

MIND GAMES

VIEW FROM THE TOP

60-SECOND SUMMARY

HOT OFF THE PRESS

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OLYMPIC COACH

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TRAINING VETERAN ELITE ATHLETES

PROGRESSING INTO THE ELITE LEVEL Obeying the Stress-Adaptation Cycle

REVIEW OF THE 2006 USOC ENDURANCE COACHES THINK TANK

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ON THE COVER

Sheila Taormina competing in three of the five disciplines of the Pentathlon. Captured here are Fencing, Shooting, Swimming and the other events are Equestrian- Jumping and Running.

Message from the
**PERFORMANCE
SERVICES MANAGING
DIRECTOR**
by
DOUG INGRAM

It's not often that we talk about our cover athletes, but Sheila Taormina is a very special athlete. She started her career as a swimmer and in 1996 made the Olympic team and won a Gold Medal in the 4 x 200m Freestyle Relay. In 2000, she changed sports to Triathlon and finished 6th at the Games and she made the team in 2004 as well. For 2008, Sheila is hopeful for her third summer sport at a Games-Pentathlon. She is a strong contender as she is currently ranked 4th in the World. Now this is all pretty impressive, but if you look at the time span, you will quickly realize that Sheila has been in the Olympic movement for quite sometime. At 38, she would definitely meet the requirements for our article on "Training Veteran Athletes".



We ask two coaches, both very successful, from two very different disciplines to speak about training veteran athletes and to provide not only insight into the coaching of these athletes, but provide some tips to coaches who are coaching veteran athletes. They both agree that veteran athletes know their bodies much better than emerging elite athletes and that is a huge benefit.

The View for the Top features one of the recent additions to our USA cadre of coaches — KiSek Lee of Archery. KiSek is revolutionizing Archery in the US with his B.E.S.T. method. His passion for the sport is very apparent.

For another article, we turned to one of our interns. Interns at the USOC are involved in a variety of tasks. Jacob Smith had the opportunity to review three days of video discussion by some of the top endurance coaches in both summer and winter sports. His task was to provide a synopsis of the meeting, which is presented in this issue.

Our features include how does a coach look at the progression of training? Patrick Borkowski presents his insights into looking at this serious issue. His concern as with many others is that athletes (or their parents) are too eager to jump to the next level without learning basic skills.

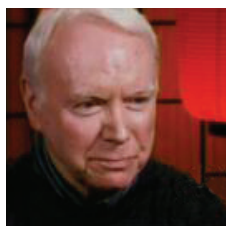
On May 3rd, the USOC will be recognizing four coaches at the USOC Coach of the Year luncheon for their impact in their sports for the year 2006. We will focus on those coaches in the next issue, but as a preview to that event, Hot off the Press is highlighting five legendary coaches, so check those sites out.

Congratulations to our winter coaches who have concluded an outstanding 2006-07 season. As the summer coaches prepare for their seasons that will lead into the 2008 Olympic Games Year, we wish you good luck.

TRAINING VETERAN ELITE ATHLETES

Veteran elite athletes — most teams will have some, some coaches will have the opportunity to work with one. As a coach, how would you deal with an athlete with lots of competitive experience versus working with an emerging elite athlete? We spoke with two prominent coaches with Olympic backgrounds, Frank Carroll and Hugh McCutcheon.

Frank Carroll is one of the World's top Figure Skating coaches with a storied past of working with such athletes as Linda Fratianne, Nicole Bobek, Michelle Kwan, Becky Hughes and Evan Lysacek. In 1997, Frank was named as the USOC Coach of the Year.



Hugh McCutcheon is the National Coach for Men's Volleyball having been named to that position in 2005. Previous to that he served as the Assistant Coach for the National team for two years. Hugh was a mixture of veteran athletes and emerging elite athletes on his team.



OLYMPIC COACH - Let's start with a definition of a veteran elite athlete. I would propose that it is an athlete who has achieved success at a World Championship or Olympic Games. The athlete would have been involved at the elite level in your sport for ten plus years.

HUGH: A Veteran athlete in our gym has been through two full quads of competition (which will include a World Championships, World Cup, and Olympic Games in each four year cycle). Doing the math you can see that they've put in at least eight years on the team – but most veterans are closer to the ten year mark because it usually takes a couple of years to make the traveling squad.

OLYMPIC COACH - What about emerging elite, how would you define them?

FRANK: Younger elite athletes under 18, they could be as young as 13. You must be 16 to compete in the World, so in our sport an athlete could be on the World scene at 16.

HUGH: Our emerging elites are usually the country's best college volleyball players. We have tried to establish a "pipeline" where

we monitor the progress of talented younger players through their participation in Youth (17 and under) and Junior (19 and under) level International competition, but we have found that, for a variety of reasons, our emerging elite athletes bloom later than in many other sports. One of the most important abilities we look for (and of course train) is technical mastery of the fundamental skills of the game (we assume that if they are being considered for the National team that they have great physical talents and abilities). Because of the complex nature of the motor patterns in our sport, and a lack of great technical coaching early in their careers, our athletes usually don't show National Team potential until they are in their early twenties

OLYMPIC COACH - How do training loads (volume and intensity) compare between the two?

FRANK: The norm would be more of a maintaining and polishing. It's really not about learning new skills. It is about keeping the skills up and keeping your body in condition and not being injured. When you're young you can bang away on the body and do as many repetitions of a triple lutz and fall on your hips,



head and back and get up and go again, but when you get into your twenties you're not going to be doing that anymore or you won't be skating in the next meet, you may not be skating at all. It's about watching the wear and tear on your body, maintaining the level of expertise and level of excellence without pushing it to the point where you are endangering your ability to put it out there and make millions of dollars.

HUGH: Initially the emerging elites cannot deal with our training load. Thanks to the NCAA they have been on a steady diet of 20 hours practice for 20 weeks with 28 competition dates per year for the four or five years that make up their collegiate careers. Our schedule (both playing and training) is more rigorous than that so the first few months are tough for them. However, once they acquire the physical capacity to train, they are usually very resilient and can work for long periods of time. The veterans are able to take a training load already and they know what kind of condition they have to be in so they usually come in prepared. Their main advantage, however, is dealing with the mental aspects of training. They have the ability to focus for longer periods of time so the overall quality of their training is usually superior. They are very in tune with their bodies so they don't waste a lot of energy and they know what they have to do in terms of treatment and recovery to be at their best every day.

FRANK: I agree. Most of the top elite athletes that I have ever taught have been so in touch with their body, the shape of their body, how much they had to weigh, what they had to do and they knew what their body was telling them. It is amazing.

OLYMPIC COACH - It's very interesting that both of you commented on the veteran being so much more in tune with their bodies than the emerging elite.

HUGH: These guys are professionals and their livelihood depends on them being able to do their job well. They know how to train, compete, and recover. The emerging elites are still trying to find their limits and figure out how to get the most out of their minds and bodies.

FRANK: Veteran athletes are smart enough to open their mouths and say, I am having a problem. I might only have three of a particular move left in me. So, let's do the three moves and make them count, don't hold back, we want quality not quantity. With an emerging elite, they are not smart enough to listen to their body and they are not able to communicate as well, and they push themselves into oblivion and end up with stress fractures.

OLYMPIC COACH - So what about residual fatigue with a veteran?

FRANK: I believe there is a physical fatigue and a psychological fatigue. With Michele, I coached her for over ten years, she was experiencing tremendous pressure from outside forces—agents, people who were telling her that she was so good and as the coach you are the one saying—this does not look so good, I think you need to come in and practice another session. They reach a point where they don't want to hear the disciplinary things they were told when they were younger, because they are hearing all the other people. It is different when they are up at the top.

