ONE OF ALL"

12. Start Today!

Huge corporate marketing wizards have used the above formula to launch new products that have become household names. This formula is proven and it works! Nine times out of ten it doesn't work because there wasn't follow through. You must plan your work... then work your plan. Simple as that. There is no substitution for pre-planning and a little hard work.

If you have any questions regarding promoting your club and events, feel free to give me a call at 206-874-1454 Monday through Friday 11 a.m. to 7 p.m. PST. I'll try to answer any of your questions and maybe we can exchange a few ideas.

Reprinted with permission from Speedskating Times (Vol 6 Number 3, April 15, 1995 issue) and from Jerry Suhrstedt. Jerry Suhrstedt is a Level 2 Canadian Coach and is currently coaching at the Tacoma Speed Skating Club. He writes for Speedskating Times and is President of Schaats USA which distributes KOPP racing wheels, Viking and other skating equipment.

Consistency – Key to Success

by Tom Overend

CONSISTENCY. How does this relate to success in speed skating? Are we talking about consistency of strides on the straightaway, consistency of crossovers on the corner, consistency of body position, consistency of leg angle? Well we could be, except that the importance of consistency in the technical aspects of speed skating has been well covered in earlier editions of this magazine and in technical manuals. Let it suffice to say that consistency in technical areas has been, is, and always will be important.

So how else does consistency relate to success in speed skating? Well, consider for a minute other factors that contribute to success in our sport. On-ice training, summer training, psychological preparation, nutrition, regeneration, there are lots out there. Is consistency important in these factors? You bet it is! Let's look at a few examples.

Let's start with everyone's favourite, nutrition, or as we call it, eating. Why is consistency important, and how can we make our eating consistent? Well, consider eating. When do we do it, how do we do it, and why do we do it? We eat so that we will have energy to meet our daily energy expenditure, which can be quite high in the midst of a training season. (OK, OK, I know that in the case of chocolate brownies and such we are not likely to be thinking of energy expenditure at all, but let's accept that as an aberration and move on.) If our eating patterns are not consistent, the energy we need to fuel the daily workouts may not be there on demand. If you skip breakfast and train in the morning, you won't be able to train as effectively. Same thing if you skip lunch and train in the afternoon. On the other hand, if you pig out for a meal, you won't feel like training at all until your poor put-upon digestive system can process the load. And in the same vein, if you eat a lot of the wrong kinds of food, you will feel the difference. Consistency in eating means eating regularly, especially in relation to your training sessions, eating consistently with respect to your Food Groups (not all the fats in one meal!) and eating consistently with respect to volume. Eating more frequently produces more consistent energy levels and decreases the need/desire/tendency to overeat at any given meal. An occasional binge won't hurt you, but regular binges will screw up your system for its most efficient performance, and efficient performance is what training is all about.

Let's take another example, perhaps just as popular as eating. I am talking about sleeping, and who among us can say that they get enough sleep? Now who can say that they need more sleep? Sleep is important for many obvious reasons. In skating, you need your rest, and your primary source of rest is sleep. This is when the body does most of its regeneration for ▶

the next training session. How much sleep do you need? Of course this is an individual matter, but if you have to drag yourself out of bed after pounding the clock radio into submission, and if you fall asleep during the day, you are not getting enough. So how is consistency important in sleep? Well most of us are pretty good at consistently getting too little sleep, but that's not quite the right answer. Consistency in sleep means getting enough sleep on a regular basis and on a regular schedule. If you need around eight hours in order to keep your face out of the potatoes at dinner, then you need eight hours in the same time block each day. Eleven p.m. to 7 a.m. is not the same as 3 a.m. to 11 a.m. Your body will not regenerate as well when your sleep pattern is all over the place. So the key to consistency in sleep is to try to get your optimal amount of sleep on a regular basis, and on a regular schedule.

Consistency in training is not quite as interesting as consistency in eating and sleeping, but it is probably more important to optimal performance in skating. Consistency in training means getting out and getting those sessions in one at a time, day after day, week after week, month after month and season after season. It is like building a bank account, you have to make those regular deposits to see the thing grow. Consistency has a lot to do with forming habits, and a good training habit is a hard habit to kick. Habits are hard to form, but once you get them shaped up, you can rely on them to help you through those tough times when going out for your training session is the last thing you want to do. On those days, you just put your mind in neutral and let your habits take over. How do you form a consistent training habit? Well the only real way is to train through those days when you don't want to go out for any of several reasons that seem so important at the time, but maybe aren't that important when measured against your goals in skating. Every time you beat down the impulse to blow off a training session for the unimportant type reasons, you lay down another layer of consistent training habit. It does take will power for those early layers, but it also gets easier the more often you do it. Sure you will have those days when the unimportant type reasons rise up in force and kick your butt back to the couch, but the trick is to reduce those occasions to a controllable minimum. And of course the benefit is that you improve your training volume with every successful decision.

Eating, sleeping, training, what's next? Well, let's try a combination of eating, sleeping and training, in fact, let's just call it your life. Consistency in your life really helps you reach your goals in skating. It is very difficult to train effectively when your life is hopping and skipping all over the place. Somehow you need to gain control over your life in order to train effectively. Your job, your schoolwork, your personal life, these things tend to resist being orderly. But the more these things flip around, the harder it is to be consistent with your eating, your sleeping and your training. Everything is interconnected and you cannot have a major disruption to your job, your schoolwork or your personal life without some disruption to your eating or your sleeping, both of which will impact upon your training. Now we are probably less able to control these factors, but what we can do is to realize that disruptions will occur and try to get back on an even keel as soon as possible. You will have job problems, you will have good and bad days in school and you will have peaks and valleys in your personal life. You can either go with the flow and be super high or super low, or you can decide that you are going to take control of events and maintain some consistency in your life. A lot of this has to do with accepting things you cannot control and thus not letting them throw you way off kilter. Absorb the "slings and arrows of outrageous fate" and move on.

Success in life is not a random happening; it is due instead to conscious decisions and choices based on what is important to you. If success in skating is important to you, then you have to make some conscious decisions and choices about the best way to achieve success. One of the keys to success is to be consistent with respect to the many factors which contribute to success. Sure it is easier said than done, but then what isn't? Consistent decisions and choices with respect to your eating, sleeping, training and life will really help you to reach your goals.

Tom Overend is a Level 1, 2, 3 and a Master Course Conductor. He is also a former Olympian and a past Technical Director for CASSA. He is also a past volunteer Vice President of both OSSA and CASSA.

Looking for Information?

Here it is!

Check any article and mail this form with your cheque to the Ontario Speed Skating Association. See Table of Contents page for mailing address.
The articles listed below have appeared in past issues of Skaters Edge and are an average of 1 to 3 pages in length. The articles have been written by some of the leading experts in speed skating.

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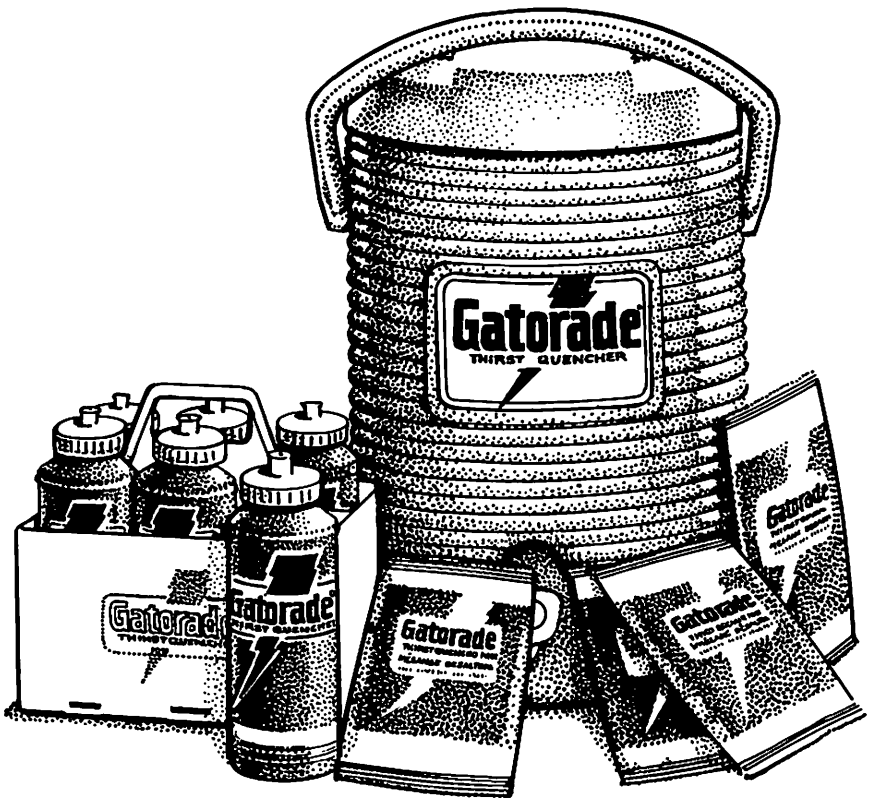

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WORK HARD, GET TIRED, RECOVER... REPEAT

by Carl Foster, Ph.D.

This month's column comes courtesy of Pat Moore. Pat is a former elite skater who now serves as a private coach in Milwaukee. The other day he was foolish enough to ask me some questions about exercise physiology, about training in particular. I told him some simple things, then promised to send him some of the reading materials that I commonly send to coaches. The next time I saw Pat he had sort of a glassy expression in his eyes, clearly the result of having it (science) piled higher and deeper on his plate. It made me realize that as much as we try to make physiology data relevant to coaches and athletes, we often wind up talking to ourselves. It made me wonder if I could explain the scientific basis of training in two pages of text.

The fundamental basis of training is that if you stress yourself beyond your comfortable level to accomplish some task (e.g. skating a 10K race or doing a certain training session) several things will occur. The first is that you will get tired and your momentary ability to do that task again will actually decrease. If you aren't tired enough to depress your performance capability, you probably aren't inducing any subsequent improvement. After an appropriate period of recovery (exactly what is appropriate is always a good topic for starting an argument), your ability to do that task will have improved. The next time you do the task, you will have to do more to get tired and to induce yourself to improve, i.e. you will have to progress your training load. So far pretty simple: work hard, get tired, recover, get better, work harder, get tired, recover, get more better...and so on.

You can think about training in terms of four variables: 1) what do you do (mode of training), 2) how often you do it (frequency), 3) how hard are you working (intensity), and 4) how long are you doing it for (time).

Within limits, the best training for what you want to do is to do what you want to do. You want to get better at skating 10K real fast? Practice skating 10K real fast. In simple terms, the best training for skating is skating. For a variety of reasons, mostly related to not wanting to race every training session, you aren't going to do the same training session every time. A variation of this theme is to break the "race" into segments, perhaps skating 10*2K at the pace you wanted to skate. That way you are actually doing twice the amount of training you could do by skating 10K once at race pace. Additionally there is a general feeling that some general qualities (strength, endurance) that contribute to your skating performance may improve more rapidly with alternative modes of training. For example, if you need more strength in order to sit in a deeper position and push harder, go to the weight room. If you need more endurance, go for a run or bike ride. Beyond this, one of the really nice things about being a skater is that almost any other form of training can help you skate better, so you can enjoy a lot of variety in your training.

If you train hard enough to depress your momentary performance capability, you need long enough to recover before the next training session. This time obviously depends a lot on the individual and on how tired your exercise bout gets ▶

IF YOU NEED MORE STRENGTH IN ORDER TO SIT IN A DEEPER POSITION AND PUSH HARDER, GO TO THE WEIGHT ROOM... MORE ENDURANCE, GO FOR A RUN OR BIKE RIDE. BEYOND THIS... ALMOST ANY OTHER FORM OF TRAINING CAN HELP YOU SKATE BETTER, SO YOU CAN ENJOY A VARIETY IN YOUR TRAINING.

you...Athens to Atlanta takes more recovery than a single 500m. The great all-arounders like Eric Heiden, Johan Olaf Koss and Gunda Neiman (all of whom were/are legendary for how hard they trained) obviously recover much better than most of us. As a general principle, you can't really do a good, fatigue-producing, training session with a given mode of exercise more than 2-3 times per week. Some coaches feel that by rotating the mode of exercise, you can do more total training sessions per week. U.S. All-around coach Gerard Kemkers, for example, never works the same energy system more frequently than every 48 hours. There is no data supporting whether, a variety of specific types of training really do allow you to recover one part of your body while you are working another. Suffice to say that however you rotate your training, you should at the least follow the advice of Canadian coach Jacques Thibault and take one day off in a 7-day training cycle or 2 days off in a 10-day training cycle. Stated differently, work hard enough that you need some real recovery days, then have the discipline to realize that a day off from training is not an excuse for a party, it's a time to recover.

