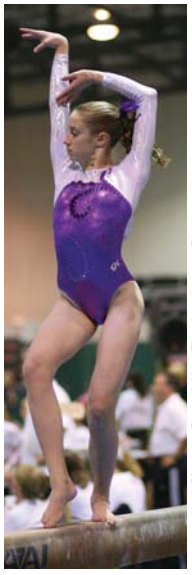
Beyond Calf Raises:
A Few Words with Dr. Michael Ripley

An expert on sports rehab shares some of his secrets for training the feet and ankles

BY **KIM GOSS**

In every profession there is always a group of experts, gurus if you will, who are a step ahead of everyone else. There are the computer hackers who see algorithms and matrixes that are invisible to others, musicians and artists who find unique ways to express the human experience, and businessmen who have unlocked the secrets of financial superiority. In the world of sports science and rehabilitation, Dr. Michael Ripley is just such a guru.

I've known Dr. Ripley for 13 years; and every time I visit or give him a call, he amazes me with what he has come up with to make athletes run faster, jump higher and simply perform better. And if you visit his office in Orinda, California, you'll see the walls lined with client photos of nearly two dozen world or Olympic champions in sprinting. Many elite college programs, including the dominant track program at LSU, have taken advantage of his expertise.



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Even gymnasts, who train and compete in bare feet, need to perform specific exercises for the feet and ankles.

One of the most interesting aspects of Dr. Ripley's career is his work on soft-tissue massage, developed from his study of material from the Russians and other known authorities in the world. In the US Dr. Mike Leahy is credited with developing the popular soft-tissue method known as Active Release. When Ripley and Leahy met more than a dozen years ago and compared notes, Leahy observed that Ripley's methods were amazingly similar to his and made Ripley one of his instructors. During the process, Ripley pointed Leahy in the right direction to cure the lymphatic cancer – a cancer with one of the highest mortality rates – that Leahy was suffering from. Ripley is a wealth of knowledge!

The BFS Connection

Last year Dr. Ripley ordered a BFS seated calf machine; and when I found out about this purchase, I was curious to know why a sprint expert was interested in such a unit. Investing in a glute-ham developer or a plyo ramp, sure; but when you think of calf machines, you think of bodybuilding. Bodybuilders certainly train hard and achieve amazing transformations in their physique, but posing on stage is probably better classified as an art than as a sport. I had to know what was up.

When I asked Ripley about his purchase, he proceeded to tell me in detail – using foot-long words that made my brain hurt – how a seated calf machine was one of the most important pieces of equipment for training for speed. Ripley explained how the exercise effectively works many of the important muscles that control the arch of the foot and informed me that virtually all the elite sprinters he has worked with have serious weaknesses in these muscles that affect their performance and are often the cause of chronic injuries. He also stressed the idea that to work these muscles completely, he often has his athletes perform seated calf raises with bare feet and in different positions: toes in, toes straight ahead and toes out. Further, he explained that because these muscles have the endurance makeup of slow-twitch fibers, he would have them do the exercise not for sets of 10-15 but often for sets of 50 or even 100!

Dr. Michael Ripley

Because ankle injuries are the most common injuries that occur to athletes, I asked Ripley to share some of his unique ideas about training this area. Interestingly, in addition to his medical credentials, Dr. Ripley has a master's degree in dance, and much of his approach to training comes from his study in this area.

One source of so many US athletes' ankle injuries, says Ripley, and for that matter, overuse issues with the knee such as tendonitis, is from the choice

of shoes and orthotics. "Shoes make the foot a solid piece, in the sense that they do not allow the foot to work as it was designed to do and the muscles get weak. Most of the Kenyan and Jamaican athletes I work with who spend much of their lives in bare feet don't have any problems." Thus, much of his initial work with athletes is getting their feet to function properly.