HUGH: There is a residual fatigue effect but it's as much mental as it is physical. Our veteran athletes are all playing professionally for clubs in Europe and Asia so, in essence, they are competing year round — and that can be a grind. There is also a lot of research that suggests that fatigue is primarily a neural issue, more than it is a muscular issue. To try and avoid or minimize fatigue this we focus on recovery, active rest, and subtle variations in our training activities (not our principles) to keep the athletes fresh, and to keep the environment in the gym stimulating.

FRANK: Recovery on a basic level for us is a cool-down and stretch after training. I think it is more important than the warm-up before. I do like them to take a certain period of time completely away from the sport. I want them to take the skates off and get away from the ice, but they need to be in the gym to keep up their bodies. But during the season it is different. Figure Skating is based on consistency of doing these very difficult jumps every time. The repetitions have to be done all the time. You can't be off a week and come back; it's not there any more. You have to do it. You have to keep your jumping going and your timing. It's harder in Figure Skating to get something back than it is to keep it going. They like to skate six days a week and take a day off because they know it is easier to do some jumps, have some fun and lighten up and keep their timing up than train.

OLYMPIC COACH - That makes sense because the Peaking and Tapering research says that you need to keep in touch with the technique in the more technical events. (For more information, see Summer 2004 Olympic Coach)

FRANK: That's exactly it.



OLYMPIC COACH - How much input does a veteran have in their training program?

HUGH: I talk a lot with my veteran athletes. They understand the magnitude of what we are trying to achieve so I know they won't ask for a drill or a training session off unless they need it. They know their bodies, so I'll listen to what they have to say. If they tell me they're tired or a little beat up and want out of drill I'll almost always accommodate their request. Every now and then I'll ask them to push through a drill or a training session if we absolutely need them. If they come to me and say that they physically can't train anymore, it's a different story, they're done right away.

FRANK: When they are younger, there is no negotiating with workout. When they get older, the body changes and they might say my back is killing me, so they don't need to practice that move while they are in pain and we can wait until it is better. One thing a coach has to listen to is the athlete. It is not your body. You analyze what you see, but a coach that doesn't listen to the athlete's input about their body is crazy. You are trying to get back information, so that you can make a decision about what they can and can not do.

OLYMPIC COACH - Hugh, you have athletes with families and other things, how is that different for the veteran?

HUGH: If you have athletes that are married you need to open a line of communication with the family, not just the athlete. You want everyone at home to be on the same page. We have a lot of guys on our team who are married, some have families. This added responsibility can be very impactful. Marriage and having children usually facilitates personal growth, a new level of maturity and perspective, which seems to make the athlete more professional, responsible, and accountable in the gym. On the down side, we travel a lot, so being away from family for prolonged periods of time (4-6 weeks) can be tough – especially if there are any problems. Usually the positive consequences of family life far outweigh any negatives.

FRANK: There is a point when there are too many influences. Parents, agents, people concerned with their commissions and how much money was involved. There becomes too much input from too many people who looked at the skating and made suggestions, and sometimes the coach just becomes another voice. The coach's voice needs to remain the primary voice.

OLYMPIC COACH - What advice would you give to a coach about working with veteran athletes?

HUGH: Veteran athletes are athletes first — so you coach them just like you do your other players. They have a good grasp of

the game and its skills so the nature of the feedback you give them is usually different. It's more about gaining small technical efficiencies or helping them to make better choices in certain game situations. Emerging elites are still trying to acquire and master the fundamental skills, techniques, and tactics so the interactions are differently. If you can find the right balance between individual competition and team improvement the Veterans can be a great educational resource. They can accelerate the learning of your emerging elites significantly.

Veterans are allowed to have some input, some interaction with the coaches, that the other guys don't get. Their experience and longevity is valued in our gym. I think having veterans is great. They usually make up the majority of your leadership group and because they know what we're trying to achieve they can help establish and drive your team culture.

FRANK: Listen to your own mind. Everyone in the world, when you have someone special, wants to give you advice. Everyone wants to have something to say—the NGB, friends, judges, other coaches. Everybody is going to have input about what you should do. What you should do is take in all this information, listen to everybody, take it all in, say “thank you very much” and then do exactly what your inner instinct tells you to do and make your own decision based on your own intelligence and what you think you can accomplish with this person. Everyone wants a piece of the pie. Take advice from people you admire.

I am a very hypothetical person. I have thought out all the answers ahead of time, all of the possibilities ahead of time, no one walks up to meet with something I don't have an answer for, that is just the way my mind works.

I have it worked out in my mind to have an answer for athletes when they might have a doubt—you need to be quick and fast to have an answer.

For example, an athlete who told me he was so nervous and that he had never been that nervous before. I said, “Of course you're nervous, you would be an idiot not to be nervous, but look you have a choice, take the nerves and make them work for you have them make you quicker, faster, stronger or let them destroy you. Make your choice.” The coach must be prepared with a response for these cases.

Every great coach in the world is intuitive. I think coaching is a talent. I think you have an insight into what works and does not work. That is talent in coaching, it's not advice from the outside world, it's not people telling you what works, it is what you feel within yourself is going to accomplish the goal at the end of the rainbow. I think if you don't have that then you are missing something very important.

Progressing into the Elite Level

Obeying the Stress — Adaptation Cycle

by Patrick Borkowski, USOC Strength and Conditioning



Between million dollar paychecks and fully funded college education, the concept of athletics is more competitive than ever. It seems like the headlines are full of younger stars with new ground breaking performances year after year. Parents, coaches and the athletes themselves want to reach the next level as quickly as possible, often forgetting that their choices now have a dramatic impact on the future of their career.

Everything in athletics revolves around a process known as Stress – Adaptation; the body is presented with a specific stress and in turn adapts to that stress. Generally speaking this is referred to as training, yet in every situation the terms stress and adaptation refer to something different. During strength and conditioning sessions, stress would refer to an increased amount of weight for an exercise. The adaptation would be an increase in strength to the musculature that you have trained.

The only way for this adaptation to occur properly is with a strategic plan involving systematic increases in volume and intensity, proper rest and recovery, nutrition, and stress management. If any of the above is incomplete then the body will not entirely adapt to a stress before a new, greater stress is applied.

What is the impact of this? In a strength and conditioning setting this could mean the muscles will not be prepared for a higher load, putting a greater amount of stress on supporting structures such as ligaments or tendons. When the next workout comes around there is still a residual fatigue either in the muscle, the supporting structures, or both, leading to a greater decrease in strength and integrity. This is the start of a vicious cycle eventually leading to serious injury and a dramatically shortened career.

When preparing a strength and conditioning program it is easy to see what the stresses are, but what about when a young athlete makes the jump from junior varsity to varsity? Somewhere between the bigger, faster, stronger opponents and the longer more intense practices the athlete must be able to adapt slowly to each new stress. As a coach, you play a critical role in assuring

the athlete takes the proper steps in reaching the next level, both technically and physically.

There are two simple methods to help maintain a proper Stress – Adaptation cycle; setting specific physical markers and gradual integration from one skill to the next. While the difference between playing on the U-16 Volleyball team verse the U-13 team might be learning a simple jumping technique, the physical impact involves proper take-off, landing and the ability to control all the limbs of the body under the extreme momentum necessary to take to the air. First, the athlete must learn how to land, then how to jump from a standing position, jump from a controlled movement, then learn the technique and finally apply it to a game situation. Additionally, the athlete must be limited in the number of times he or she will be performing this technique each practice, gradually increasing the number of repetitions from week to week.

