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EDGE

WINTER 2013

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OF CLIENTS**

**REVS METABOLISM
KEEPS WORKING
(NO PLATEAU!)**

**MUSCLE
IMBALANCES**
How CES
Can Help



MARKET YOURSELF BETTER:

5

PROVEN SECRETS

**TRAINER
SHANNON JAY
DOUGHERTY
SHARES HER
BEST TIPS**

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Enhancement
Specialists
**INSPIRING
RESULTS**

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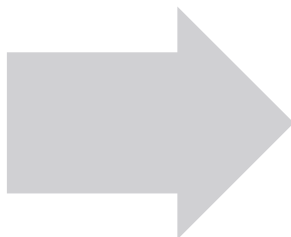
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YOU DO IMPORTANT WORK. YOU HELP CHANGE LIVES.

Every day you are helping people in the fight against obesity, stress, high blood pressure, diabetes, heart disease, and other killers. It's rewarding work, but it also carries the responsibility to stay up-to-date on the latest scientific knowledge and share in a community of top-level fitness professionals. At the National Academy of Sports Medicine (NASM), we're thrilled to bring you a new way to do just that. Welcome to *The Training Edge*.

This is a magazine for fitness professionals like you. In it, you'll see successful trainers and other fitness professionals sharing what's worked for them. You'll find new ways to apply the Optimum Performance Training™ (OPT™) model, nutritional insights (backed by science, not fads), plus an approach to fitness and motivational strategies that you can use with your clients. But we didn't stop there—we also offer the opportunity to gain continuing education credits by reading *The Training Edge* (more on that on page 2).

It was a passion for fitness that drove you to enter this field in the first place. Our goal? To help you hone that passion and give you the tools you need so that you can make it a successful career. Please enjoy this first issue, and let us know what you think at thetrainingedge@nasm.org. We'd love to hear from you!

ANDREW WYANT
NASM PRESIDENT

Take Five

Some of our favorite little highlights from this, the first issue of *The Training Edge*:

1 How our cover trainer, Shannon Jay Dougherty, ATC, CES, uses **plyometrics** to get results (p. 3)

2 How you can serve seniors, women, and kids even better with **specialist credentials** from NASM (p. 7)

3 How basketball star Grant Hill's life changed when he met NASM CEO Dr. Mike Clark and started **CES training** (p. 10)

4 How endurance athletes should **time nutrition** before, during, and after events (p. 27)

5 How to **market yourself** to build clientele—including using YouTube to boost credibility (p. 31)

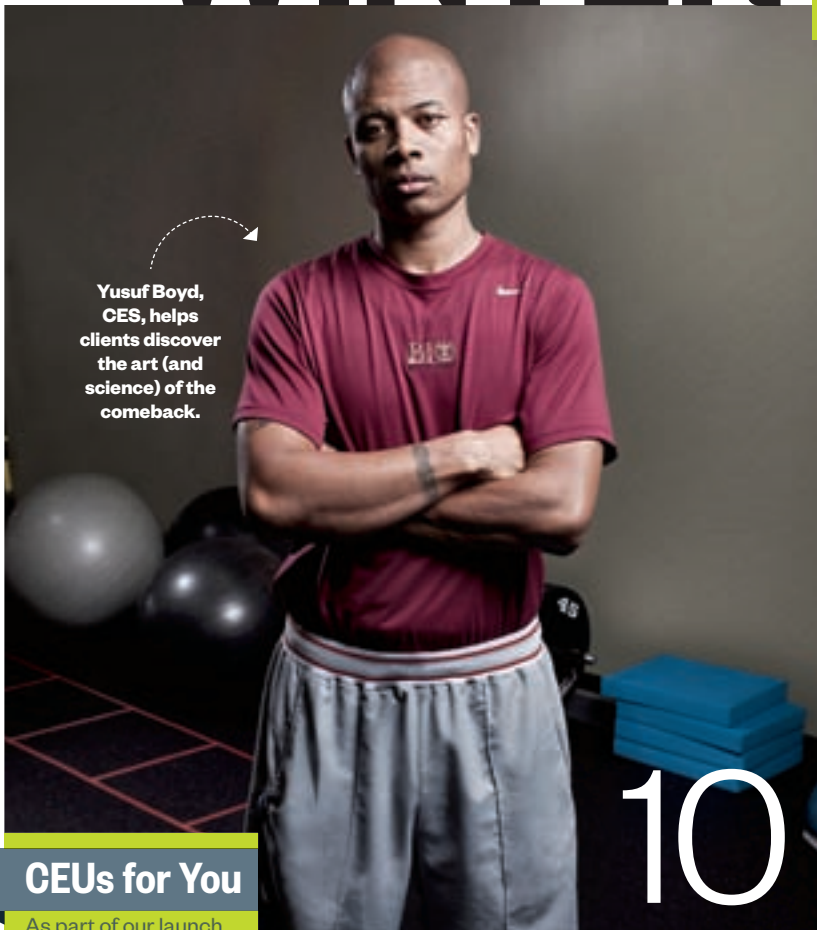


TO CELEBRATE THE PUBLICATION of *The Training Edge*, we're giving you **\$50**—to be used on anything in our e-store at nasm.org/shop.*

► To redeem, use promo code **EDGE50** at checkout.