YOU CAN THINK ABOUT TRAINING IN TERMS OF FOUR VARIABLES:

1) WHAT DO YOU DO (MODE OF TRAINING),

2) HOW OFTEN YOU DO IT (FREQUENCY),

3) HOW HARD ARE YOU WORKING (INTENSITY), AND

4) HOW LONG ARE YOU DOING IT FOR (TIME).

There is probably more written about training intensity than any other part of training. Part of this is that measuring training intensity, via oxygen up-take, heart rate, or blood lactate, is what physiologists do best. Most scientists have learned the trick of using big words to talk about what they know best. It's a great strategy for making you think we are pretty smart. It also gives coaches something to be really specific about, and we all know that coaches like details. Additionally, experimental studies (done mostly with previously untrained individuals or with sub-elite athletes) have consistently demonstrated that there is a clear minimal training intensity capable of provoking change (that's why we are training, remember). As a general principle, even untrained individuals need to be about 60% of their momentary capacity to induce improvement. Athletes probably need to work at relatively higher intensities; around 85% of your capacity for that task is probably close to the minimal intensity necessary to induce improvement.

To use your earlier analogy, if you can time trial (no drafting allowed) 10K on rollers in 18:30 you are skating at 32.4K/hr. 85% of this velocity is 27.6K/hr or 21:50. If you skate much slower than this, you aren't provoking yourself to change, the very point of training. However, such relatively high intensity seems to require a fair amount of low intensity training to balance it and provide for general fitness. The overall rule of thumb being that only about 25% of your training load should be at high relative intensities. Thus, continuing our analogy, you might skate 10K every day, three days would be relatively slow and easy (significantly slower than 21:50), one day would be faster than 21:50. After some period of time, your best all-out performance for 10K will be faster than 18:30, you will have achieved a training effect. Thus, you are trying to induce improvement only every fourth day, the others are all recovery. If you insist on running, or cycling, or lifting in addition to these skating efforts, make sure you take one day in seven or two days in ten completely off. Alternatively, you can use about 85% of your own max heart rate, remember don't use the tables as they are only statistical averages. If you have the option of measuring blood lactate, workloads that induce lactate concentrations significantly about 4 mmol/l should only occupy about 25% of your training.

Training time is another hard thing to gauge. Some, like Koss, reportedly train 6 hours per day. Most of us have neither the free time nor the body to do this very often. One strategy for calculating the minimal training time needed is the so-called "rule of threes" developed by marathon runners. They have found that if your daily average isn't at least one-third of your racing distance, that you can't expect to get through the distance without having to "take the pressure off". Thus, one-third of the 26.2 miles is 8.7 miles per day. You don't need to train 8.7 miles per day, just average this over a longer period of time, such as 61 miles per week. This isn't much training when you consider that most elite marathon runners do double this amount. In skating terms, even preparation for Athens to Athanta shouldn't take much more than 200 miles per week. While this sounds like a lot, at even a comfortable 15 miles per hour it only represents 13 hours per week. For shorter distances, such as 10K, only 14.5 miles per week is necessary. Clearly anyone who takes their sport seriously is doing more than this, so except for the really long events, training time is as likely to be overdone as underdone. My feeling is that unless you are preparing for marathon events, more than an hour per day should be carefully considered and justified before it is done. Otherwise, you may be increasing your ability to do more training more than your ability to race faster. Borrowing the words of the legendary athletics coach Arthur Lydiard of New Zealand, who coached Peter Snell and Murray Halberg in the 1960 and 1964 Olympics, and who was as responsible as anyone for starting the trend of doing high-volume training by his suggestion that elite runners should do 100 miles per week during their buildup, "once you can comfortably do 100 miles per week (alternating 20 miles and 10 miles each day), don't run further, run faster".

Lastly, it must be remembered that skating is as much a technique sport as it is an energy-demand sport. You only learn how to skate by skating, or by some very specific simulations. If you are too tired from skating or doing energy system training to execute skating practice correctly, you may have more to lose than to gain by continuing to practice. For this reason, I believe that you should do your skating training when you are relatively fresh and able to execute the skills well. The time for the "donkey work" of running, cycling and weight-lifting is when you are a little tired. Above all, the words of Canadian coach Jack Walters... "skating is pretty simple, you sit really deep, you push really hard to the side"...should be your ever present guide.

Hopefully, you don't have a glazed expression in your eyes. Now you know as much about training as I do. You just don't know the fancy jargon to spout. Thanks for the idea, Pat.

Reprinted with permission from Speedskating Times (March 1-April 15, 1995). *Carl Foster is Director, Cardiac Rehabilitation and Exercise Testing, Co-ordinator, Sports Medicine/Sports Science, USISA.*

1995 CASSA AGM Highlights

by Ian Hennigar

Compared to the past several years this meeting was very quiet and calm. A great deal of time was spent in workshops with the restructuring of the CASSA Board taking up most of the time. A committee was created to research and prepare a revised Board structure for approval at next year's Annual General Meeting.

It appears that CASSA will revert back to two Short Track ranking events for the upcoming season. The reduction last year to one event was not well received by most provinces due to the lack of elite-level competitions in Canada.

This meeting saw a real decrease, from previous years, in Procedures and Regulations' amendments. Four were circulated with only one being passed. The change concerns rule K22-100 which details the selection of skaters for a final only in the 3000m short track events. The change will now allow the meet Co-ordinator to determine the top 8 competitors.

CASSA launched its new computerized membership program. The software program will track coaching and officials certification along with a member's history. The provincial associations can use this software for free and then provide CASSA with a disk to update its database.

The following awards were made at the CASSA Awards Banquet (left)

This year's meeting in Quebec City may be the start of the creation of a common vision for CASSA. The delegates and the CASSA Board displayed a great deal of co-operation the entire weekend. This co-operative environment will see the Organization move ahead.

Also worthy noting is that the meeting approved an increase in the competitive 2 membership fee from $6 to $12. All other fees remained the same.

Ian Hennigar is the Executive Director of the Ontario Speed Skating Association.

CASSA HALL OF FAME

GERRY CASSAN : Ottawa
ANDRE LAMOTHE : Montreal

Long Track Male Athlete.....**NEAL MARSHALL**

Long Track Female Athlete.....**SUSAN AUCH**

Short Track Male Athlete.....**MARC GAGNON**

Short Track Female Athlete....**ISABELLE CHAREST**

Female Coach of the Year .....**INGRID PAUL**

Male Coach of the Year.....**GUY DAIGNAULT**

John Hurdis Award.....**RAYMOND LEBERGE**
(Outstanding Volunteer)

Official of the Year.....**LINDA GOUGH**

Administrator of the Year.....**MARCEL BOIVIN**

Certificates of Merit ....**5 to SASKATCHEWAN**

Doreen Ryan Award.....**SASKATCHEWAN**
(best in Long Track)

Pat Underhill Award.....**QUEBEC**
(best in Short Track)

HALL OF FAME:

- **KEVIN SCOTT** for World Record in 1000m
- **SHORT TRACK MEN'S TEAM** for their win at the World Relay Championships

The Pan Am Experience:

The Canadian In-Line Speed Skating Team at the Pan American Games

by Barry Publow

From March 12-26, 1995 the XII Pan American Games were held in Mar del Plata, Argentina. In-line (roller) speed skating, or "Patin Carrera" as it's called in Spanish, was just one of the 38 sports contended at the Games. Although still regarded as a budding sport in Canada, roller speed skating has been part of the Pan Am program since 1979 in Puerto Rico. However, it was not until the 1991 Pan Ams in Havana, Cuba that the majority of racers began competing on in-lines (vs traditional "quad" 4-wheel roller skates).

Canada's speed skating team consisted of two male skaters (Arcton Lancaster, Calgary, AB, also a National Team long tracker; Patrick Chayer, Montreal, PQ), one women (Melissa Hemlow, Hamilton, ON), and their coach, myself, Barry Publow, Ottawa, ON. This coaching appointment would prove to be an interesting role change and an "other side of the fence" experience for me. As a National team skater myself, I had now taken on the responsibility of coaching two of my teammates and the toughest personal skating rivals here in Canada.

Once in Argentina, the excitement began with the Opening Ceremonies as we marched with the Canadian delegation into a packed stadium of 50,000 plus roaring spectators. The Opening Ceremonies more than met all of our expectations as a sensory extravaganza. I can't even begin to explain the intense patriotic pride we all felt when we entered the stadium. For a brief moment, the spotlight was on our sport as hometown heroine and reigning sprint World Champion Nora Vega ran into the stadium carrying the torch. This was really not much of a surprise when ▶

one considers that, next to soccer, in-line speed skating is considered the second most popular sport in Argentina.

The in-line racing program began with three days of banked-track competition. The newly renovated patinodromo, equipped to seat 10,000 spectators, was standing room only as competition began. The distances for men were: 300m solo time trial, 500 and 1500m heats, 10,000m points race, and 20,000m elimination race. There was also a 3-man 10,000m relay. For the women the sprint distances were the same, while the longer races were 5,000m points, 10,000m elimination and 5,000m relay.

Overall, the Canadian team did well in their races, especially when one considers that the timing of the Games meant very little or no outdoor training, and at a time when most skaters are still in the off season. The Americans dominated the majority of the races with the Columbians and Argentines providing the occasional upset and giving them an all around hard time. In the 500m, Arty skated strong and, with good strategic heats, qualified for the final of 4 skaters. At the 300m point he was positioned at the back of the group but still within striking distance. Making a difficult, but manageable, outside corner pass spelled disaster as he came off the banking a little too early and lost his traction. With only minor "road rash", Arty valiantly got to his feet and completed the last lap. With the very real possibility of medalling gone forever, all of us were a little disappointed. But, his fourth place finish was something to be proud of as the best ever placing by a Canadian at such a major International competition. Patrick, who put in a solid 300m sprint performance with an 8th place finish, also skated respectably in his other races. Melissa, who at the young age of 16 was skating in her first ever (Senior) international event of this calibre, put in good personal performances in all of her races (and gained some valuable experience in the process).

After the track competition there were 3 days of road racing. The course was a tight and technical 3-turn circuit measuring a mere 277m (quite small for a road course). The same distances used for the track racing were employed for the road competition. Once again the American superstars dominated both the men's and women's events. Through strong skating and an excellent strategy in the heats Arty again qualified for a final, this time in the 1500m. He skated to a 5th place finish just seconds behind the winner, Derek Parra of the U.S. Patrick Chayer made a daring one-man breakaway in the 20,000m elimination race. He maintained the break for about 7 or 8 laps while he slowly increased his lead to almost 2/3 of a lap. The pack eventually got nervous and began to reel him in. Once he realized the chase had begun, he eased off and became reabsorbed into the pack. Although he was eliminated shortly after, Patrick's breakaway showed courage and confidence and set the pace for the rest of the race. Melissa, who was now a little more comfortable racing in such a high calibre field, set several personal bests and steadily improved over each event.

The final day of competition was a 42k open-road Marathon for men, and a 21k half-marathon for women. The men, exhausted after 5 days of racing and each nursing minor injuries, decided not to participate in the hilly and rough "pebbled-ashpalt" course. Melissa, however, was determined to race the half marathon and do her best to stay with the pack. Unfortunately,

C•O•N•T•E•S•T

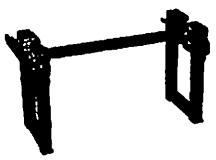
May Contest Winners

The winners in May's hunt for **"JOHN'S JIG"** were:

PIERRE LANDRY (Brampton)
TABATHA CARR (Madoc) and
SUE PENDER (Cornwall)

Congratulations!

LET'S FIND "JOHN'S JIG"!



This is only a sample and is not eligible for prizes. Look elsewhere for JOHN'S JIG.

Once again, John Cavar, OSSA's President, has hidden a jig on one of the pages in this issue of Skaters Edge. He advises us that it may be used as an underline, a paragraph heading, separation line between articles, etc. It could be anywhere: horizontal, vertical. So-o-o-o, put on your detective's cap, get out your magnifying glass and... all the best!