As a coach you are responsible for determining the physical progressions young athletes follow. Closely examine the key movements your athletes must execute on a regular basis and how they change as the competition gets more intense. Are they required to jump? Change direction quickly? Tackle or move an opponent? Rotate at high speeds? Hit or throw? Skills requiring any and all of the above characteristics are extremely common in sports and all demand a proper progression. Described in the charts below are general physical markers and a basic skill introduction progression. Once you have identified the key physical components of a skill, for example change of direction requires proper squatting, lowering of the center of gravity, extreme single leg force absorption and production, proper acceleration mechanics, etc., you can set specific markers your athlete's are required to fulfill prior to learning a new skill. Once all the physical markers are met and the skill is taught, you then gradually incorporate it into a regular part of training.

While many sports have unique physical demands, all sports can benefit from simple physical progressions, as seen in the charts below. As a coach, you fill a critical role in the development of future Olympians and the responsibility falls on you to assure proper progression through the years. An unprepared increase in the Stress-Adaptation cycle early on can cause severe set backs down the road. So, regardless of how talented the new athlete is, make sure you address each and every need before moving them to the next level.

<p>Level 1 Mobility through full Range of Motion Squatting Techniques Lunging Techniques (Forward, Lateral) Basic Athletic Stance (B.A.S.)</p>	<p>Level 2 Lateral Shuffles Cross – Over Steps First Step from Basic Athletic Position Extreme Lunges Cross Over Lunges</p>
<p>Level 3 Acceleration Steps Lateral Step from Basic Athletic Stance Landing Drills (into B.A.S.) Stationary Jumps (Box Jumps) 1-Leg Squatting Techniques</p>	<p>Level 4 Change of Direction Lateral Accelerations Repeat Stationary Jumps Single Response Broad Jumps Single Response 1-Leg Jumps</p>
<p>Level 5 Movement to Jumping Repeat Broad Jumps Bounding Exercises Lateral Jumping Repeat 1-Leg Jumping</p>	<p>Level 6 Depth Jumps Single Leg Bounding Exercises Weighted Plyometrics Complex Training</p>

The chart above describes a basic progression of training exercises that may be used to improve the explosive ability of an athlete. By setting a variety of levels with multiple specific exercises in each phase, the coach and athlete can determine short-term and long-term goals to assure proper physical and skill progressions. For an athlete to compete successfully at a University intensity they should progress through each level.

In order to progress, the athlete must show proper execution of every exercise within a level. For example, before an athlete can be expected to incorporate change of direction, or agility drills into their training, they must first demonstrate the ability to laterally step from a Basic Athletic Stance, accelerate in a linear plane, absorb impact in a proper stance, perform stationary jumps and one legged squatting movements. Prior to these skills the athlete must be able to laterally shuffle, cross-over step, move through full ranges of motion in the squat and lunge techniques, and so forth from Level 1. The coach must then determine where specific skill sets of their sport fall and what exercises are necessary to properly prepare their athletes.

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1	Drill 1 Drill 2 Drill 3	Drill 1 Drill 2 Drill 3	Drill 1 Drill 2 Drill 3	Drill 1 Drill 2 Drill 3	Drill 1 Drill 2 Drill 3
Week 2	New Drill (10 reps) Drill 1 Drill 2 Drill 3	Drill 1 Drill 2 Drill 3	Drill 1 Drill 2 Drill 3	New Drill (10 reps) Drill 1 Drill 2 Drill 3	Drill 1 Drill 2 Drill 3
Week 3	New Drill (10 reps) Drill 1 Drill 2 Drill 3	Drill 1 Drill 2 Drill 3	New Drill (10 reps) Drill 1 Drill 2 Drill 3	Drill 1 Drill 2 Drill 3	New Drill (10 Reps) Drill 1 Drill 2 Drill 3
Week 4	New Drill (15 reps) Drill 1 Drill 2 Drill 3	Drill 1 Drill 2 Drill 3	New Drill (15 reps) Drill 1 Drill 2 Drill 3	Drill 1 Drill 2 Drill 3	New Drill (15 reps) Drill 1 Drill 2 Drill 3
Week 5	New Drill (15 reps) Drill 1 Drill 2 Drill 3	New Drill (15 reps) Drill 1 Drill 2 Drill 3	Drill 1 Drill 2 Drill 3	New Drill (15 reps) Drill 1 Drill 2 Drill 3	New Drill (15 reps) Drill 1 Drill 2 Drill 3
Week 6	New Drill (20 reps) Drill 1 Drill 2 Drill 3	New Drill (20 reps) Drill 1 Drill 2 Drill 3	New Drill (20 reps) Drill 1 Drill 2 Drill 3	New Drill (20 reps) Drill 1 Drill 2 Drill 3	New Drill (20 reps) Drill 1 Drill 2 Drill 3

The above chart is an example implementation of a new drill into the daily training schedule. For simplicity, we will assume that the current program consists of three different drills performed at each practice, everyday as seen in Week 1. The introduction of a new drill should start with only a few repetitions, spread out throughout the week. The coach should then increase frequency of the drill, followed by number of repetitions, then frequency, repetitions, and so forth until the drill is a regular part of training. In this example a Six-Week

implementation was used. Depending on the complexity and intensity of the new drill, full implementation could take longer.

Keep in mind, if the new drill is of very high intensity, similar to a game situation, full implementation may be completed at two days per week, perhaps only every other week. The coach must closely examine the drill's purpose and intensity to determine its proper placement within the season's plan.

USOC Endurance Coaches Think Tank

By Jacob W. Smith
2006 Athlete Performance Lab Intern
U.S. Olympic Committee

In 2006, the United States Olympic Committee brought together the top coaches from the senior national teams of most summer and winter endurance sports. Over three days, coaches from speed-skating, triathlon, running, cycling, Nordic combined, and cross country skiing, as well as sports physiologists and strength and conditioning coordinators with experience working with Olympic level endurance athletes met to discuss all aspects of successful training and racing. Specifically, the coaches described their programs, including anecdotal evidence of what works and the scientific reasoning for their choices. Likewise, the coaches discussed philosophies, periodization, cross-training and strength training, recovery, and psychology. This article will review the coaches' thoughts on those topics.