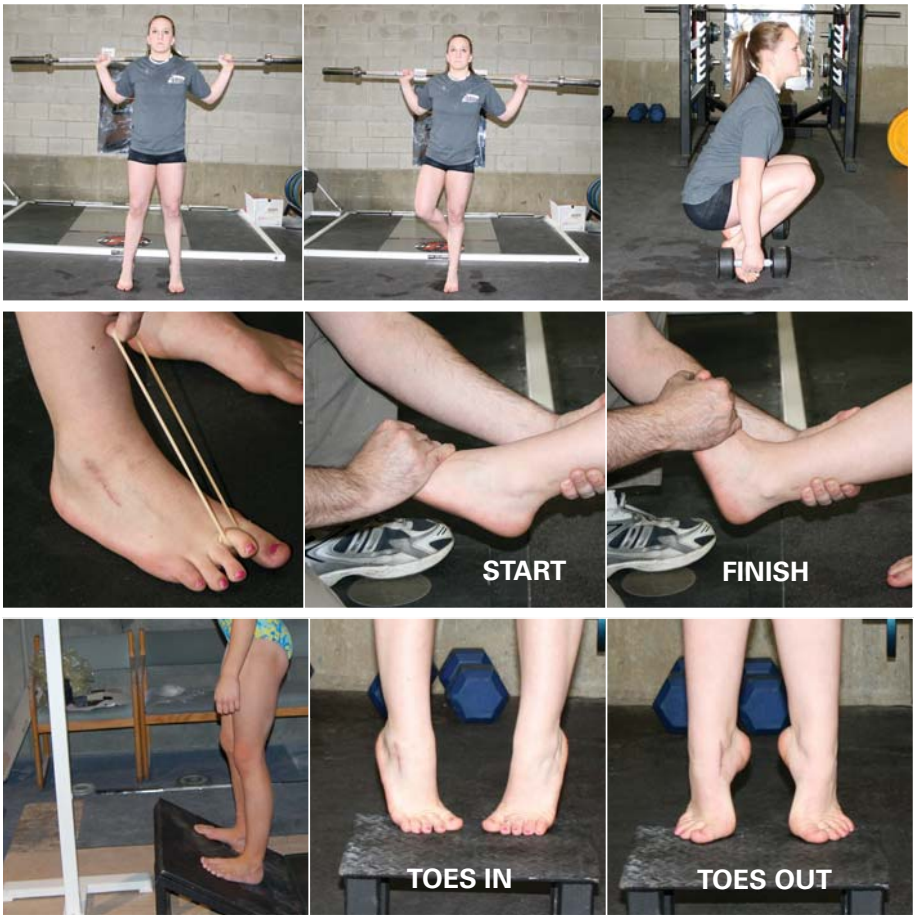
For example, with many athletes Ripley says he must use aggressive soft-tissue techniques to release the chronic tension in the feet and must adjust every articulation of the foot to restore full range of motion. "What these athletes often have is accumulative trauma that results in scar tissue and calcification, and muscular weakness – many elite sprinters I work with could not do something as seemingly simple as standing on their toes and balancing in that position for more than a fraction of a second." He even has athletes using rubber bands around each toe to do flexion exercises as one of his rehab exercises to get the toes functioning properly.

Another interesting point Ripley brings up is that gymnasts do a lot of work in bare feet but seldom do any specific work to develop the arch, which leads to a flat foot condition that can place harmful stress on the knees and back. He also adds that orthotics won't do much to help a gymnast, as they don't wear shoes during the sport, and as such they need to find ways to incorporate training for the feet. One idea is dance.

Ripley says that many of the ideas in modern dance will help not just gymnasts but all athletes who seek to develop speed. In addition to working the muscles of the feet, even with basics as barre work in first position/second position, modern dance will teach the proper position of the pelvis when sprinting. "During these types of exercises dancers are taught to have a middle contraction of the rectus abdominis [a major abdominal muscle] to create a posterior pelvic tilt that is necessary to be able to run at maximum speed." As such, he has athletes perform his series of specific exercises, such as squats on their toes, and will have the athlete tuck in the pelvis. Of course this technique is not recommended for heavy squats, which require the athlete to have a neutral spine or to – in BFS terminology – "lock in the lower back," but is used to teach the athlete proper body awareness.

Finally, Ripley is big on stretching not just to help reduce injuries but also to develop speed. "Athletes need to be able to move without creating tension in their bodies. This requires teaching proper posture and adherence to a regular stretching program." Ripley also says that in addition to finding and using the best stretches, athletes can improve the quality of their stretching by using proper breathing methods when they stretch.