*Valid for purchases with a combined value of \$100 or more. Expires 12/31/12.

WINTER 2013



Yusuf Boyd, CES, helps clients discover the art (and science) of the comeback.

CEUs for You

As part of our launch celebration for *The Training Edge*, we are offering 0.2 CEUs from this issue for **\$15**.

TO TAKE ADVANTAGE

Read this premier issue.

Log onto thetrainingedgemagazine.com to access the CEU exam.

Successfully pass with at least **70%** to earn your NASM CEUs.

HURRY!

This **\$15 CEU offer** expires 12/31/12. Price increases 1/1/2013. Look for new NASM CEU opportunities in every issue.

That's more than half off our regular CEU pricing (a \$39 retail value)!

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WARRIORS

ELLEN BARNES



“After finding my balance, I wanted to help others.”

Shannon Jay Dougherty
ATC, CES, Chandler, Ariz.

► **Becoming a trainer:** “I have always been active, but for five or six years of my youth, I was overweight and got teased for it. Then, one day, I was running up and down this hill near my home and something just clicked. After that, I cut out sugar and became even more involved in sports. In college, I also battled an eating disorder. I can relate to people with similar problems, and because I share my story, it builds trust. After finding my balance, I wanted to help others.”

► **New clients:** “I let them do a lot of talking—to share goals. Then we set short- and long-term goals to match their lifestyle.”

► **Sharing motivation:** “On days clients don’t see me, I call them or send them emails with quick messages to stay on track or to congratulate them on a good workout.”

► **Favorite meal:** “Salmon, asparagus, and brown rice.”

► **Tough workout:** “After a treadmill warm-up, I’ll do 30-second sprints, then hop off and do a few dumbbell exercises. Next up: a couple plyometric moves. Then I repeat the sprint-resistance-plyometric circuit five to 10 times.”

► **The payoff:** “I have a client who has lost 80 pounds—he’s really changed his lifestyle and diet and has been my most rewarding client. I also work with some seniors—it means a lot to help them feel stronger and have fewer falls. I’m a trainer because I love helping people feel good about themselves.”



Thunder VP/GM Sam Presti (left) and Sharpe (right) celebrate with players Kevin Durant and Russell Westbrook.



Joe Sharpe, ATC, Oklahoma City Thunder

This past June, the Oklahoma City Thunder battled the Miami Heat in the NBA Finals. And Joe Sharpe, the Thunder's head athletic trainer for the last four years, experienced the thrill firsthand. Sharpe shares his path into pro sports.

Q What experience and training do you credit with landing you the job with the Thunder?

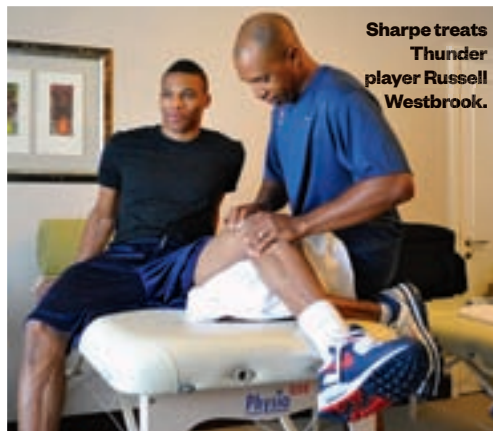
A My primary education came at Old Dominion University, where I received a BS and MS. I then went on to become an NASM Corrective Exercise Specialist and Performance Enhancement Specialist with certifications from the National Athletic Trainers' Association, National Strength and Conditioning Association, and Functional Movement Systems. I worked at the University of Connecticut for nine years, with the Minnesota Timberwolves for two years, and with the Charlotte Bobcats for four years before coming to the Thunder.

Q What advice do you have for other trainers who want to follow a career path similar to yours?

A Volunteer your services within the appropriate setting. For example, I volunteer with USA Basketball and the United States Olympic Committee. Reach out to individuals in the field and setting you wish to work.

Q What are three tips that you've learned while on the job?

A Having a mentor and someone to emulate is good. Education is a continuing process. Never treat anything before you assess the situation.



Sharpe treats Thunder player Russell Westbrook.