When you find **"JOHN'S JIG"**, send a note by mail or FAX to the Ontario Speed Skating Association, 1185 Eglinton Avenue East, North York, Ontario M3C 3C6 (FAX: 416-426-7385) stating the exact location of JOHN'S JIG, including the page number. Remember to include your t-shirt/sweatshirt size as well.

Three winners will be selected from a random draw on November 6, 1995 to win prizes for being great detectives. Happy reading and good luck!

the intense heat, diffucult course, and lack of outdoor endurance training proved to be a little too much as she was eventually removed from the course by officials due to a road closure time restraint.

For me, the whole Pan Am experience left an impression that is not soon to fade. As a sport that does not yet hold Olympic status, the Pan American Games represent the pinnacle of the sport and the penultimate level of achievement. Argentines' are incredibly passionate about their sport. Sometimes when I'm alone I can swear that I can still hear the 10,000 frenzied fans cheering "Argentina! Argentina! Argentina!..." as their skaters battled it out for medals. It amazed me how athletes in a sport so seemingly small and irrelevant as roller speed skating can be National heroes/heroines, with their top skaters being household names. Some Argentine fans got so emotionally involved in the racing that whenever there was a minor altercation involving one of their skaters, they would go on a rampage. Some yelled obscenities, some threw objects, and some even jumped the barriers at the end of the race in an attempt to assault the rival skater (in this case a Columbian who tugged at the suit of their male superstar).

I learned many things through my experience at the Games. First of all, it is very difficult for us here in Canada to understand just how important the Pan Am Games are to all of the Latin American countries involved. To many, the Pan Ams are recognized and respected more than the Olympics themselves. Like their Olympic counterpart, the Pan Ams provide a medium where dreams can be either realized or extinguished. It is a place where the true spirit of amateurism, competition, fair play, and sportsmanship live on; ideals that have been all but eroded by the ever-encroaching world of money and big-time professional sport.

The entire Canadian team can be proud of its performances at the Pan Am Games. They have made their mark in history as probably the most successful Pan Am in-line speed skating team ever. Each of the athletes involved undoubtedly brought back to Canada their own unique set of memories and experiences. All of us involved in the sport dream of the day when we eventually become a medal sport in the Olympics. Until then, the Pan American Games, along with the annual World Championships, will provide our skaters with similarly rewarding experience. The next Pan Am Games are to be held in 1999 in Winnipeg, Manitoba, Canada! Yes, you heard me right...Canada!. The next four years are, therefore, critical for the development of the sport so that Canadian skaters can optimize their athletic performance in Winnipeg, 1999. Facilities, including Canada's first and only 200m banked-track, will, hopefully, be built for the hosting of the in-line competition. Hopefully this information, once disbursed among the ice speed skating community, will further encourage ice skaters to get involved in their warm weather counterpart. Four more years to train, work hard, and to build, and the whole Pan Am experience will once again be repeated. And this time, right here on Canadian soil!

Barry Publow was the Canadian Team coach at the XII Pan American Games in Mar del Plata, Argentina. Barry himself is a member of the National/World In-Line Speed Skating Team and currently races out of Ottawa for Team Rollerblade and Powerbar.

• • •

Clarification

Re: "In-line Racing: An International Perspective"

from SKATERS EDGE, May 1995

by Barry Publow

It was pointed out to me after publication that I had mistakenly implied that CFARS is responsible for organizing events on our summer racing calendar. Let me set the record straight by informing everyone that we owe an enormous amount of thanks to the continuous, tireless efforts of Sandy Nimmo and CIRSA (the Canadian In-line and Roller Skating Association). It is CIRSA who organizes individual races and coordinates event dates to ensure that we have a full and well-balanced season of racing. Credit must also be given to the Toronto In-line Skating Club for its important role in organizing several events. By carelessly omitting this rather critical information in the article, it may be that readers assumed that CFARS is responsible for coordinating these in-line events. My intention was to simply inform readers that CFARS holds trials to determine the World/Pan Am teams. Basically, CFARS' involvement with (outdoor) in-line racing ends here.

I feel that it is necessary to clarify that it is CIRSA, not CFARS, that can be credited for our solid in-line racing calendar for 1995. I sincerely, and humbly, apologize to all who may have drawn an incorrect conclusion by my inadvertent omission of pertinent information. Most of all I apologize to Sandy Nimmo for not giving credit where credit is undeniably due.

Barry Publow is a regular contributor to Skaters Edge. He studied speed skating physiology while completing his B.P.E. at McMaster University. He is a member of the National In-Line Speed Skating Team and represented Canada at the World Championships in Gujan Mestras, France

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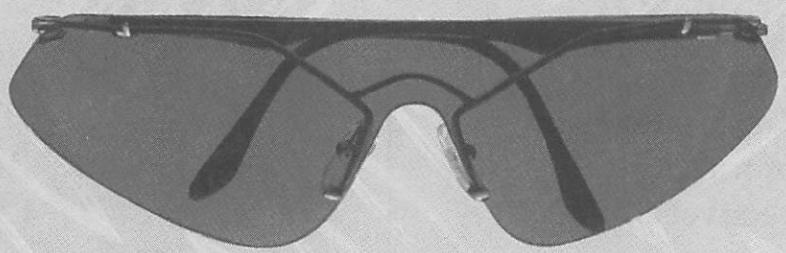

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World Champion in Two Sports!

*Champion of Champions – Jaap Eden

by John Hurdis

This is how the Dutch writer Wil Smulders described Eden (*Champion of Champions) in a 1983 publication predominately about his achievements in winning two World cycling championships which he added to his 1893, 1895 and 1896 World Speed Skating Championships but again we have to thank our friend Karel Verbeek for providing many facts about this great skater.

Eden was born in Groningen the capital of the northern part of the Netherlands on October 19, 1873. His father was a gymnastics teacher and his mother died seven days after his birth. He moved to Haarlem and was raised by his grandparents who owned the "Velserend" hotel.

His first interests as a boy were hunting and gymnastics. He took daily walks but mostly ran through the dunes and to school, a distance of more than ten miles which resulted in giving him very strong legs. It made him especially well equipped for the two sports that brought him fame: speed skating and cycling.

Eden raced his first race at the age of 15 at Abcoude in 1890 and it was in this race that he finished second in a one mile race to the great Klaas Pander who recognized his talent. At Paterswolde on January 11, 1893 he raced in an international race for amateurs over the 5000m and was first in a time of 9.16.8. Later in an "unofficial" Open Dutch Championship he won the 1500m in 2.35.0 which in those days would have been considered a World record! (In this race a skater by the name of L.A. Couvee from Scheveningen raced under the pseudonym "Brokendown" in the official list!) Eden was sent to Hamar on a training program when he was 17 but did not start in any races there.

We first see his name among the World international speed skating competitors in the 1891 World Championships held in Amsterdam on January 6 and 7 when he was 18 years old in the event that Joseph F. Donoghue of the U.S.A. was declared the World Champion. Eden placed 3rd (1.31.2) in the deciding half-mile race and 4th (3.15.2) in the one-mile race but he was not listed in the 2 and 5 mile events.

Again at Amsterdam, two years later in 1893 on January 13 and 14 he was declared the World Champion with wins in three of the four distances. He won the deciding race in the 1500m (2.48.2); the 5000m (9.59.0) and the deciding race over the 500m (51.2) but he fell in the 10,000m. At Stockholm, Sweden on February 10 and 11, 1894 no World Champion was declared but Eden finished 2nd in the deciding 500m race (50.4); he won the 10,000m (in a World record time of 19.12.4) and was 2nd in the deciding 1500m race (2.36.2) and fell in the 5000m race.

On February 23 and 24, 1895 at Hamar, Norway he won three of the four distances to be named the World Champion; the 1500m (2.25.4), 10,000m (17.56.0), both ▶

World record times for that period, and the 5000m (8.41.0). At St. Petersburg, Russia on February 7 and 8, 1896 he again won the title of World Champion for the third time by winning all four distances namely the 500m (50.2), the 5000m (9.03.2), the 1500m (2.36.2) and the 10,000m.(18.52.4). By the age of 23 years he had won three World Championship titles.

The first staged European championships at Hamburg, Germany on January 23 and 24, 1891 saw the name of Eden recorded in 9th (59.8 tie) for the half-mile and 6th in the one mile (3.10.4). At the second ISU European Championships staged at Hamar, Norway on February 24 and 25, 1894 Eden's name only appeared once in the recorded results, a win in the 5000m with a World record time of 8.37.6. This championship had been a controversial one for Eden and it was rumoured that he was not that interested in the races but more so with members of the opposite sex!! No Champion was declared.

As an amateur cyclist he won two World Championships; the first on August 12, 1894 was the 10km distance at Antwerp, Belgium. The day after he was one of the pacemakers for Wilhelm Henie of Norway (father of Sonja Henie) who won the demi-fond title (pacemaking by motorcycles was introduced in 1899 in Montreal). Eden won his second World Championship on August 18, 1895 at Koln, Germany as a sprinter. Here Wilhelm Henie was fourth!

In 1896 he became a professional cyclist by signing a contract for 5000 guilders with Humber-Dunlop and went to Paris, France in March of that year. It proved to be the beginning of the end. He had an exceptionally strong body but a much weaker mind. He enjoyed the "good life", always smoking big cigars, drinking too much, having affairs with women who adored him. Life in Paris for him and later in the U.S.A. weakened his body and he refused advice to alter his expensive ways of living. He finally ended up as a beggar.

Not quite a teenage boy, on October 29, 1914 in Amsterdam he married a Miss L. Prisen who came from Haarlem (like Eden) and apparently had loved him for many years. From this union they had a son Jaap born on August 18, 1915.

Eden died on Saturday February 7, 1925 at 51 years of age and was buried in Haarlem in a nameless grave among the poor much like Amadeus Mozart the great composer!

His friends and admirers from his earlier days built a monument above his grave and a period started in which all kinds of myths originated that are still told today in the Netherlands.

The name of Jaap Eden is a great name in the history of the sport in the Netherlands. The award for "The best Sportsman and Sportswoman of the Year" is called the "Jaap Eden Trophy" and one ice rink was named after him. The one in Amsterdam opened in 1961 by the 10 year old grandson, Jaap Eden III, staged two World Short Track Championships in 1985 and 1990 and in 1996 the World Short Track Championships will be staged at the Hague in De Uithof rink on a road that leads to it called "Jaap Eden-weg".

Karel Verbeek of the Netherlands is a member of the Board of the K.N.S.B. He is a respected speed skating historian and contributed to the Dutch 100 year Anniversary of the K.N.S.B. history book and helps the writer tremendously with preparing articles dealing with the Dutch speed skaters and administrators.

John Hurdis has been involved in speed skating for 51 years in Great Britain, South Africa and Canada. He is also a CASSA Hall of Fame Inductee. He is the greatest historian of speed skating data in Canada and authored a history book about speed skating in Canada.

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Chronic Fatigue

by Nancy Clark, MS, RD

Compulsive exercisers relentlessly push themselves to the limit and deny themselves permission to take rest days, but dedicated athletes look forward to a day off as an integral part of their training program.

QUESTION: What gets stale besides bread?

ANSWER: Athletes and active people who exercise hard every day but plan too little rest into their weekly training schedule. Rest days are a very important part of an exercise program but their value is often underestimated. Tired muscles require time to 1) heal the tiny injuries that occur during training, and 2) refuel depleted glycogen stores. Athletes who train relentlessly set the stage for injuries, chronic glycogen depletion, and chronic fatique.

If you are among the many active people who have imbalances between training and recovery, and pound your body in the name of marathon training, weight reduction or getting in shape, you may relate to some of the following signs of staleness. Take heed if any two of these are present for you: unusually poor performances in training and competition; failure to improve despite a good training program; loss of appetite and weight – the "I'm too tired to eat!" syndrome; insomnia or restless sleep and feeling that you are "always tired"; irritability and anxiety accompanied by depression.

If you know that rest is important but just don't heed the advice, here are some tips to help you rest –in peace.

CONCERN: *"I'm afraid to take a rest day. I worry that I'll eat just as much and get fat from all the excess calories..."*

ANSWER: When you take a rest day from exercise, you will probably be just as hungry and want to eat just as much food, even though you are expending fewer calories. Here's why. Instead of burning the carbohydrates you eat for muscle fuel, your body finally has the chance to store them as glycogen in the depleted muscles. For each 1 ounce of stored carbohydrate, you store 3 ounces of water – and the scale jumps up 2 to 4 pounds. This jump may frighten you into believing you are "getting fat" just because you took a day off from exercise. Not the case!