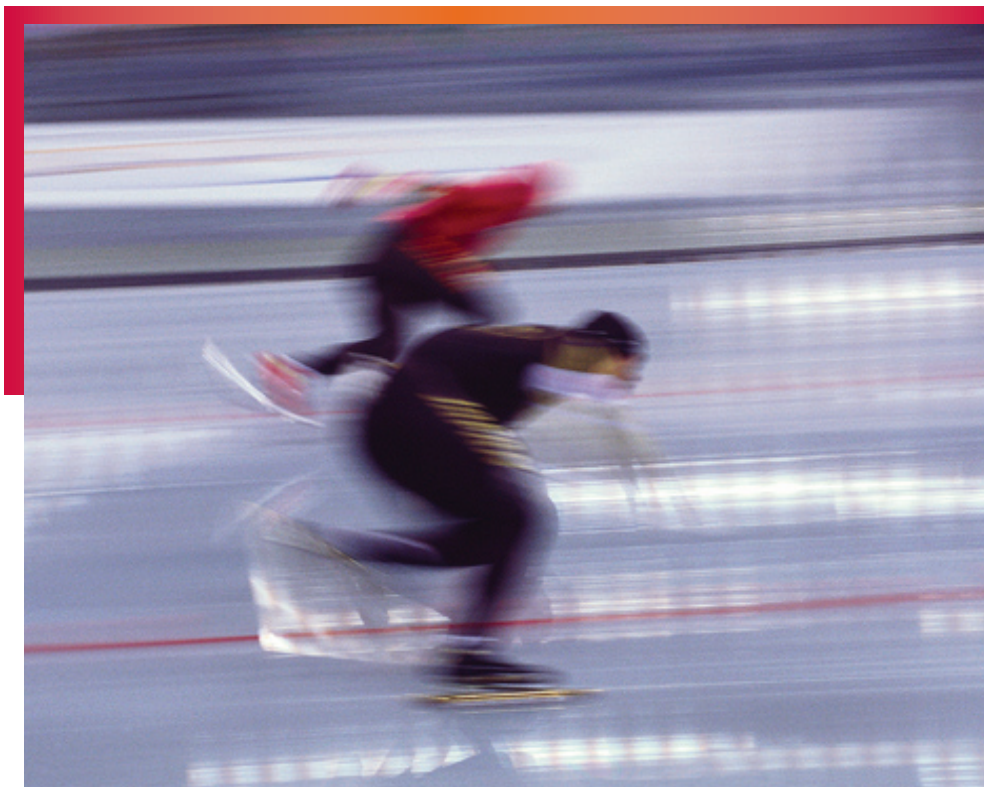
COACHES

The coaches who attended the Endurance Coaches Think Tank collectively represented over a century of experience and many Olympic medal winners. They included: George Dallam (triathlon), who coaches Hunter Kemper (world #1 ranked triathlete in 2005); Dean Golich (cycling), who coaches Alison Dunlap (2001 World Mountain Bike Champion) and Mari Holden (2000 Road Time Trial World Champion); Bob Larsen (running), who coaches Meb Keflezighi (2004 Olympic Silver Medalist in the marathon); Bobby McGee (running and triathlon), who coached Josia Thugwane (1996 Olympic Gold Medalist in the marathon), Barb Lindquist (2002 Triathlon World Championship Silver Medalist), and Colleen De Reuck (4-time Olympic runner); Randy Wilber, the Senior Sport Physiologist for the United States Olympic Committee; Tom Cushman (speed-skating), who coached the 2006 Olympic long track team; Sten Fjeldheim (Nordic skiing and cross country running), Fjeldheim coached the 1994 Olympic and 1995 and 1997 World Championships ski teams; Zach Weatherford (strength & conditioning), who has worked with the cross country skiing, Nordic combined, and running national teams, including athletes such as Deena Kastor; and David Jarrett (Nordic combined), who is a Nordic combined national team coach and former Olympian.

PHILOSOPHY

Within the topic of coaching philosophy, the ideas expressed aligned into two more distinct categories. The first category related to the establishment of a program itself, while the second category pertained to general matters of training.

When establishing a program, Bob Larsen suggested that focus should be put on building the program before emphasizing results. This came up as a result of some discussion about balancing the



needs to develop young talent for the future and the desire to win now with established veterans. Larsen's comments indicated that he felt that each coach should develop a system that allows for long-term development that can eventually lead to competitive results. Noting that 22-30 years is the age when endurance athletes produce their best performances, Randy Wilber pointed out the difficulty of long-term development of athletes, particularly distance runners, who compete in three seasons of NCAA competitions. Larsen also emphasized the need to consider the social and psychological aspects of the athletes, especially in team situations.

George Dallam suggested that coaches be transparent by exchanging ideas with other coaches, as opposed to being secretive. Dallam explained, "That inclusiveness not only helps other people, but the [exchange of ideas] also helps you".

The coaches also discussed the differences between race schedules with many races close together over a significant time period and race schedules of just one or two races per year. For example, both Nordic combined and cross country skiing face the challenge of competing for points in a World Cup format in order to qualify for a world championship. That format hindered the ability of those teams to not only peak for the world championships, but also to make performance gains from one year to the next. Having been in the unique situation of preparing Hunter Kemper for the 2004 Athens Olympics and then also training Hunter to earn enough points to claim the #1 world ranking in 2005, Dallam suggested peaking first, then working on consistency. His

argument was that the athlete needed to reach a very high level first in order to try to maintain a high level.

When discussing training and development, Dallam suggested teaching skills first, then progressing to conditioning. For example, he advocated that proper technique (i.e. economical running form, swimming stroke, skating technique, etc.) should be achieved before attempting to improve fitness. This, of course, is not very controversial, but we have all seen coaches who work with beginners and fail to adhere to this principle, or we have worked with athletes who obviously were not properly instructed as beginners. Similarly, Dallam advocated emphasizing volume over intensity, and he noted that you have to be very careful not to do too much of either. Dallam suggested that it was better to do too little work rather than too much. As Dean Golich mentioned, "you can't take back the intervals".

Dallam also suggested using shorter, less stressful intervals in order to achieve a higher total workload. For example, instead of having a distance runner complete four intervals of one mile at 5:00 minute pace, consider using nine intervals of half a mile at 5:00 minute pace. Dallam would argue that the benefit is greater due to the extra half mile of total distance and the work is less stressful to the athlete because of the shorter interval. As a result of the work being less stressful, the athlete can either: do more work within a given workout; recover more quickly from one workout to the next; or both. He would also argue that the lower stress levels also decrease the risk of injury.

At this point, it should be noted that coaches who choose to utilize such a strategy should always keep in mind the physiological systems that are targeted by a given workout. Obviously changing the length and number of intervals as well as the duration of the recovery periods can significantly alter the way in which the body is stressed. For instance, if the above example was originally designed to stress either the neuromuscular or aerobic systems of the athlete, then the suggested change should allow for similar stressing. On the other hand, if the original workout was designed to induce anaerobic or even VO_2 max stresses, it may not be possible, even with adjustments to the recovery periods, to generate the appropriate stresses.

Dallam also pointed out that if a coach is only interested in short-term improvement, then he/she should go for specificity by simulating the





race. However, for long-term improvement, each physiological component that affects performance should be developed.

The last topic about training philosophy concerned the question of whether to employ multiple workouts in one day or just one session. Larsen made a great point when he said, “I think you maybe could get all your fitness with one session per day. The problem with two sessions per day is [that] you’re warming up and cooling down twice, which is a lot of wasted time.” For those that coach multi-sports and feel that a second daily workout is necessary, consider combining those workouts into blocks and also that having two workouts in a day essentially cuts the recovery time between workouts in half.

PERIODIZATION

Although each of the coaches outlined, presented, explained, and answered questions about their training programs, only two programs will be discussed here. Because of their success, simplicity, and the numbers of participants in the sports of running and cycling, the programs of Larsen and Golich will be described, along with some ideas from the other coaches.

To preface his training program, Larsen explained that, “both [VO₂max and lactate threshold (LT)] are extremely important, but you seem to be able to have more effect on [LT] than VO₂max because of the limitations from genes on VO₂max more so than [lactate] threshold... We’ve taken it a step further, and we wouldn’t even start anaerobic training without having a pretty sustainable threshold level”. Larsen liked to start his marathoners with eight to twelve weeks of aerobic base building. Then they moved to four weeks of threshold training, followed by five to eight weeks

of combined aerobic, LT, and anaerobic training. If they had less than 17 weeks of training for the next race, they would generally reduce the amount of time spent in the aerobic base building phase because they felt that the aerobic fitness lasted longer and was easier to obtain, particularly for elite athletes. Dallam provided anecdotal evidence showing that the aerobic base could be sustained for up to two years via one long run by simply running once per week for at least 20 miles.