3 Essential Tools

What can set your training service above the competition and help clients best?

GONIOMETER

This protractor-like tool measures range of motion in precise degrees. It enables trainers to show clients specific numbers and demonstrate progress in improving range of motion.

MOVEMENT ASSESSMENT

This evaluation indicates imbalances in the neuromuscular system. From an overall assessment, you can determine a client's specific needs. For example, while evaluating walking patterns, you may discover deviations in the movement of a client's big toe, hip, or thoracic spine.

ONLINE NEUROMUSCULAR STRETCHING COURSE

While the assessment and goniometer identify the problem areas, this course shows what moves create better ranges of motion. The \$79 course available through NASM (nasm.org) takes you through lengthening techniques and their proper application.



Measurements help clients see improvement.



COME TOGETHER

Try these keys for smooth (and effective) small group training.

Small groups are hot. In 2011, about 7.7 million Americans participated in boot-camp-style cross-training classes, according to the Sporting Goods Manufacturers Association. What's more, 2.9 million of those people went to such classes at least 50 times a year.

"Group training—usually between three and six clients—is a great way to expose your personality, style, and services to a lot of people," says Eric Beard, LMT, NASM-CPT, CES, PES, NASM's director of advanced education.

"Small groups can be fun but more challenging," Beard says. "One-on-one training is like a waiter serving one person at a restaurant, but the small group training is more like being a bartender at happy hour." To run successful small group sessions:

▶ **Assess levels.** Determining fitness levels can help you create effective groups. For example, in a group of higher-level clients, you can be more creative and incorporate more complex exercises.

▶ **Mix it up sometimes.** One or two clients at a higher level in a small group can serve as examples and motivators for other clients who need help.

▶ **Pay attention to technique.** The biggest challenge for small group trainers, says Beard, is ensuring that clients stick to proper form. Trainers will need to use visual, auditory, and kinesthetic cues to explain exercises.

▶ **Turn to NASM resources.** Beard specifically recommends kettlebell, sandbag, and sports performance workshops for instruction on running successful small group classes. For more information, check out nasm.org/workshops.

In 2011

7.7

million
Americans
participated
in boot-
camp-style
cross-training
classes.



Jashinsky's
advice:
Think of
yourself as an
entrepreneur.

BOOST YOUR BUSINESS

A CPT/MBA shares her secrets to success.

Knowing how to boost clients' health and fitness is just one part of your job. You're also an entrepreneur. Whether you're a trainer at a large chain or a sole proprietor, professional development skills such as marketing, sales, communication, and business operations can enhance your reputation and lead to new clients.

"One of the most challenging parts of being a trainer is juggling the non-training, business side of things," says Karen Jashinsky, CPT, MBA, chief fitness officer of O2 Max Fitness in Santa Monica, Calif. So, where should you focus for the best return on investment?

A SMARTPHONE

Because trainers are on the go, they often don't have time to sit at a desk. In addition to emails and texts to clients, Jashinsky uses her phone to post to social networks and type notes about client workouts.

SOCIAL MEDIA

"Have various social media profiles and presences," Jashinsky says. Smart moves:

- ▶ Use **Facebook** to share useful tips and motivation with clients. Post class times and set an open invitation—your clients may share this invite with friends.
- ▶ Define your personal brand by those you follow on **Twitter**. Following NASM and NASM partners can convey a professional image, for instance.

PHOTOS

"When you can show examples of your training, more people will take notice," Jashinsky says. "With clients' permission, post pictures of workouts or results on your site or on Facebook. Mix it up. Don't always make your sales efforts about you; instead show what you can do for your clients."

COMMUNICATION

"The more you communicate, the more you share, the better," Jashinsky says. Quick texts telling clients "great job" or "good workout" will make them feel special and will add value to your services. In addition, she recommends passing along other things clients may be interested in, such as discounts to their favorite restaurants or interesting magazine articles.

46

Percentage of American adults who own a smartphone, using it to text, follow social media, and browse websites.

88

Percentage who own a cell phone. That's good news for fitness pros—use texting to keep in touch with clients and build strong relationships.



The Perfectly Tailored Fit

Emerging clientele segments often come with special needs—even beyond the physical. It's crucial to understand clients' different motivations for engaging in fitness, in order to boost marketing efforts and provide the best training programs.