I've just scratched the surface of what Ripley has to offer. In future articles *BFS* will share more of Dr. Michael Ripley's unique, practical ideas on how to reduce the risk of injuries and perform better. Training hard is important, but you must also train smart! BFS



Dr. Ripley believes in using a variety of specific exercises and stretches for the feet and ankles. Shown are the following: (top) double- and single-leg toe raises with a barbell, and squats on toes; (middle) toe flexion exercises with a rubber band and manual resistance for the shin muscles; and (bottom) calf stretches (which will be performed with straight and bent legs) and toe raises with the feet in various positions, including with knees bent.

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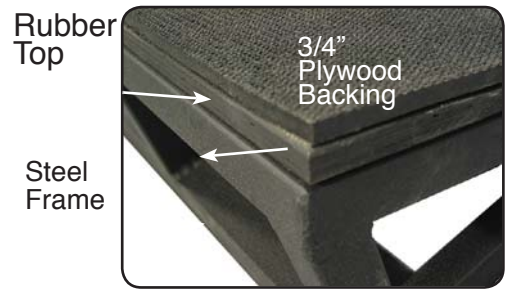

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DRILL 3: Up & Back

DRILL 4: Side to Side

DRILL 5: Quarter Eagle

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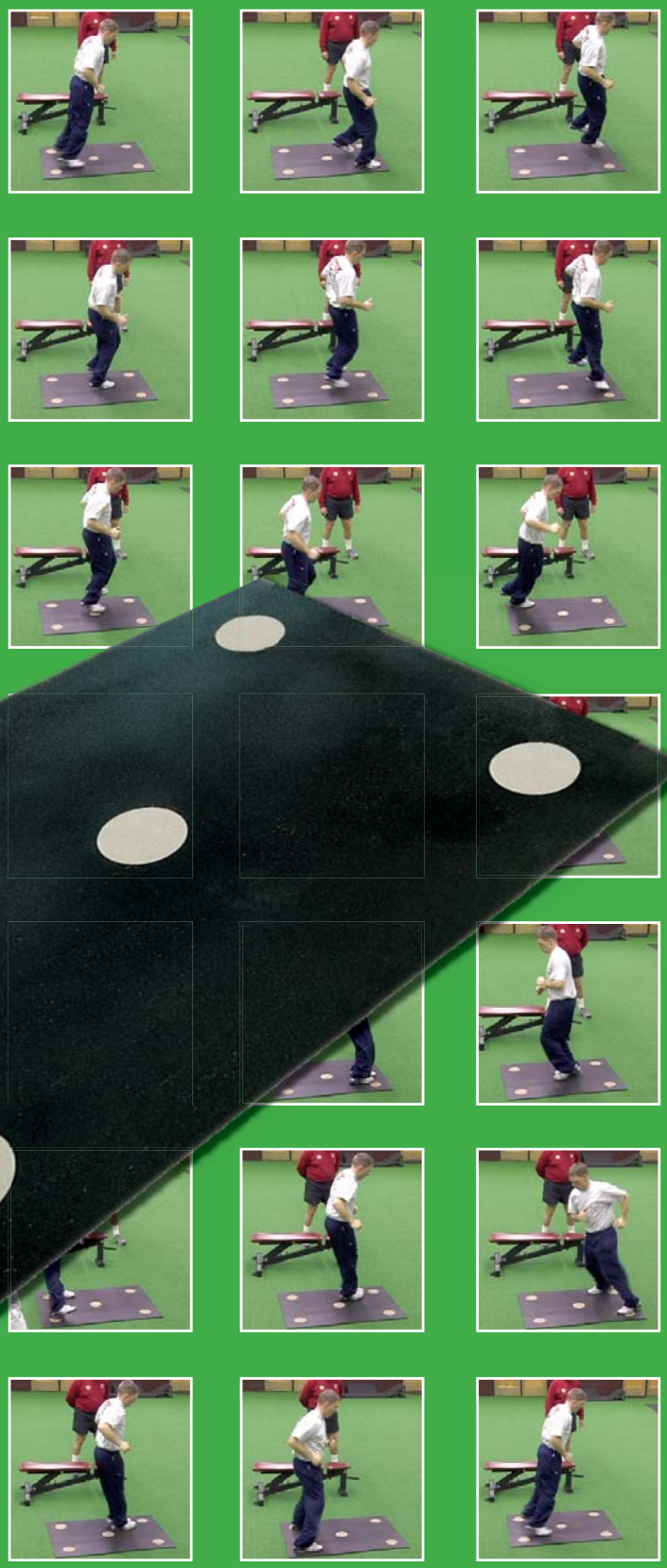

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