Within Larsen’s training plan, long runs and total mileage were the foci of aerobic base phase; generally each week contained at least two long runs. During the LT phase, two LT runs ranging in length from 5 to 15 miles were included each week. Also, one of the LT runs occurred within a long run, allowing for two long runs and two LT runs per week. During the five to eight week period of aerobic, LT, and anaerobic training, generally the athletes completed two long runs, with an LT session during one long run, an additional LT session, and one session of anaerobic intervals.

Larsen’s athletes also took advantage of altitude. Larsen indicated that they produced the best results with four weeks of training at altitude, followed by one week at sea level. During the altitude weeks, the anaerobic intervals were the only training typically conducted at a lower altitude (4,000 feet vs. 8,000 feet). The four weeks at altitude fell in line with Larsen’s belief that four weeks of one kind of training was the longest amount of time the athletes could train without changing the training; after four weeks, he felt that the training needed to be changed to allow for continued improvement. Similarly, Larsen preferred to conduct different workouts each week because he did not want his athletes to compare workout performances more often than every three or four weeks. He recognized that improvements occur over several

weeks, and not necessarily from one week to the next. Therefore, he felt that it was psychologically beneficial to infrequently repeat workouts. The time between the same workouts would allow enough time to see improvement, and there would be no loss of confidence for the athletes if they failed to improve on a workout from one week to the next. Dallam implemented a system of three weeks of hard training, followed by one week of easy training in order to facilitate recovery and adaptation.

Golich's training plan began with two weeks of training that included two workouts of aerobic, neuromuscular workouts. These workouts were short bouts of race intensity, speed, pace, or power (depending on the sport) with long recovery periods. The goal of these workouts was not to stress the heart, lungs, buffering capacity, etc., but rather to stress the nervous system and muscle fibers with the recruitment levels and speed of movement. Golich found that doing two of these workouts per week on consecutive days, as well as two weeks of this training prior to aerobic base training, allowed for greater improvements during the aerobic base phase. Those two weeks were followed by four weeks of aerobic base training, including a couple of long rides per week. The next phase was four weeks focused on LT training, with two LT sessions and two longer rides, sometimes with an LT session during a long ride or group ride. The LT phase was followed by a four week phase of VO_2 max intervals. The VO_2 max intervals were conducted twice per week on consecutive days. The final phase (not including the taper) was anaerobic intervals on consecutive days and lasted just two to four weeks. Golich used 1:1 work to rest ratios for VO_2 max and anaerobic intervals.

Another interesting note was that Bobby McGee found that physical size was the limiting factor for running volume with his triathletes. Also, several coaches cautioned that LT is affected by diet. Also, LT training can be done with intervals. However, those intervals need to be long (most of the coaches felt that LT training needed to be sustained for at least 20 continuous minutes), and the recovery periods need to be short (just a minute or two). The coaches felt that recovery periods within LT training were simply for mental breaks, and might not be needed by elite athletes.

CROSS-TRAINING

Another major topic of discussion at the Endurance Coaches Think Tank was cross-training. Of course, one of the biggest concerns with cross-training is the principle of specificity. The consensus of the coaches was that cross-training should only be done when specific training cannot be utilized due to injuries,



lack of proper surface (i.e. snow or ice during summer for skiing or skating), or musculoskeletal intolerance (particularly associated with high impact activities like running). Even in those situations, the coaches all felt that the cross-training should be as specific, in terms of movement, as possible.

Movement patterns and muscle recruitment notwithstanding, Sten Fjeldheim pointed out that “the heart doesn't know if it's on a bike seat”. Clearly cross-training can be used to improve central fitness. However, Dallam asserted that cross-training only helps if it is tolerable. He said, “Extra stresses are good, as long as they don't compete with the stresses that are specific”. Dallam also felt that a specific type of cross-training, strength training, can be used to increase economy if it is movement specific. He advocated the application of resistance to movements that replicated the patterns within the sport. Golich qualified that strength training is not beneficial to cyclists because the force required per pedal revolution is too low.

Another consideration for strength training is the latency between training and adaptation. Expanding on that idea, Dallam explained, “When you apply resistance to create new muscle protein, that's not like next week you're going to be ready from that. That's a longer process. There's a whole hormonal shift, so you're talking a couple of months later from when you've made an actual gain before you won't be impacted in terms of that more specific movement. And if that movement is specific, the one you're doing in the weight room, then it's in the short run going to make you feel fatigued in the [regular training on the bike, road, pool, ice, snow, etc.]. That makes it good because if it wasn't creating that effect, it wouldn't be specific [enough to increase

performance]”. Adding his thoughts on strength training, Golich said “I’m going to recruit this fiber that I don’t normally recruit, and I’m going to train it to be less fatigue-able – not [necessarily] to produce more force, but now I’m going to recruit it over and over”.

Continuing on this theme, when Zach Weatherford began working with Deena Kastor, he told her that “we’re not going to make large gains here in the next three months, or even the next year, but I think you can make gains over a long period of time”. Also Weatherford was careful not to let Kastor’s strength training interfere with her running training. For example, during Kastor’s very high volume weeks (140 miles), but also during her recovery weeks (when she only ran 80 miles), her strength training was reduced as much as possible. She did just enough to maintain her previous gains. Consistent with that approach, her strength training was conducted in the afternoon of interval days, regardless of the volume of running for the week. Weatherford felt that it was acceptable to compromise her strength training (as a result of fatigue from the morning’s hard workout) because the purpose of the strength training was to support and enhance the running. Although she may have made larger strength gains, it would have been detrimental to Kastor’s running performance to organize her training any other way. Kastor’s strength training programs consisted of two sessions per week. Each exercise was performed for two to three sets, each with six to 12 repetitions at 50-70% of 1RM, but not to failure. The program utilized a strength-to-power progression, with an emphasis on the speed of movement.

Many of the coaches also mentioned plyometric training. For example, Bobby McGee had his athletes perform plyometrics between stations during circuit training. That circuit training consisted of body weight exercises such as push-ups, pull-ups, and various core strengthening exercises.

Weatherford cautioned that the gains from plyometrics take longer to build and are easier to lose. He also emphasized speed before power with his athletes, and he suggested a range of 60-200 foot touches during a session.

RECOVERY

Another important issue for the coaches was the idea of recovery. All of the coaches clearly considered recovery to be the most important aspect of training. In fact, they even discussed the idea of simply doing no training on recovery days. For example, Golich had success and found no difference between letting his athletes choose to either do nothing or an easy ride on their recovery days. The major considerations for doing nothing were the athlete’s psychological acceptance of it and also the need to adjust calorie consumption accordingly. When choosing to train on recovery days, the consensus among the coaches was that the

speed or pace needs to be slow. However, they also agreed that the stride frequency or cadence and also the movement patterns of the race need to be simulated as much as possible. They agreed that the intensity should be low enough to prevent blood lactate concentrations from going above two mmol.

The coaches also stressed the need to alter training plans to allow for recovery.

Reinforcing the importance of recovery, Fjeldheim said, “If 70 or 80% of your training is supposed to be aerobic, and you’re messing up 70 to 80% of the time, that’s a big mistake. And then also, you come to the interval or threshold training, and your peripherals are that much more fatigued, so you never learn how to go fast because you’re always fatigued”.

The coaches also stressed the need to alter training plans to allow for recovery. For example, an unplanned extra day of recovery may be needed.

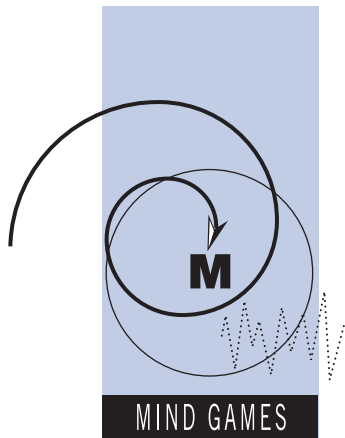
Referring to a planned LT workout, McGee noted that “if they couldn’t get to that [LT] heart rate on a given day, even if I went back and rewarm them up and brought them up slowly, then their peripherals were just too fatigued to manage the workout”.