Water-weight differs from fat-weight. Throw away the scale and pay attention to how much better you feel during your workouts. You'll likely have more energy and perform better after a rest day. Athletic improvement comes with *quality* workouts – not just quantity.

CONCERN: *"I always feel so guilty when I skip a day of training... I'd rather drag myself through the motions of exercise than sit home fretting that I'm getting lazy."*

ANSWER: *Compulsive exercisers* relentlessly push themselves to the limit and deny themselves permission to take rest days, but *dedicated* athletes look forward to a day off as an integral part of their training program. If you are a compulsive exerciser, you may have the following personality traits that interfere with your training program. You —

- like to be "in control". Regular exercise gives you a sense of control over your day's chaotic schedule.
- are a perfectionist. You demand of yourself the "perfect" training program (read that *no days off*).
- are compulsive in other areas of your life. Are you also a food-aholic or work-aholic?

These personality traits are common to athletes who grew up in families that abused addictive substances such as alcohol. Now exercise-addicted, these athletes exercise 7 days a week, twice per day, and even train while injured.

CONCERN: *How much rest is enough before a competition?... I'm afraid of getting out of shape if I take one day off.*

ANSWER: Rest will enhance, not hurt, your performance! You won't lose fitness, but rather will be able to perform better with better-fuelled muscles. Here's what some studies show about the benefits of reducing exercise —

- Runners who reduced training volume by 70% from 50 miles in 6 days/week to 15 miles in 5 days/week x 3 weeks (including 3 miles of high intensity intervals) maintained fitness and ran 9% longer in an exercise test.
- Cyclists who intensely trained for 6 weeks then tapered their exercise for up to 2 weeks improved by about 9%.
- Triathletes who reduced their training for 10 to 13 days before a 3.1 mile race finished 12 to 16% faster than when they raced without rest. This translates into knocking minutes off their racing time.
- Marathon runners (training 45 to 50 miles per week) who tapered for only 1 week showed the best improvement when they ran only 6 miles during the taper week and included some speed workouts (500-meter intervals) as compared to a taper with no running or about 20 miles per week of slow running. If you are severely overtrained, you may need weeks, if not months, to recover. One study with swimmers showed that a 2½ week taper was inadequate to recover from the staleness acquired during a 6 month season.

CONCERN: *I've been training harder, but my times are getting slower.... Is my junk food diet catching up with me?*

ANSWER: Probably. Muscles need carbohydrates immediately after exercise, not "sorry, no time to eat right." One simple solution is to drink extra juices for quick and easy carbs that quench thirst as well as supply needed fuel. Target 50 grams of carbohydrates (200 calories) every 2 hours after exhaustive exercise – ideally, a total of 600 grams carbs per 24 hours for a very active 150 lb athlete. This means carbs at every meal, not high-fat "junk food".

Nancy Clark, MS, RD offers private nutrition consultations at Boston-area's SportsMedicine Brookline. Her books provide additional information: Nancy Clark's Sports Nutrition Guidebook ($18) and the New York City Marathon Cookbook ($23). Send check to Sports Nutrition Materials, 830 Boylston St., Brookline, MA 02167.

Training Load, Variability & Performance

by Carl Foster, PH.D.

A Few Months Ago We Discussed a study done with racehorses by the Dutch physician/scientist Harm Kuipers. As you may recall, Harm trained these horses progressively harder over a period of about 7 months. So long as the training was maintained on a hard day-easy day basis, even when the hard days became quite hard, the horses prospered and continued to improve. However, once the easy day was made harder, the horses had trouble completing training sessions, became very cranky, and lost their performance ability. I hope that you will forgive me revisiting a subject so quickly again. However, the implications of their data are so striking that they deserve a more detailed analysis.

We have been interested in the relationship between total training load, the variability of training and performance. If we examine two different training plans (A & B Fig. 1), we note that although the daily average load might be very similar (150 units/day in the example), the variability of the load (expressed as the mean divided by the standard deviation (X/SD)) can act to

Fig. 1

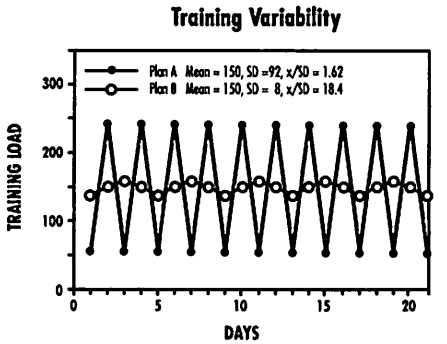


Fig. 2

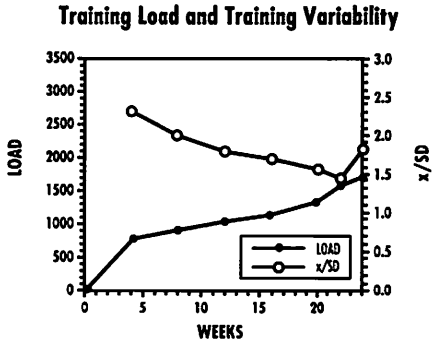
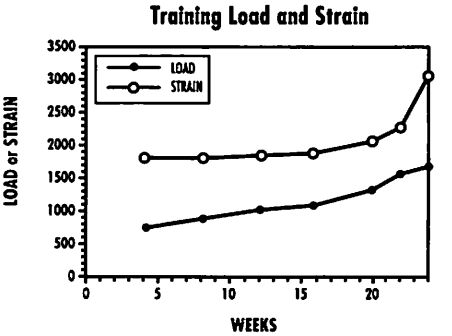


Fig. 3



Dave Lowery 410-833-5923

Fig. 4

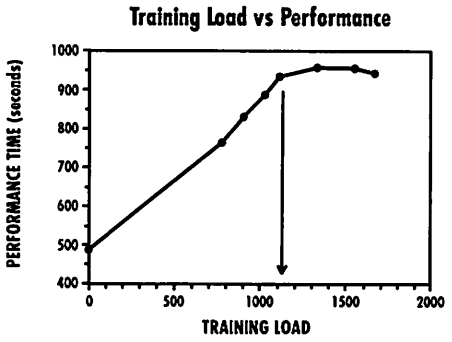
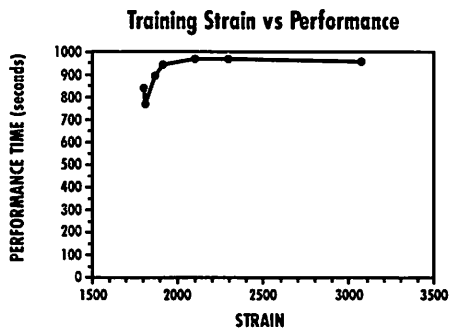


Fig. 5



create a very different picture of the training load. The larger the X/SD, the more similar the training on a day-to-day basis. In view of Kuipers' data, we felt that more variable training might present less of a strain to the system. Accordingly, we calculated the training load and the training variability (X/SD) using the product of training duration and estimated rating of perceived exertion (no Harm didn't ask the horses how they felt) (Fig. 2). As you can see, the variability of the training actually increased (the X/SD decreased) as the hard days got progressively harder with the easy days remaining the same. However, when the training load was increased by making the easy days harder, the X/SD increased. With both the training load and X/SD increasing during the last weeks of training, the calculated strain in training increased markedly (Fig. 3).

If we then compare the horses' performance to their training load and strain, we see some interesting relationships. In this case performance is the length of time the horses could maintain a set workload, i.e. how long can you hold 22 mph. A better marker of performance is time to complete a fixed distance, but since that is not available, we do the best we can. First, note that performance improved fairly regularly with training load, up to about 1200 units per week. Beyond this the performance curve is pretty flat at very high training loads (Fig. 4). Does this mean you don't need to train hard? No! Based on other data we have, I think that it means that there are individually more or less optimal training loads in relation to performance. Beyond a certain load you may be able to adapt to heavier and heavier training, but it won't necessarily get you to the line any faster. Since they don't give out gold medals for who trains the hardest, training that doesn't contribute to better performance may just contribute to an increased risk of injuries. Other data we have suggests that the individual relationships between training load and performance are highly variable. This is to say that some of us can tolerate really big training loads and continue to improve. I've calculated values around 6000 units/week in some of our elite ice skaters. I also know that my own is about 1500 units/week. It certainly makes a case for consistent monitoring of your own training and doing some sort of index performance. Second, note that performance flattens out very quickly with increases in the calculated strain in training (load • X/SD) (Fig. 5). Again, I suspect that there are highly individual responses of performance in response to the strain of training. Monitoring your own training and doing regular index performance is the best way I can think of to determine this. Next month we will talk about strategies for doing index performances.

Since they don't give out gold medals for who trains the hardest, training that doesn't contribute to better performance may just contribute to an increased risk of injuries.

There are two take-home messages in this data that I think are fairly important. First, keep your training really variable. It seems better to include frequent recovery days, than less frequent recovery weeks. At least to the degree that human skaters are like racehorses, and I suspect the similarities are much more than the differences, there seems much to be said for the hard day-easy day approach. Secondly is to monitor your training load and to do index performances. You don't want to prepare for the biggest race of your season without some sort of systematic index of what you think you might respond to, not when it is so easy to gather the relevant data. Get out your graph paper.

Reprinted with permission from Speedskating Times (March 1-April 15, 1995). Carl Foster is Director, Cardiac Rehabilitation and Exercise Testing, Co-ordinator, Sports Medicine/Sports Science, USISA.

Notes form the Lone Star Skate

One More Bag 'O Wind and We're Done

by John Banks

DUMB LUCK

Hopefully by now you can do a pretty good job of predicting what kind of weather you'll have for your next race, and what general direction the wind ought to blow during your race. Before I get to the details of wind peculiarities, how about a little math concerning how just a little wind can kill (or aid) your race speed.

TWO AND TWO AIN'T NECESSARILY FOUR

Aero drag is affected by the square of the difference in wind speed, i.e., twice the wind speed makes FOUR times (2 squared) as much wind drag. Worse yet, twice the wind speed takes EIGHT times (2 cubed) as much power to overcome. For instance, if you're skating 15 mph into a 10 mph headwind, your apparent wind speed is 25 mph. If you either speed up 2 mph, or the wind increases by 2 mph, your aero-drag wind speed goes up to 27 mph. That's an 8% increase in wind speed (100x27/25=108). That means that the aero drag force you are fighting goes up 16% (108 squared=116). The power required to overcome that drag increase is 26% (108 cubed=126). Kinda' sucks doesn't it.

THE FOUR WINDS...

There are four distinct ways wind can blow, not counting the major change due to pressure system movement. Even when a pressure system is stationary, the wind direction can vary considerably. But thankfully, there is a detectable, repeatable pattern to most wind shifts. Learning to recognize these four wind shift patterns is also advantageous in plotting race strategy.

TYPE 1, THE CONSISTENT WIND

The consistent wind blows from the same direction for the whole time you're interested in its effects on your race. It don't change... 'nuff said.

As an example, let's say you were skating a square course with equal sides one mile long, in a consistent south wind of only 3 mph. Let's apply a little math to this. Let's say you skated the whole course at 18 mph. For the four sections of the course, you'd have the apparent wind speeds, drag, and power consumptions shown in Fig. 1.

Since each of the course's four leg's distances and times are equal, the average extra power required is the sum of the extra power for each leg divided by 4. Although 6.3% more power doesn't sound like much, the real question is can you put out 58.9% more power for the entire headwind leg?

Now, let's change the strategy slightly. What if you skated 17 mph in the headwind, 18 mph in the crosswinds, and 19.11 mph in the tailwind? The math changes to that shown in Fig. 2.

You just saved two percent (6.30-4.30) of your total energy expenditures. But more ▶

FIGURE 1

COURSE SECTION	APPARENT WIND SPEED (mph)	POWER INCREASE NEEDED	TIME TO COMPLETE (min)
Leg 1 headwind	21	58.9%	3.33
Leg 2 crosswind	18.25	4.2%	3.33
Leg 3 tailwind	15	-42.1%	3.33
Leg 4 crosswind	18.25	4.2%	3.33
Average extra power req'd		6.30%	13.33 min/lap

importantly, you significantly reduced your power needs in the headwind. Also, for the same lap time, you now have a two percent energy reserve to apply to your finish line sprint. How many times have you lost to a competitor by just a few feet at the final sprint?