Some practical advice from Dallam included not flying within 24 hours after a race or hard workout, because, as McGee pointed out, “anytime you have an intense session [or race] where you’re tasting heme iron, then you’re cracking a mucous membrane, and you’re getting capillary bleeding, and you’re opening yourself up massively for infection”. Thus, because of the close proximity of many other passengers and the increased concentration of bacteria and viruses in the recycled air of a plane, flying was not recommended during that 24 hour window of decreased immune function following a race or hard workout. During interval workouts, Larsen indicated that heart rate should be allowed to decline to 125 beats per minute or less.

PSYCHOLOGY

A final topic that the coaches discussed was the psychological aspects of training and racing. Dallam suggested being proactive by giving expectations to the athletes, and all the coaches agreed that the athletes should focus on the performance, effort, or process rather than the outcome. McGee suggested giving assignments or keys to work on to the athletes. That way the athletes could focus their attention internally and concentrate on those keys.

Finally, the coaches discussed the dissonance between how an athlete feels and that athlete’s performance. Tom Cushman noted that “there is no correlation to how you feel and how you perform”. McGee echoed a similar sentiment that in “endurance events, there’s one law to go by: you will have a bad patch, and it will go by. [Therefore], don’t let your feelings determine your actions; let your actions determine your feelings”.



Can Elite Coaches Have a Balanced Life?

By Sean McCann, USOC Sports Science Division

The Problem: High Coach Turnover = Low Performance

For the past three winter Olympic Games, entire coaching staffs have changed in some sports, ensuring a lack of coaching continuity from one Games to the next Olympic Winter Games. An important factor in many of these changes is the inability of many of our coaches to lead a balanced and healthy life. Some coaches have told us that it becomes a choice between a marriage and coaching. Other coaches have said that they cannot tolerate the time away from their children. Finally, some coaches have stopped coaching because the constant performance stress was changing them in way they did not like.

Given the high turnover rates, the ability of coaches to be happy, healthy and balanced is more than some psychologist's touchy-feely ideal. After talking to coaches in many sports, I discovered that this serious performance issue for professional, college, and Olympic Sport coaches. Unhappy, unhealthy and unbalanced coaches either burnout or leave coaching. Coaches who maintain some semblance of a balanced life are better performers. Sports organizations that retain personnel perform better than organizations that have to start from scratch every year. Developing excellent coaches is impossible if the coaches keep changing.

LEADING FACTORS IN COACH IMBALANCES: CULTURE & PERSONALITY

The "more is better" culture of elite sport – The culture of elite sport today is a major factor leading to coaching imbalances.

In virtually every high-pressure coaching situation, there is a belief that **working harder** is the solution to every performance problem. This issue is not unique to coaching, as hard work is also the bottom-line in business today, from computer software designers pulling regular all-nighters, to salespeople flying half-a-million miles a year. In business, however, organizations are finding the limits to hard work, the downside of turnover and the point at which working harder equals lower performance. The culture of sport is definitely lagging behind business in the awareness that hard work is necessary but working beyond sustainable limits is counter-productive.

In sport, we know that pushing athletes in training is absolutely necessary for them to gain strength, speed, endurance, and sport skills. We also know that these gains are lost if we do not allow enough recovery. The literature is so convincing that researchers are starting to use the new term "under-recovered" instead of the more familiar term "over-trained." If athletes have the time and techniques for recovery, training can be incredibly intense. As a coach preparing for World Championships told me, "Athletes in the best shape are also the most vulnerable, so recovery is the number one performance issue."

The workaholic coaching personality – In addition to the culture of sport, the personality of coaches also plays a part in unbalanced lives. At the national team level, a remarkable number of coaches are workaholics and perfectionists. Many of our best coaches tell the same story – as athletes, they made up for a lack of pure talent with intelligence and hard work. These athlete and coach traits were rewarded. If you have been rewarded all your life for working harder than others, the response to overwhelming workloads is often, "Bring it on! I can take it."

Ironically, blindly adopting the normal productive workaholic strategy tends to backfire at the most-important and stressful competitions. At events such as the Olympic Games, the perfectionist, workaholic coach can become a stress-ridden, emotional liability to his/her athletes. When coach-athlete communication is most important, the overstressed, overworked and under-recovered coach sends the message, "Don't add to my workload, and don't talk to me unless it is good news." These are the coaches who later say, "If only I had known she was anxious, I could have reassured her."

THREE WAS TO BUILD A BALANCED COACHING LIFE

Don't neglect recovery. Since workload for elite coaches is nearly always high, coaches soon get out of balance if they neglect personal recovery from work. For most elite coaches, the two areas neglected during high stress periods are regular sleep and a personal exercise program. While sleep disturbance usually corrects itself is a short time, personal exercise is a critical and underrated component of recovery that can go neglected for long periods by coaches who complain of lack of time. The impact of exercise is subtle but important, as regular exercise enhances energy, sleep, immune system response and recovery from stress. Perhaps the



most important benefit of regular exercise for coaches is the proven positive impact on mood. This impact allows a coach to be a positive motivator, handle bad news and communicate more openly with assistants and athletes. **Exercise enhances performance.** Can a coach afford to give away this advantage?

Challenge your own workaholic mythology. One reason for the neglect of a personal exercise program by coaches is the personal myth that more works equals a better product. When I talk to workaholics about modifying behavior, I first need to challenge this myth. I use the example of a workaholic distance runner who refuses to reduce workouts the week before a critical 10k race, because she needs to know she “has worked harder than her competitors.” After a number of races in which the runner shows no improvement from training, it makes sense to challenge the effectiveness of this high-mileage, slow-race strategy. Just because it makes you feel better to train more, it isn’t a smart strategy. Eventually, the athlete admits it is very hard to take a recovery day even if it makes performance sense, because it makes her “feel guilty.”

This story is relevant for coaches. In the case of the distance runner, I ask if they want to be the best worker or the best runner. When they say they want to be the fastest runner, I respond, “That makes sense to me, so why are you being lazy and neglecting the recovery days you know you need? How good do you want to be?” Workaholics hate to be called lazy, and occasionally the shock of this word creates the first cracks in the myth of more is always better.

Coaches are also being lazy when they neglect recovery. Workaholic Coaches always have excuses, and will respond with, “I just don’t have enough time, my needs are less important than my athletes’ needs, there is no off-season in my sport and being on the road makes it impossible.” In response to these rationalizations,

I ask coaches how good they want to be. If a coach is too lazy to pay attention to personal recovery, I know they won’t ever be as good as they could be.

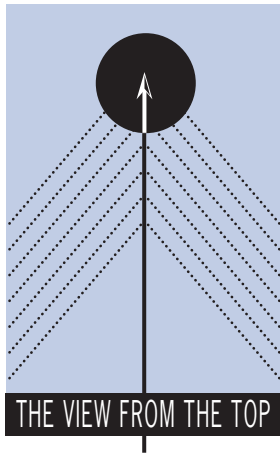
Despite the performance evidence for athletes, **coaches consistently neglect their own recovery** from work and stress. In my experience, coaches also get tired. The culture of elite sport makes this truth seem a weakness rather than evidence of humanity.