TYPE 2, THE PERSISTENT WIND

This pattern is most common to the larger wind pattern movement due to pressure system movement. The wind starts out blowing from one direction, say for instance from the south, and steadily changes to a new direction, say for instance northwest, with a PERSISTENT attitude. Sort of, "I'm changing direction and there ain't nothing you can do about it". If I was picking terms I'd probably have called this an obstinate wind shift. This kind of wind shift can take from a few tens of minutes to several days to make its direction change.

TYPE 3, THE OSCILLATING WIND

An oscillating wind is one where the wind direction tends to wander, say from south, to southeast, then back to south, then to southwest, and then back to the south again, to start the wind shift cycle all over again. Think of an oscillating fan. This kind of wind pattern is really common when the land is hilly some distance away, but relatively flat where you are skating. The oscillations in this case could be caused from horizontal vortex flow as the wind breaks around the distant hills.

The nice thing about this kind of wind is that the oscillation time period is pretty constant. If it takes ten minutes to shift a full cycle the first time, then it will usually be a ten minute oscillation period for the next cycle. Big buildings can cause oscillating winds too, but you can expect their time periods to be pretty short, sometimes as little as just a few minutes or less.

Just to confuse things, an oscillating wind can be combined with a consistent or a persistent wind pattern. With a consistent/oscillating wind, the oscillations always return to the starting direction you first noticed the wind blowing from. With a persistent/oscillating wind, the original direction will gradually change, but the total angle of oscillation should remain relatively constant.

TYPE 4, THE UNPREDICTABLE WIND

Just what the name says, no common pattern is discernible. Treat your race strategy for this wind like you were skating in a consistent wind (type 1). You won't be able to do any better. Try to preserve a small amount of energy when you think you have a headwind, and go like crazy with the tailwinds. Good luck and skate hard.

FIGURE 2

COURSE SECTION	APPARENT WIND SPEED (mph)	POWER INCREASE NEEDED	TIME TO COMPLETE (min)
Leg 1 headwind	20	37.1%	3.53
Leg 2 crosswind	18.25	4.2%	3.33
Leg 3 tailwind	16.11	-28.3%	3.14
Leg 4 crosswind	18.25	4.2%	3.33
Average extra power req'd		4.3%	13.33 min/lap

HOW TO FIND THE WIND

It takes about 15-20 minutes of watching the wind to detect most of the patterns described above. A good time to do this is while you are warming up. A watch for timing the wind pattern shift is helpful. Find a recognizable landmark to sight on. Stand in the same place every few minutes to judge the wind direction. Your ears are your best clue for the wind direction. Turn your face into the wind, and when the sound of the wind is the same in both ears, that's the direction the wind is coming from. Don't try this standing directly behind or in front of a building, you'll get false readings.

I hope this helps you learn to make the wind your benefactor, instead of your enemy. I remember all too well that the entire first year I skated, I fought the wind instead of learning to work with it. It made me dread windy races. Now I look forward to them.

Reprinted with permission from John Banks and Speedskating Times (March 1-April 15, 1995). John Banks has been a rocket scientist for 25 years and is employed at Loral Vought Missile Systems in Texas. He has a Bachelor of Science degree in Aerospace Engineering. Mr. Banks took up in-line skating and speed skating in 1991 in order to rehabilitate a knee broken while playing soccer. He won his age group in Category 2 in the IISA National Championships in 1992 for the 10K and 20K distances and competes in races up to 38 mile distances. He is also nationally competitive in the SCAA (Sports Car Club of America) and sails.

A close look at changes on their way

Short Track

A Little of the Past
A Little of the Future

by Bill Markland

Beginning in 1988, certain occurrences have taken place greatly affecting the administrative efforts at the international level. All seem to focus on the fact that Short Track has now come full circle and is on the program of the Winter Olympic Games.

Occasionally since 1977 talks would center around producing some type of ranking system for Short Track. Several rankings were prepared and circulated informally. Nothing circulated seemed to arouse any interest and were dropped. However, since 1988 and the Olympic Games, the ISU's Short Track Committee has spent many hours discussing a Ranking System. The motivation for such a system being twofold, one a working document that would help promote the sport, and two, a document that would assist in the make-up of the first races at a Championship or Olympic Games. More on a ranking system later in the article.

After Calgary, and because the IOC imposed entry restrictions, the ISU's Short Track Committee began discussing ways of qualifying for the Games. Because the sport had no money and the Committee did not favour adding another competition, a decision was made to use the previous World Championship to qualify for the Olympic Games. On paper all appeared to meet the needs of the sport. Unfortunately, experiences in Sydney (1991) and Beijing (1993) proved otherwise. First of all the participating countries focused on qualifying and not on winning the World Championship. Secondly, the discussions, or downright arguments, got out of hand concerning the lower end of the final ranking. All because it determined the qualifying positions for the Games. Resulting from these experiences was the Committee's proposal for a specific Olympic Qualifying Event. Again, I will discuss this later in the article.

Early last season the Committee began to focus on four areas it believed would have a major long term impact on Short Track speed skating. These areas are the two mentioned above, and athlete safety and automation of the finish line procedures. The ISU has appointed a Safety Committee to review all areas concerning safety, and the automation system will go through its first practice run this season. Now, I would like to report on each area separately.

WORLD RANKING SYSTEM

The World Ranking System as it now appears in ISU Communication #854 ▶

evolved from original discussions on how to prepare some type of ranking comparable to other individual sports that would serve promotional purposes, and assist in making the races at competitions better balanced. Because most highly successful sports have some type of ranking system, the Committee believed such a system would benefit Short Track.

Several ideas had been on the table until about a year ago when the outline of using the previous year's World Championship as the starting point, and adding to this ranking the results of specific international competitions, materialized. The Committee's goal is to have the World Ranking System fully operational within the next three to four years.

This season, the World Ranking will only reflect from the '94 Worlds in Guildford. During this season, the Committee hopes to designate four other international competitions as World Ranking Competitions. Organizers wishing to have a competition designated as a ranking competition must apply to the Short Track Committee, and the competition must meet the criteria outlined in ISU Comm. #854. Once finalized, a World Ranking will be circulated within a short time after each of the designated competitions. The World Ranking can be used by future organizers to help promote the competition by indicating that ranked athletes have entered, and the Competitor Steward can use the ranking to assist in the make-up of the first round of heats in a competition. It is intended that the World Ranking will become a very useful tool in the future development of Short Track.

"The Committee's goal is to have the World Ranking System fully operational within the next three to four years."

AUTOMATION SYSTEM

The Automation System presently being developed with the assistance of LYNX SYSTEM DEVELOPERS, INC. is truly believed to be capable of putting Short Track well into the 21st century. The system centers around two computer programs. The first being a finish line program that provides the electric timing and photo finish of each race during competition. The second program being a protocol program that prints the results of each race, tabulates all points scored, prepares the next set of races, and completes the final standings at the end of the competition. By linking these two programs together, an information system will allow for the results of a race to be distributed throughout the entire rink, before the athletes of that race have left the ice. The ISU has signed a contract with LYNX to provide the timing at all World Championships, and it is the

intention to have the system fully operational by the end of the season. The goal of the Committee is to develop an automated system that will supply results and other information instantly throughout the entire competition area through the use of remote printers and large screen viewers. Just imagine being able to view the results of the race you have just skated in, while you are putting on your skate guards to leave the ice. Once the present bugs are worked out, the automated system will work that fast. In fact, we are presently working on the procedure that will allow the Organizing Committee to hand out a complete set of results as you leave the rink. Another nice factor about this system is that the entire Official Protocol can be stored on a computer disk for future reference.

OLYMPIC QUALIFYING EVENT

The Olympic Qualifying Event, mentioned earlier, resulted from many criticisms received regarding the requirement of qualifying and the previous World Championship. Comments ranged from "the qualification was unfair to all members," to "it destroyed the integrity of the World Championship." The Committee reviewed all criticisms and developed the Olympic Qualifying Event approved at this past Congress in Boston. This qualifying event will benefit all members of the ISU, and will lend greatly to the overall development of Short Track.

The qualifying event offers the positive factors for the sport. It allows for the qualification to be held much closer to the Games thereby assuring the best possible participation at the Games, and it offers all ISU members an equal opportunity to participate in the Games. It returns integrity to the World Championships in that now the Championship is not being used for another purpose.

Under the old system at each World Championship, members had to concentrate on finishing in the top 16 positions to have maximum entries the next year. Now, start positions at a championship have nothing to do with Olympic qualifying. The World Championships will just determine the World Champions. By having the qualifying conditions in the rule book, members have four years to prepare their strategies for the next Games. True, some have objected that a qualifying event during the Olympic season is requiring the athlete to peak too often. However they are not accepting the fact that under the old procedure each member had to perform at every championship, whereas now they are competing for any one of 20 positions. Finishing first or second receives the same qualifying status as finishing 19 and 20.

"... our athletes can feel assured that the helmet being worn will provide the necessary protection."

SAFETY CONCERNS

Finally, the matter of athlete safety and the subject of greatest concern to the Committee. For the fifteen years I have served on the Short Track Committee, safety has been a topic of discussion. Items such as padding, helmets, gloves, and rounding the tips of the skate blades have been discussed, proposed, and now appear in the rules. At the Worlds in Guildford, ISU President Poulsen appointed a special committee to look into all aspects of safety regarding Short Track speed skating. The special committee met in Guildford to outline its agenda and schedule for the first year. Its goal is to have specific proposals ready for the '96 Congress in Israel.

"... the results of a race... distributed throughout the entire rink before the athletes of that race have left the ice."

As a result of two meetings held since Guildford, two areas have been finalized and are being prepared for presentation. The first item already being circulated is a complete Medical Protocol outlining the necessary medical procedures and equipment that must be on-site during a championship. This protocol outlines the equipment necessary, the qualifications of the on-site staff, the response procedures, and the reports that must be made before, during, and after a championship. These official reports will serve as a basis for future discussions and practices. The second area in the final stages of competition is the matter of protective headgear.

Presently the rules require skaters to wear helmets, however there is nothing that indicates which helmets are suitable and which are not. Through joint efforts of the Safety and Short Track Committees, ASTM, an internationally renouned testing institution, is preparing a standard for the testing of helmets to determine their suitability for use in Short Track. It is anticipated that this standard will be approved by the International ASTM Standards Committee before this season ends. Once approved, this standard will be sent to all helmet manufacturers worldwide so that each manufacturer can specify which helmets meet the standard. Then our athletes can feel assured that the helmet being worn will provide the necessary protection.

Other areas still in the discussion stage are padding, cut resistant material, and standards regarding equipment. Two institutions are presently conducting tests on padding that would be suitable for Short Track, and efforts are being made to locate a cut resistant material that would be suitable for skaters to wear during competition. Both Short Track and the Safety Committee are making a study of other types of equipment that may benefit the safety of skaters during competition.

All in all, the future of Short Track looks good. Past efforts have lead to present successes, and present efforts will lead to future development.

Reprinted with permission from the February 1995 issue of Racing Blade. Bill Markland is an ISU Short Track Technical Committee Member.

Ready or Not?

Start line Jitters

by John Teaford

Scene: The Calgary Olympic Oval Season Finale, March 1993. Fastest ice in the world. I was at the peak of my fitness – every muscle, every system, every piece of equipment finely turned and fully prepared for the race of a lifetime. And that day, on the fastest ice in the world, my nerves sabotaged me. Distracted just long enough for the screw-up to occur, I surrendered control, lost my concentration and made a rookie mistake – two false starts and I was disqualified. I thought I'd been so ready only to discover I hadn't been ready at all.

I spent the whole next summer wondering whether my preparation and training had been correct. I had no final race on which to judge a year's work – 365 day's worth of learning lost to a moment's carelessness.

That body you occupy is no dummy. It knows when the stakes are high, and lots of times its instincts are more powerful than their thinking counterpart. Any lapse in concentration and your chances of failure rise dramatically (just take that day back in 1993, for example).

That body you occupy is no dummy. It knows when the stakes are high, and lots of times its instincts are more powerful than their thinking counterpart.

Every challenge you face as an athlete is perceived by your wrinkly mammalian brain as a matter of survival. In competition, spectators and competitors alike have a predatory edge about them. Rivals are there to take your livelihood. I know, I know – that may seem pretty far-fetched, but stretch your imagination for a moment while we consider the competitive mind.