Challenge the Culture. I recently heard of a college head football coach who gets to the office at 4:00 a.m. every morning and works through dinner. He harasses assistants who get to work after 5:30 a.m., leave work to attend events with their family and do not work through the night. Single-handedly, this coach drives away talented coaches who avoid his program rather than suffer an unhealthy coaching culture. Ultimately, this culture hurts coaching performance.

Certainly, coaching at an elite level means long hours, travel and hard work. This doesn’t mean that certain aspects of the coaching culture cannot be challenged. A great example of this was a recent discussion I had with the head of coaching for a very successful U.S. Olympic sport. He said, “We don’t ask our coaches to go to all that extra-stuff after the season. We did, but we found it caused us to lose coaches. Coaching is hard on coaches and their families, so we push them during the season and then give them big enough breaks to get away from the sport. Now, we keep our best coaches, and they produce better results.”

Is your coaching culture producing the best results? How good do you want to be?

Reprinted from Olympic Coach, Fall 1999, Volume Nine, Number Four



The View From the Top: KiSek Lee



Olympic Coach- Tells us about your educational background in sports?

Coach Lee: I have a bachelors in Physical Education Dong — A University, Bu — San, Korea 1980 and a post-graduate degree in Physical Education at Dong — A University — Korea 1985

Olympic Coach- What is your coaching philosophy?

Coach Lee: For an athlete to be successful not only must they be technically strong, but they must be mentally, physically, emotionally and spiritually healthy. We can liken the athlete to a racing car with four tires, representing the Technical, Mental, Physical, and Equipment aspects that make up the archer. These four wheels must be balanced to achieve a smooth ride, but what drives it all is the engine under the bonnet which is the archer's mental, emotional and spiritual health and development. They must develop an inner peace to be totally successful.

Having said this, it is so crucial that the coach and Sport Science and Sport Medicine staff work together. Also, parents must actively support their child's drive for success in their sport.

Olympic Coach- Prior to coming to the US, you were the National Coach for Korea and then Australia, what do you see as differences between athletes in each of the three countries?

Coach Lee: Yes, I see big differences, especially cultural. I have a very hard time with this. It was easier when I coached in Korea

because at that time Korean students always held their elders in unconditional respect, especially coaches and teachers. However, when I became a Christian I overcame these differences. I love my archers and am always thankful for their hard work. I am happy with them and they always give back to me more than enough in their hard work and achievements.

Olympic Coach- What are three key ingredients that an athlete must have to be able to improve?

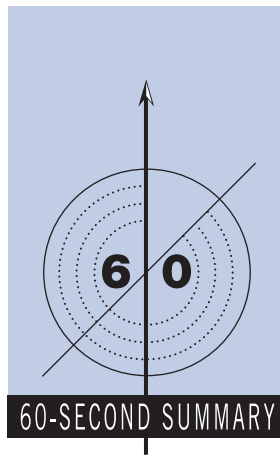
Coach Lee: Love for their sports, passion and perseverance, especially in archery.

Olympic Coach- You have been teaching a new style of shooting to athletes that have a previously established pattern — how do you approach the re-learning of technique?

Coach Lee: Yes, Simon Fairweather (Gold, 2000) in AUS is a good example. He was a world champion but I had to refine him for the Olympics. It was kind of battle until he got to the Olympics. Refinement is always hard, but I am trying to explain the reasons why we need it done, as much as I can in Biomechanical reasons. As long as the athletes understand my reasons for wanting them to change, they will do it.

Olympic Coach- What is one piece of advice that you would give to a beginning coach?

Coach Lee: Love your athlete all the time with care and sincerity.



Review: David Bishop: Warm Up II Performance Changes Following Active Warm Up and How to Structure the Warm Up,

Sports Medicine 2003. 33 (7): 483-498.

By Catherine Sellers, USOC Coaching Department

The warm-up – almost all coaches have athletes do some type of warm-up, but why? How do we know how long it should be and what benefits we gain from warming up? Even the name provides us some indication of the purpose of the typical workouts opening session.

David Bishop provides an extensively researched review of the literature (66 citations) regarding warm-up and makes recommendations for increasing the effectiveness of the warm-up to performance in his two part series.

Bishop first looks at the difference between Passive and Active Warm-up. “Passive warm-up involves raising the muscle temperature (T_m) or core temperature (T_c) by some external means (e.g. hot showers or baths, saunas, heat lamps and heating pads)”. An active warm-up would be jogging, stretching, cycling, swimming activities that typically “warm-up” the major muscles. Most coaches use active warm-up in the training of athletes, so the focus of this review will be on the Part II of Bishop’s article regarding warm-up.

One special note concerning the use of passive warm-up it “may be important to supplement or maintain temperature

increases produced by an active warm-up, especially if there is an unavoidable delay between the warm up and the task, and/or the weather is cold”.

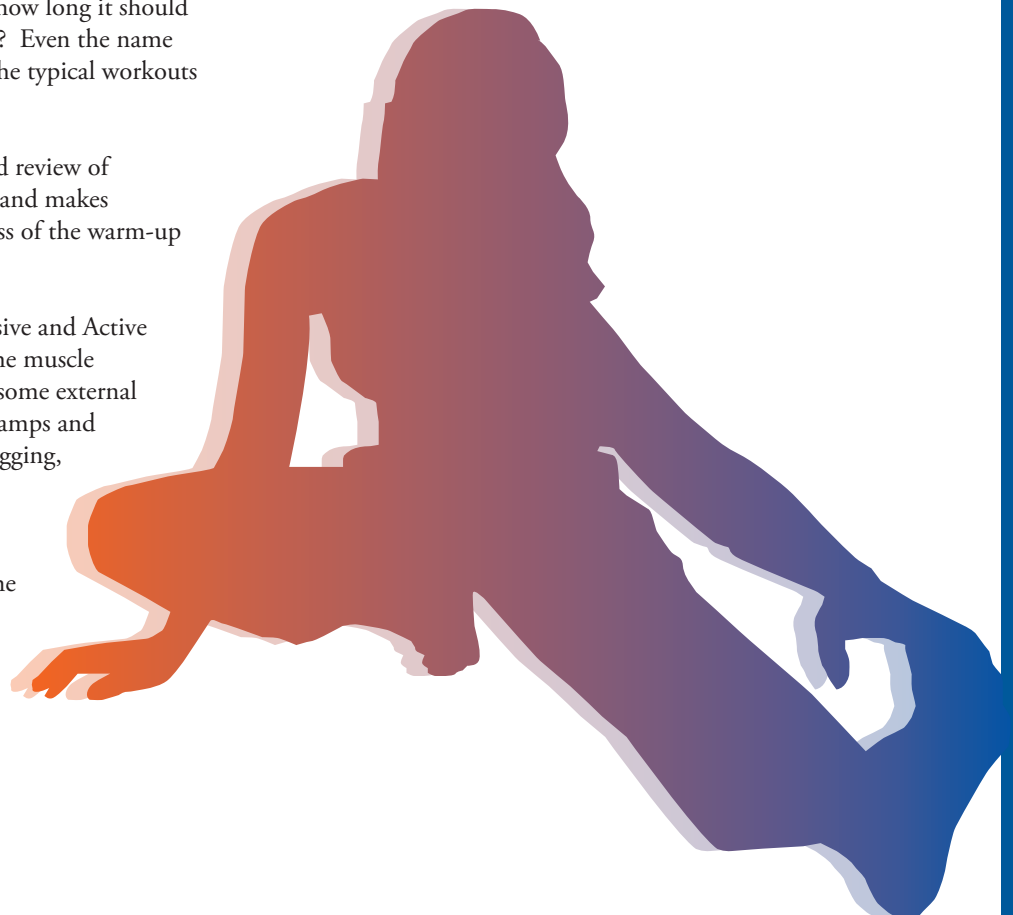
Wisely he breaks his overview into what happens and what types of warm-ups should occur for:

1. Short term performances- maximal efforts of less than ten seconds
2. Intermediate performances- maximal efforts of more than ten seconds and less than five minutes.
3. Long term performances- efforts greater than five minutes.