Competition represents one of the few remaining opportunities for achieving status and establishing dominance, even when the only competition is oneself. In an evolutionary world – survival of the fittest and all - competition is plenty to be nervous about. So, when the butterflies begin to flutter, there's only one thing to do – recognize the sensation for what it is. Use it to your advantage. Enjoy it. Ride it out. Competition is as close as you'll come to feeling the instincts that kept our ancestors alive on the African savannah, the American frontier, the Asian steppe.

The body's natural tendency is to avoid stress, humiliation, pain, danger, potential injury. Nerves are the body's first line of defense in keeping bad things from happening. When they take over your system, it's the body's way of suggesting "You're about to go too far." The body instinctively doesn't want to risk any more than it has to, and if it can stop the "me" from putting "us" at risk, then it will save itself the trouble of having to recover from injury. But your body is also a pessimist, a whiner, and fundamentally a chicken____. Its interest isn't in becoming a better skater. What it really wants is to sit still and conserve energy. Such bodily naysaying is nature's version of your mother telling you to not run with scissors in your hands ("You'll put your eye out"). Improving as a skater requires overcoming such built-in reluctance. Once you do, your body will adapt to and recover from any reasonable challenge it faces.

I've raced in nearly every ice-harbouring corner of the globe – hundreds of races, thousands of miles of travel, three continents, more than a dozen countries. Once or twice I was the biggest dog in the yard on race day – expected to win, to dominate. Sometimes I came through. Other times I was disappointed. More often than not I was expected to be pack filler, anonymous cannon fodder, another butt for champions to kick. Most of those days I performed to those exact expectations. But once or twice I was the winner when no one expected me to be. On those days my triumph was as much over myself as over anyone else.

This life of mine isn't some movie I'm watching. I won't be floating somewhere overhead watching in the third person as the action happens to a body only remotely recognizable as my own. It's really me. Nerves are merely a reminder that the next move will be an important one - that this is a time to be at my best, not a time to retreat. This is the time for me to be on. Now when nerves try to take over, I accept them for what they are, and I *concentrate.*

Reprinted with permission from the May 1995 issue of InLine magazine. John Teaford is a former coach of the U.S. Olympic Speed Skating Team. From age 19-26, he was a member of the U.S. Cycling Team.

Getting the *Most* out of *Strength Training*

by Dr. Carl Foster

I must be getting old, either that or I am running out of interesting things to say. Assuming that Ocam's razor is right (the simplest answer to a question is most likely the correct answer), I must be getting old. Anyway, I find myself revisiting the topics of previous columns with disturbing regularity. This month I would like to turn again to strength training. Certainly few aspects of training are any more important to skaters. Additionally, there are so few hard data about strength training that there is as much misinformation as there is information.

For a skater, there are two primary purposes of strength training, stabilization and propulsion. The more important of the two is probably stabilization, since skating itself increases the strength and power of the propulsive muscles. If you watch any of the great skaters - Koss, Neiman, Jansen, Blair - one of the striking things you will notice is how stable their hips are. The strength to hold their hips stable allows the push from the knee and hip extensors to be effective. In less accomplished skaters, lacking the strength to keep their hips stable, the skater falls off the push losing much of the effectiveness of their push. Thus, no matter how strong their hip and knee extensors are, they don't get very much into the push. Accordingly, the first priority in strength training is to develop hip stability. To develop hip stability, the main exercises needed are the so-called "core" exercises and total body exercises. The biggies here are things like power cleans and squats. I prefer power cleans since they are more dynamic and since they add an element of co-ordination. In my opinion power cleans (squats) should be done with weights only as heavy as can be handled without a weight belt. Remember we are trying to build the strength to stabilize the hips. Using a weight belt takes pressure off these very muscles. Additionally, abdominal exercises (situps, knee raises, back extensions, trunk twisters, lateral situps) contribute to the ability to stabilize the hips against the ▶

push in skating. Additionally, rubber band exercises for upper body with the trunk held absolutely immobile acts to improve the core strength fostering stability in the hips.

Most skaters are probably more familiar with exercises which contribute to strength in the pushing muscles - squats (with weight belt), leg extensions, leg curls, hip sled, etc. While important, these exercises should be viewed as very secondary in importance since without stable hips to push against, strength in the push is largely wasted. The skating push is fairly high velocity, fairly ballistic and from a low position (where most people are very weak). The skating push is more nearly a jump than the slow controlled motion you ordinarily use in the weight room. Since strength transfers fairly poorly from slower to faster velocities, strength gained from comparitively low velocity weight training is likely to be only minimally effective in improving the power of the push. Accordingly, jumps against resistance from a low position are probably as effective as anything else relative to improving the effective power of the skating push. On this basis, many of the classical sandbag resisted skate jumps that have been around for a generation, and which are well described in Dianne Holum's book, may be effective as anything you could do in the weight room.

A separate but related issue is how strength-power training interacts with endurance training. Several studies of combined strength-endurance training have demonstrated that endurance training hinders the development of strength. However, strength training doesn't seem to impair the development of endurance. Accordingly, if you are at a point in your training where improved strength-power is of primary importance, other training may have to be reduced temporarily. Recent experience with the national team has, however, demonstrated that maintenance strength-power training may be continued throughout the skating season on a 1-2 times per week basis.

There is, I think, a simple bottom line to the foregoing comments. The important issues are to do core exercises and high power exercises. In the interest of time economy they can probably be done as part of a single training session. Obviously, before you do these sessions you will warm up both generally (jogging or cycling for 10 minutes) and specifically (light weight power cleans). Then, two sets of power cleans with enough weight to limit the repetitions to 10-12, followed by several different abdominal exercises and upper body rubber band exercises with the trunk held motionless, followed by 3-4 different types of sandbag resisted jumps from a very deep position. During these jumps concentrate on getting into a very solid, very deep position, then really exploding into the jump. Take enough recovery between each jump so that you can be explosive, this is not endurance training. Unless you are a sprinter, and perhaps need more resistance training, I feel you can get by with 2 sessions per week like this during most of the preparation part of the year and one session per week during the primary period of racing. As the Norwegians say, nice and simple.

Reprinted with permission from Speedskating Times (June 1-July 15, 1995). Dr. Carl Foster is Director, Cardiac Rehabilitation and Exercise Testing, Co-ordinator, Sports Medicine/Sports Science, USISA.

Why Keep Track of Your Race Times?

by Jerry Search

(Note: This article is intended to apply to *pack style* racing. Since "metric" style long track races are always skated against the clock (for time), this article would obviously be unnecessary).

After a friend read my article in the last Racing Blade, "How Fast Can You Really Skate?", I was asked if it's really good to have kids keep track of their race times. The feeling was that too much emphasis on the race time could jeopardize other things like technique.

I do agree that skaters will skate faster if they concentrate on skating correctly, and not just on their time for the race. However, I also feel very strongly that developing skaters, regardless of their age, *really should* keep a record of their times, especially in the shorter distances, as long as they do not lose sight of continuing to improve their technique. There are many reasons that times are important and/or useful, but let's take a look at the simplest.

Suppose you skate a race, against the same skaters you usually skate against. Now, normally you can keep up with them, sometimes they win, sometimes you win. This time, however, you are still halfway through the last turn when they cross the finish line. How well did you skate? Could you have beaten them? Does someone (like your mom or dad) think you *should have* won the race, but you didn't?

Well, let's look at your time. If this race was a 500, and your fastest *previous* time (Personal Record, or "PR") was 56.50, and this race was 54.2, how did you skate? Could you (or anyone else) expect yourself to skate *faster*? Probably not.

If your time for that race was *slower* than normal, well then you know that *maybe* you could have skated faster, but also please keep in mind that you will definitely *not* skate faster every time you race. And there are often things in a race, even a short one, that can affect your time.

If you *do* keep track of your times, you will have a better idea of how you are *really* skating when you race, regardless of the outcome of the race. A simple fact to remember: *You cannot control how fast any other skater skates or improves, all you can do is skate your best.* And, especially in the shorter races, your *time* is the best way to tell how well you *really* skated, assuming that the other parts of the race were okay, that is, your start, passes *and* technique, etc. And keeping your times also makes it easy to watch your improvement over a long period of time. Another way to put your times to good use is in deciding which meets to go to. For example, in most classes *except* Senior Men, you will probably be last (or near last) at the National Short Track unless you can skate a 500 in 58 seconds or better (because the Senior Men class has so many *fast* skaters, a 58 won't do a skater much good in *that* class!).

Should you go to the Olympic Festival Trials? Well, what is your 500 time? For the past 2 years, I have plotted the 500 meter times for the *bottom* 4 skaters (of the total of 18) on the Olympic Festival Teams. Besides the fact that you have to make the *top* 24 in a 1,000 meter Time Trial just to skate the meet, the bottom 4 girls, for the past 2 years, have been skating a 52.5 second 500 or faster. For the boys, it's a 50.5. So it's safe to say that if your 500 time isn't at least within a second of these times, you probably will not make the "Oly-Fest" team. However, if you are close, do go, since you will get some pretty valuable racing experience!

Remember, the key to becoming a good skater is to gradually improve your physical conditioning, skating ability, knowledge, skills, technique, and *speed*, and the only measure of *speed* is your time. Keep a *time chart* of your times, and when racing your local meets, always keep *your time* in mind. If you are too far behind to stand any chance, ***keep your speed up and go for a good time!*** If you are way out in front (maybe everyone fell), don't be satisfied just to win. ***Keep your speed up and go for that "PR".*** This is the way you will become *fast* enough to skate at the national level.

Remember too: Don't take my word for it, talk to your coach and/or parents about keeping track of your times. Besides, parents make pretty good timers. For training purposes like I have talked about here, you don't need an "official" time, just someone with a stopwatch.

PS: The reason times are not as important for the longer races is due to the way these races are skated. Because of the different strategies that occur in longer races, the times, even at the World Short Track Championships, are often slow. The first several laps are skated at a very easy pace, sometimes 15 second laps. Then when everyone is nice and tired, they pick it up and skate the last several laps under 10 seconds each! The Men's winning time for the 3,000 meters at the 1994 World Short Track Championships was just under 6 minutes, while most of the top world level men skaters can easily skate a 3,000 under 5:20.

Reprinted with permission from the February 1995 issue of The Racing Blade. Jerry Search is a coach with the Southern California Speed Skating Association.

Competitive coaching and the PURSUIT

by David Morrison

The pursuit has been adopted as a preliminary selection method at team trials both provincially and nationally. The pursuit pares a group of athletes to a manageable number. While an athlete need not be the fastest they must be fast enough to make the "cut". At a Canadian trials this cut is 16 skaters.

A pursuit is a competition within a larger competition. A skater may have two opportunities to skate the set distance (6 laps). If they opt to reskate (i.e., skate twice), the first time is thrown out. The skater in conference with his coach must decide in a couple of minutes after the first skate whether to request a reskate. Given the short time frame and the risk to the skater in the reskate on what do you base the decision? There are three things that are important when making a reskate decision.

1) Knowledge of the competition.

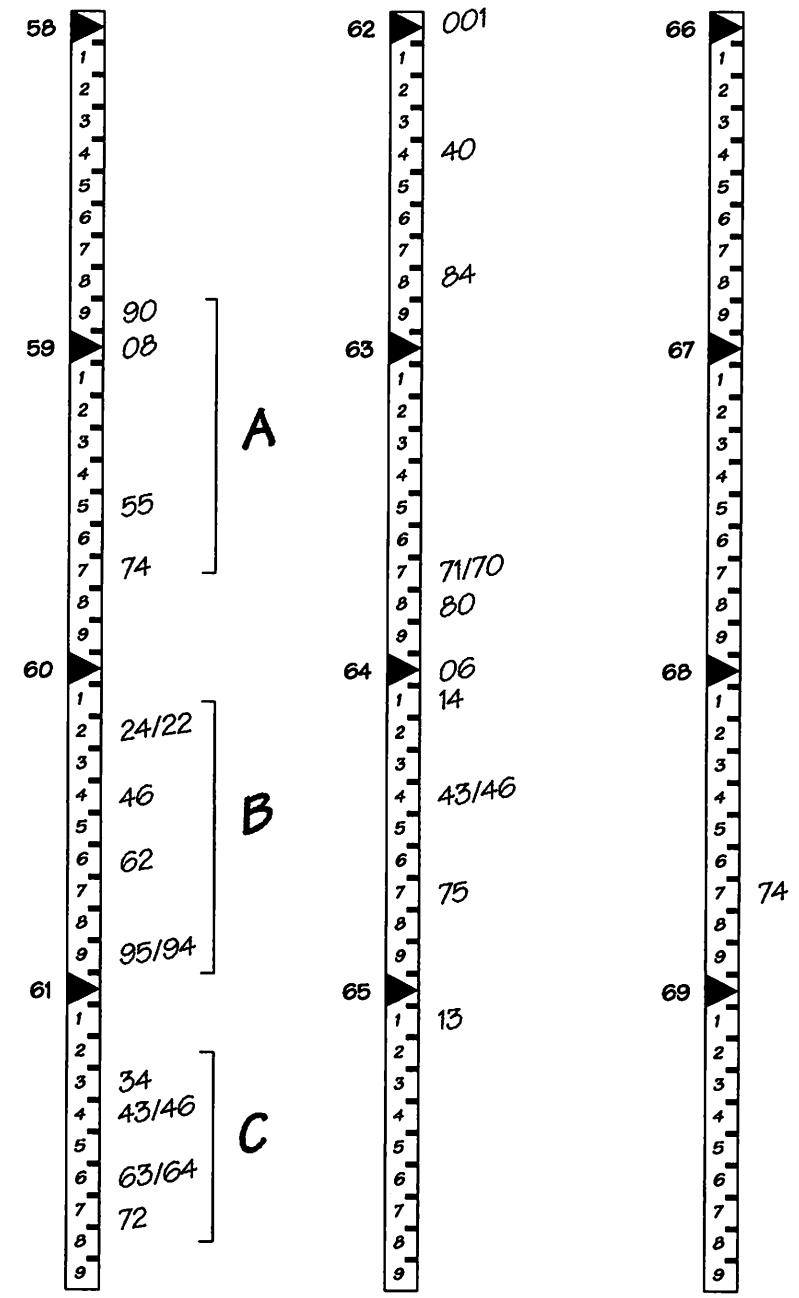
2) Accurate tracking of the results.

3) Recognizing when your skater has skated to the best of their abilities.

It is not enough any more to show up to the rink with your stop watch and a pencil and paper. The coach has homework to do. The task of knowing the competition becomes easier the more often you are present at major competitions. This doesn't mean there aren't the occasional surprises, but these are minimized and quite often predictable. If you are not knowledgeable about the skaters, you need to spend some time talking with other coaches and/or pouring over some meet protocols to get an idea of the speed out there. This can be done well in advance of the meet and you may be able to table a list of predictions. This may also give you an idea of what the cut off time will be. A predicted cut off time and your skater's best time are valuable pieces of information. Lap times from other competitions can be used as a predictor of pursuit times. Since the 2nd and 3rd laps of a pursuit are the fastest, taking a skater's best lap time from a 500m race will help you predict the pursuit time. The 2nd and 3rd laps of a pursuit are roughly 15.47% of the total pursuit time. (I attained this result after tracking the results of club and national athletes over several years.) Therefore, when it was reported that someone in Montreal skated a sub 9 second lap (let's say 8.9 sec for the calculation) one could predict a time of 57.5 seconds for the pursuit. (Marc Gagnon of Montreal, and two-time World Champion and runner up this past year, skated 57.45 in a pursuit this year.) Making predictions prior to the competition is time well spent. It gives you a better feel for how the competition will unfold.

The second important task is to track the results of all the skaters. Simply writing the times on a pair sheet beside the skaters' names is a recipe for disaster. The times have to be sorted so that

FIGURE A. Tracking of pursuit performance of the 1995 short track trials, men's division



you know exactly where each skater ranks at any given moment. The mental gymnastics required using the above method would be staggering. A simple form, however, can be developed. A form that has each second as a block (57, 58, 59, 60, etc.) and each block is broken down into tenths (0.1, 0.2, 0.3, etc.) (See Figure A). Make lots of room on the form to make it as useful as possible. When writing times down this way, a pattern emerges which helps you make that all important decision. When times are laid out as in Figure A, there are 2 or 3 times that stand out as superior to all the rest (i.e., Marc Gagnon). After that there are usually two groupings or clusters of times. The first cluster is generally well above the cut off time. The second cluster however has the cut off right in the middle of the grouping. Therefore, as the pattern emerges your skater's position relative to these two clusters is important for your reskate decision. (The pattern is more obvious in the men's competition than in the women's due to the larger number of competitions.) When tracking all the results it is also important to circle times (not erase!) where a skater (not your own) has decided to reskate. Keep their times in the mix until they reskate, for you must account for the possibility that they may skate the same or faster time in their second attempt.

The final bit of knowledge comes from working with your skater. Have they skated to the best of their abilities? More skaters (unless they've fallen or stumbled) skate slower in a reskate than faster. If your skater has skated clean and a P.B. then that's all they can do. There is no advantage to be gained in the reskate in this case. Exceptions would be if they will be dropped from the competition and they are close in time (tenths) to the cut off.

The more information a coach has, the more likely good decisions will be made with regards to the pursuit, minimizing the risk a reskate presents to your skater.

Dave Morrison is the Head Coach of the Ottawa Pacers. He was Ontario's Short Track Coach at the 1995 Canada Winter Games.

Pre-Competition Nutrition Guidelines

Here are some recommendations for eating before a competition. However, remember that everyone is different in their tolerance to foods – some people, depending on their sport, can eat almost anything just before they compete, while others have a more sensitive stomach. It's best to experiment with different foods and meal-timing before practice sessions, so you'll know what foods to eat and when to eat them before a competition. Don't experiment with something new the day of a big event!

PURPOSE OF THE PRE-COMPETITION MEAL

1. To prevent low blood sugar and its symptoms of fatigue, indecisiveness, blurred vision and light headedness.
2. To prevent hunger feelings and to settle the stomach by absorbing gastric juices.
3. If eaten far enough in advance for digestion to occur (i.e., 2-4 hours), to replenish fuel (glycogen) stores in the muscles.
4. To allow optimal exertion and performance without abdominal discomfort.

PRINCIPLES

- Carbohydrates make the best pre-competition foods. They digest quickly and are easily taken into the muscles. High protein foods (i.e., meat, eggs) take longer to digest, while fatty foods (i.e., fried foods, hamburgers) sit in the stomach the longest and may produce a feeling of heaviness.
- Be sure to drink plenty of water before your event to prevent dehydration: 2-3 glasses of water up to 2 hours before the event, and more just before the event if you can tolerate it.
- If you absolutely can't eat before a competition, eat an additional high-carbohydrate food the day before.
- You can't cram good nutrition into one day – you should eat a high carbohydrate diet every day to ensure optimal replacement of muscle glycogen.

AVERAGE DIGESTION TIMES

Large Meal: 3-4 hours
Smaller Meal: 2-3 hours
Liquid Meal: 1-2 hours

RECOMMENDATIONS FOR MEALS DEPENDING ON EVENT TIME

1. *Morning Events*
- Eat a large high-carbohydrate supper and bedtime snack the night before. If you can tolerate it, eat a light snack in the morning to prevent hunger, settle your stomach and prevent low blood sugar levels. One or two slices of toast can be effective.

2. *Afternoon Events*
- Eat a large high-carbohydrate breakfast and a light lunch.

3. *Evening Events*
- Eat a large high-carbohydrate breakfast and lunch, then an optional light snack 1-2 hours before the event.

MEAL SUGGESTIONS

Here are some high-carbohydrate/low fat pre-competition meal suggestions:

- *Breakfast:* Cereals, low fat milk, instant breakfast drinks, bananas, toast (especially whole wheat), muffins, bagels, french toast, pancakes, waffles, applesauce, yogurt.
- *Lunch:* Soup and crackers, sandwich (no mayonnaise), low fat milk, pizza (especially thick crust, single cheese, no meat).
- *Dinner:* Pasta with tomato sauce, rice, potatoes, vegetables, small serving of chicken or fish.
- *Snack:* For morning, between events or before bed: crackers, bagels, canned instant sports drinks, muffins, breadsticks, pretzels, granola, gorp, oatmeal raisin cookies, unbuttered popcorn, toast, canned or fresh fruit (i.e, peaches), yogurt, frozen yogurt, buscuits, rice cakes, banana bread, chicken or turkey sandwiches.

PRACTICAL IDEA

- On trips, bring your own pre-competition foods – especially breakfasts, such as cereals and muffins. That way you don't have to depend on restaurants... and you'll save money too!

Reprinted with permission from the Fall (September) 1994 issue of Physical Education Digest (Dick Moss, Publishing Editor).

COACHES' CERTIFIED CORNER

Relay Exchange

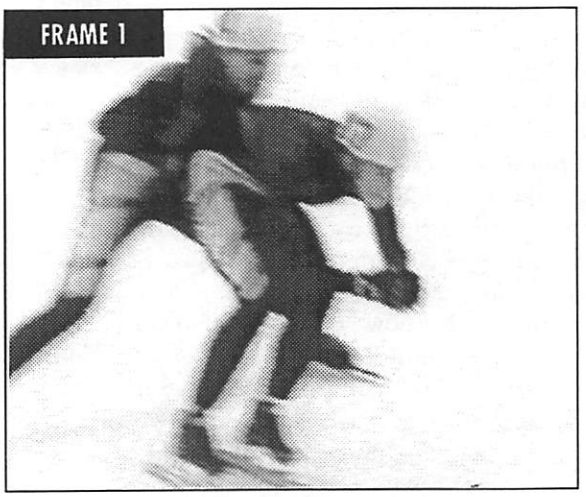
by Brian Wallace

Points to Remember:

1. To maintain the greatest momentum a smooth pass is required.
2. The exchange can take place on either side of the straightaways.
3. The physical push and the timing between the two skaters on the exchange is critical.

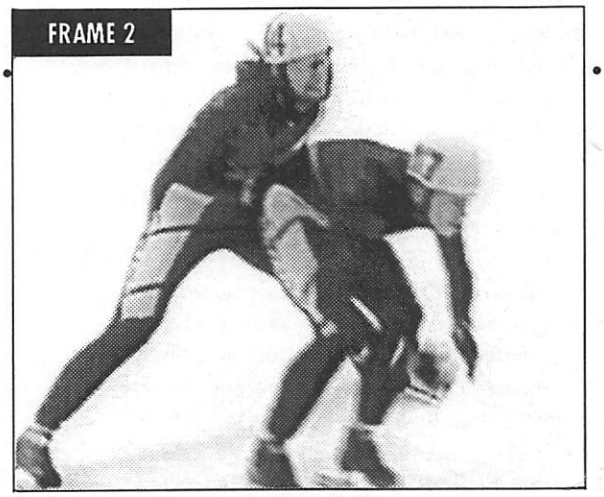
The following relay exchanges were taken from the Men's and Women's Worlds held in March 1995 in Norway. The Canadian men broke the World record with a time of 7:09:76 for this 5000m event.

FRAME 1



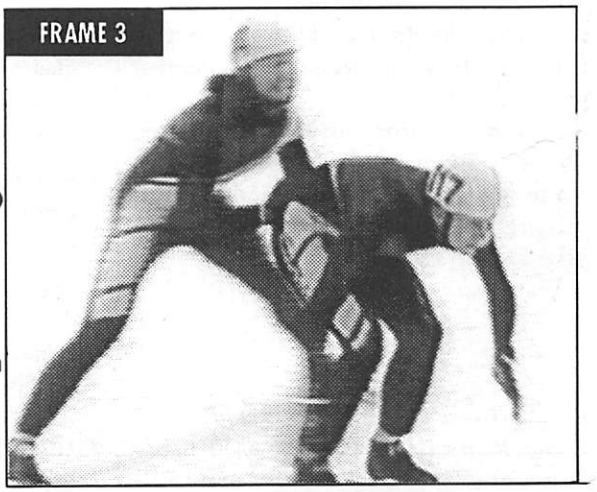
SYLVAIN GAGNON is making an exchange with BRYCE HOLBECH. Notice how Sylvain's arms are bent at the elbows to ensure a soft contact with BRYCE. BRYCE'S skates are parallel and heading straight, the feet are about shoulder width apart, the knees are bent, the weight is evenly distributed, and the arms are spread for balance.