SHORT TERM PERFORMANCE- Activity of less than 10 seconds

The research points to the ability of the warm-up to increase muscle temperature, thus decreasing joint and muscle stiffness. If that wasn’t enough muscle temperature also plays a role in increasing how fast nerve impulses can fire, along with increasing “glycogenolysis, glycolysis, and high-energy phosphate degradation.”.

If you remember from the last issue’s (Winter 2007)60 second summary – “What coaches should know about energy systems” you will remember the body uses the ATP-CP system in the initial



portions of activity. If a warm-up is too intense or too long, it will have an impact on the short-term performance because the high energy phosphates (ATP-CP) have been used in the warm-up and not the activity.

Bishop summarizes by saying that the research suggests “a warm-up performed at 40 to 60% of VO₂ max (moderate intensity) for 5-10 minutes, followed by a 5-minute recovery will improve short-term performance”. The five minute recovery varies based on the intensity, duration or environmental issues surrounding the warm-up. Bishop notes that muscle temperature drops significantly following 15-20 minutes of recovery, so to get the greatest benefit from the warm-up, the recovery window is between five minutes and 15 minutes.

INTERMEDIATE TERM PERFORMANCE- Activity of more than 10 seconds but less than 5 minutes

The muscle temperature factors still come into play for the intermediate term performance, but the warm-up may “decrease the initial oxygen deficit, leaving more of the anaerobic capacity for later in the task”. “Warm-up may allow subsequent tasks to begin with an elevated baseline VO₂ (see Table 1). Consequently, less of the initial work will be completed anaerobically, leaving more of the anaerobic capacity for later in the task. The caution

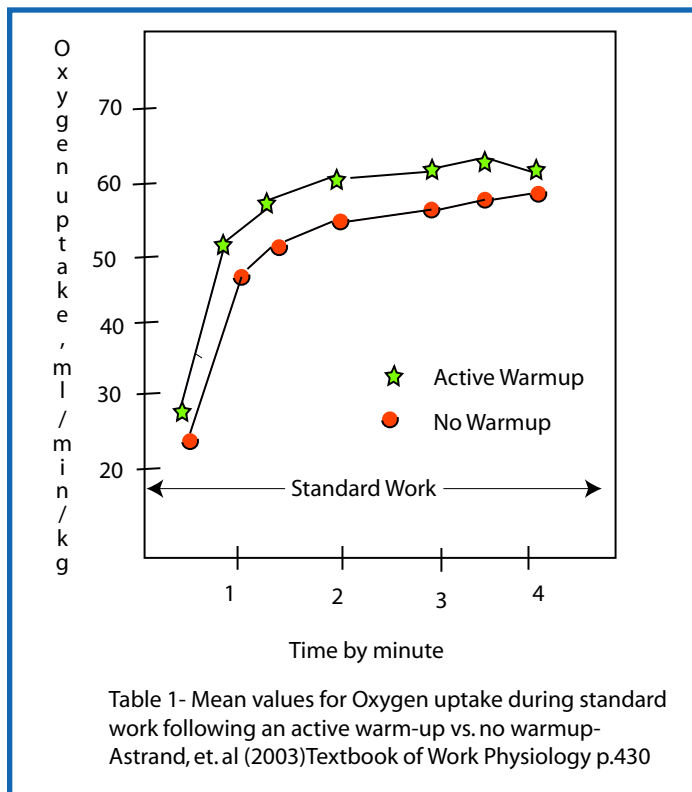
is raised not to have too intense of a warm-up to avoid fatigue. You want to have the VO₂ elevated but the athlete sufficiently recovered.

Because the objective of the warm-up is very similar for Intermediate and long term performance Bishop suggests that “While the optimal warm-up will depend on many factors, the research suggest a warm-up performed at 60-70% VO₂ max for 5-10 minutes followed by less than or equal to 5 minutes of recovery”. The thought is that with less recovery you are starting the activity with the elevated baseline VO₂.

LONG TERM PERFORMANCE- Activity that is a fatiguing effort of more than 5 minutes

The studies on warm-up for long term performance are very mixed. The studies report improvement, no change in performance and impairing performance. The studies that showed improvement fell into the starting with an elevated VO₂ as the probably reason. Bishop’s advice is “that warm-up prior to long-term exercise is not fatiguing and does not significantly raise the rectal temperature.” It appears that an increase in rectal temperature (either done passively or through an active warm-up) causes a decrease in performance. This will probably be difficult for the average coach to determine (and possibly for the athlete). A tympanic thermometer can be used with a reasonable amount of accuracy for this purpose.

Table 1



SPECIFICITY OF WARM-UP

“It appears that a specific warm-up may provide ergogenic (an external influence that improves performance) benefits in addition to those provided by a general, active warm-up. However, the task-specific bursts of activity should be brief enough so as not to cause significant fatigue.”

CONCLUSION

A properly designed warm-up can be beneficial to performance. Three considerations must be made: category of activity as to determine the type of warm-up, making the warm-up non-fatiguing and monitoring the recovery time.

USOC DIRECTORY FOR
**THE COACHING
 RESOURCES STAFF**

HOT OFF THE PRESS

The Olympic movement can provide inspiration in some many ways. Here are a few inspirational stories:

CHICAGO 2016

A great video by the City of Chicago as it is selected by the USOC as America's candidate for the 2016 Games.

http://www.chicago2016.org/chicago_video.aspx

COACHES THAT INSPIRE

"DOC" COUNCILMAN- SWIMMING

Revolutionized swimming through his book "The Science of Swimming" and the development of the pace clock, underwater filming and studied lift and drag on swimmers.

<http://www.usaswimming.org/USASWeb/ViewMiscArticle.aspx?TabId=507&Alias=Rainbow&Lang=en&mid=864&ItemId=923>

JOHN WOODEN- BASKETBALL

UCLA's coach that developed not only outstanding teams (11 NCAA titles) but men with character that counted. Make sure you check out the Pyramid of Success.

<http://www.coachjohnwooden.com/>

ED TEMPLE- TRACK & FIELD

Mr. Temple developed the Tennessee State Tigerbelles program. The Tigerbelles were one of the first black women's teams to dominate the Olympic Games.

http://www.ncteamericancollection.org/litmap/temple_edward_tn.htm

MARGARET WADE- BASKETBALL

The architect of three AIAW titles in a row for Delta State University and a 157-23 record. The Wade Trophy for the top female basketball player is named after her.

<http://gostatesmen.netfirms.com/sports/wbasketball/WBB-PDFs/Section7-WBB-0607-MargaretWade40to41.pdf>

DAN GABLE- WRESTLING

Won a gold medal and was a coach for five Olympic Games for Freestyle Wrestling.

http://www.usolympicteam.com/26_37841.htm

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OLYMPIC COACH E-MAGAZINE

The U.S. Olympic Committee Coaching and Sport Sciences Division reminds you that our quarterly magazine, OLYMPIC COACH, is now available electronically as the OLYMPIC COACH E-MAGAZINE.

This quarterly publication designed for coaches at all levels can now come to you via e-mail. The quarterly e-mail provides a summary of each article in the magazine with a link that takes you directly to the full-length article. The best news is that OLYMPIC COACH E-MAGAZINE is available to all coaches and other interested individuals free of charge.

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