FRAME 2



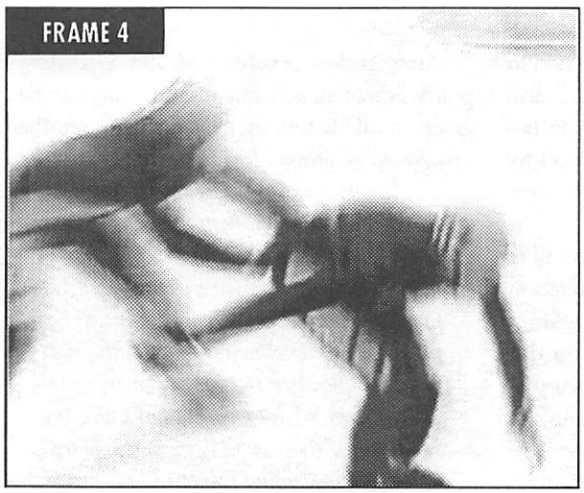
As in Frame #1, notice how SYLVAIN'S legs are spread apart so that he is able to maintain a straight line, good balance, and expansion to allow the forces to go up through the arms for a strong push. The bent arms also allow SYLVAIN to absorb impact and at the same time to transfer his force onto Bryce without any rotation allowance. Both of SYLVAIN'S hands are placed on Bryce's hips at the same time. The fingers of the hands are spread and the thumbs point towards each other.

FRAME 3



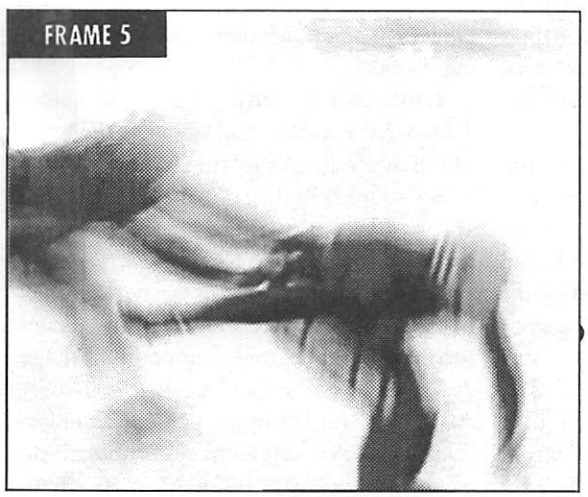
You can see that SYLVAIN is beginninng his push onto BRYCE as the arms are beginning to extend. This is another reason for the arms being bent on contact as it allows SYLVAIN to have a greater force in his push through the eventual full extension of the arms.

FRAME 4

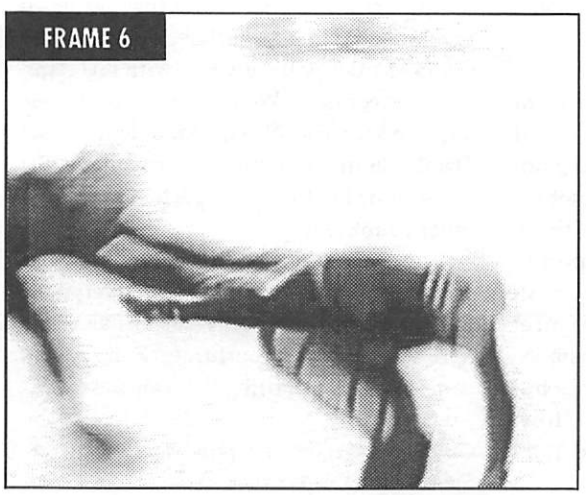


The arms are almost in full extension and the force is being transferred through smoothly. SYLVAIN is pushing with equal force through both arms at the same time. This prevents any rotation that would be sent onto BRYCE.

FRAME 5



FRAME 6



SYLVAIN'S arms are fully extended. Notice how his arms are perfectly parallel to each other and with the ice surface. BRYCE is now carrying all those forces and technical aspects that SYLVAIN executed flawlessly. Remember that this exchange is completed fairly quickly. It takes a lot of practice to perfect this portion of the relay. This is only one segment of a relay race. There are many factors involved in the making of a relay. Every component is important to make a winning team. Practice makes perfect!

Sowing Seeds...

by Guy Chenard

One official recently complained to me of a rule that, he said, needed to be changed. At issue was the practice of scheduling 3000m short track races as one final event restricted to the top 8 competitors **with points from previous finals** (CASSA Rule K22-100 D refers). It seems that, although more than 15 skaters were registered in the Senior age class at his last competition, only four received points in the first three distances. The result, of course, was a four skater 3000m race or, in the words of our official: "the Rule killed what should have been the most exciting event of the weekend."

Quick off the mark as usual, I hastened to point out that the Rule was not absolute and that there were other options. The alternatives, however, are not well understood by most officials. Some expansion is, therefore, in order.

The first and most obvious option is to run heats, which is the procedure used at the Canadian Age Class Championship. That, however, would not be a popular choice at most provincial-level meets: 3000m races are time-consuming, and the calibre of participants is not always sufficient to make heats a desirable option. A better solution retains the Meet Coordinator's prerogative to restrict participation to the top 8 or 9 competitors after three distances. All that is needed is an accurate method for ranking competitors with zero final points.

Significantly, the ISU uses "Seeding Points" to rank skaters for seeding purposes and for tabulating the final results of world-level meets. The formula could be applied easily to domestic competitions and would resolve our dilemma. The system is simple. ISU Rule 282 states:

> *Seeding points will be awarded in all races. In the awarding of seeding points the same rules apply as in awarding final points, except that all finishers of a race will receive at least 1 point. This does not apply to finals.*

In other words, points are given in the traditional order for every race (5, 3, 2, 1) with fourth place and below receiving 1 point. Skaters who are disqualified or do not finish the race receive zero points. In finals, fifth and lower places get zero points. Simple addition produces an accurate ranking of skaters at any point in the meet. Results are used to seed the next distance. Ties are resolved by referring to times but, since the present CASSA rule allows skaters tied for eighth place to skate in the final, our problem is resolved.

Another clear benefit of calculating seeding points is that an accurate final ranking can be given to **all** skaters in a category. Again, the procedure is simple. ISU Rule 282 continues:

> *For the final classification the skaters will be ranked first according to their total final points. Skaters who have participated in finals and did not score final points will be ranked immediately after those with final points. Following those, the skaters who have scored seeding points only will be ranked and those who have participated but scored no seeding points will be shown last in the final classification.*

Only final points, of course, count for awarding medals.

Now, using seeding points to select skaters for a 3000m final stretches the letter of the existing CASSA rule (amendment is being sought), but one can argue that the spirit of the rule would be respected. In addition, the ability to give everyone an accurate final ranking is clearly desirable. In fact, one province requested the use of seeding points to rank competitors in age class competitions at last year's CASSA AGM. Unfortunately, given the unfamiliarity of most domestic officials with seeding points, it would have been difficult to implement at the time. It was, therefore, temporarily shelved. Notwithstanding, it is reasonable to expect that domestic (read CASSA) rules will converge with ISU regulations over time. We can also expect pressure to run the North American Short Track Championship according to ISU rules in order to attract participants from other countries.

This evolution is healthy and normal. It is probably also inevitable. We have everything to gain by being proactive in this area and here is a golden opportunity. Funny what comes out of a "boring" 3000m race.

Guy Chenard is the VP Officials for the Ontario Speed Skating Association.

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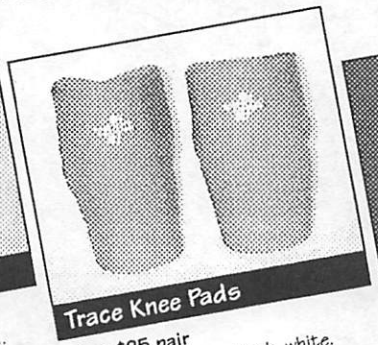

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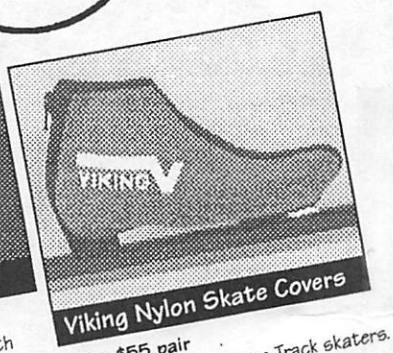

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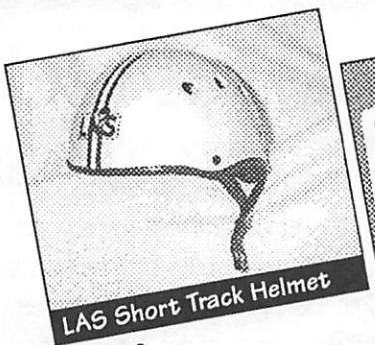

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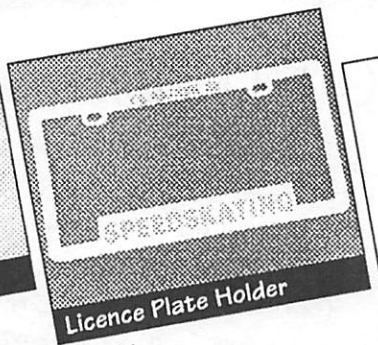

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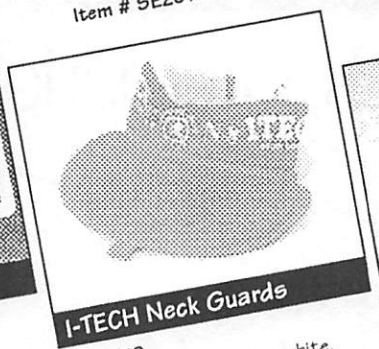

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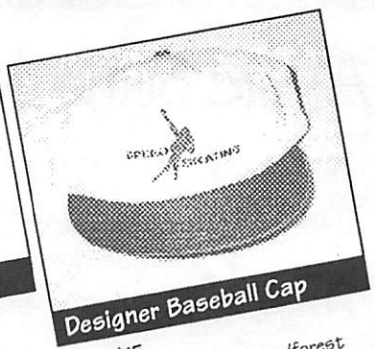

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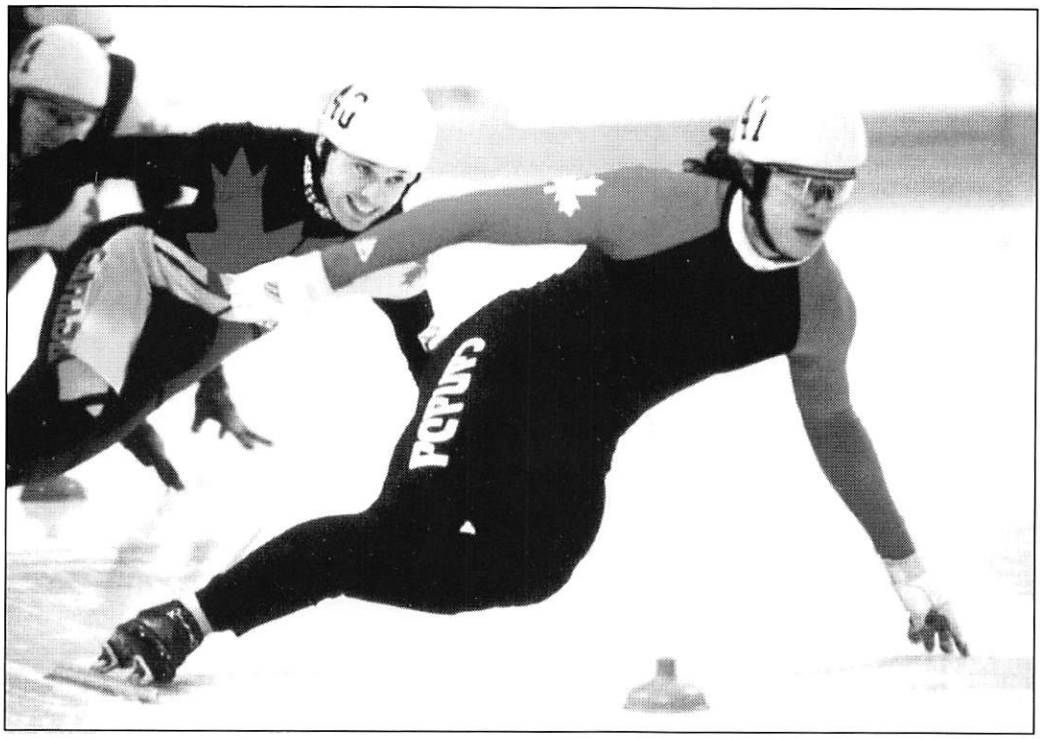

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