	NEEDS	MOTIVATORS	RESOURCES
SENIORS	 <p>Recognize exercises that may be contraindicated (or take on more importance) due to health conditions and medications. Watch for sensory impairment. Extend warm-ups and cool-downs as needed for joint mobility.</p>	<p>Increase energy levels, participate more freely in activities they enjoy, keep blood pressure and cholesterol in check, and reduce pain.</p>	<p>The NASM Senior Fitness Specialist credential offers a comprehensive, 13-module program focused on flexibility, cardiorespiratory health, and nutrition for older adults. nasm.org/sfs</p>
PREGNANT WOMEN	 <p>Modify, especially during second and third trimesters, to protect from overstretching ligaments. Include exercises that keep them in safe, comfortable positions (not flat on their backs).</p>	<p>Keep weight within healthy ranges, ease labor and delivery, boost strength needed for motherhood, and meet other moms-to-be.</p>	<p>The Women's Fitness Specialist credential addresses pre- and postnatal fitness, eating disorders, and other unique needs—from teens to senior women. nasm.org/wfs</p>
YOUTH	 <p>Help motor development through fundamental movement skills. Guard against overuse injuries by adjusting volume of training to the activities. Focus programs on fun as well as performance.</p>	<p>YOUNG ATHLETES: Improve sports performance. INACTIVE: Increase daily activity levels to slow or reverse weight gain.</p>	<p>The Youth Exercise Specialist credential covers safe, effective, and fun training for kids ages 6 to 19—including biomechanical, psychological, and physiological needs. nasm.org/yes</p>

WHY SPECIALIZE? "Too often fitness professionals try to fit all their clients into a similar package," says Christian Thompson, PhD, associate professor in the kinesiology department at the University of San Francisco and coauthor of NASM's Senior Fitness Specialist course. "NASM courses teach trainers to recognize the intricacies of each population, perform assessments, and improve client communication and training."

IMAGE SOURCE (4)



WHAT'S
HOT
→

Try a
cutting-edge
workout
with battling
ropes.

American Ninja

A new course promises fast results with plenty of thrills.

The crowd cheers as contestants push themselves on a grueling course with obstacles called Arm Rings and Devil Steps. The TV show *American Ninja Warrior* tests athletes' endurance, agility, and strength.

The recent popularity of the show and mixed martial arts fighting has created a demand for unconventional training, so NASM launched the Mixed Martial Arts (MMA) Conditioning Specialist course this past June.

► **Best clients:** "Based on the number of MMA fans, the potential market is huge, but the appeal goes beyond those who want to train in mixed martial arts," says Eric Beard, LMT, NASM-CPT, CES, PES, NASM's director of advanced education. "We're seeing health and fitness enthusiasts turn to MMA looking for something to excite them and get them faster results."

► **Benefits for trainers:** "The course helps fitness professionals stay on the cutting edge," Beard says. "It combines NASM's OPT™ [Optimum Performance Training™] progression and regression concepts with MMA-style workouts that are effective and fun."

Such workouts include battling ropes, medicine balls, kettlebells, and training that mirrors MMA fight moves. Another advantage of the MMA course: Trainers can conduct the course just about anywhere, from an exercise studio to a city park.

► **Inside the credentials:** The MMA Conditioning Specialist course includes nine chapters with online presentations and an exercise video library. Earn 1.2 NASM CEUs, too. Learn more at nasm.org/mma or by calling 888-830-4563.

Coconut Water: Cracking the Case

It's a hot trend in sports hydration—but does it supply the nutrients you need?

"One of the biggest draws of coconut water is that it's loaded with potassium," says Leslie J. Bonci, MPH, RD, CSSD, LDN, director of sports nutrition at the UPMC Center for Sports Medicine in Pittsburgh. "It is also relatively low in calories." One cup of coconut water has

about 46 calories and 600 milligrams of potassium, a nutrient that's essential for muscle contraction and relaxation.

The watch-out: Balancing potassium with sodium. During intense workouts, an athlete can sweat out 10,000 milligrams of sodium. Too much

potassium and inadequate sodium may increase the risk of muscle cramps, according to Bonci. To help, she recommends pairing coconut water with a sodium-rich snack (such as pretzels) after a workout.

To give it a try for light sports hydration

or just a refreshing drink:

Check the label.

Opt for 100% coconut water with no added sugars. Some brands may have less than 10% coconut water.

Stick with water.

Coconut water is the liquid taken from the center of young coconuts. Coconut

milk is from the "meat" of mature coconuts, making it much denser in calories and fat.



Watch the
sodium
balance.



CAN YOU BEAT THE COMPETITION?

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THE COMEBACK

Trainer Yusuf Boyd has helped clients bounce back from all kinds of fitness setbacks. His tool: corrective exercise. Here's how everyone from top athletes to weekend warriors can benefit.

By Sarí Harrar Photography by Hollis Bennett

Yusuf Boyd, CES, knows the power of corrective exercise—it got him past knee pain.



EVERYONE THOUGHT GRANT HILL WAS HISTORY.

The great college basketball player had found initial success in the NBA, but a long series of ankle problems left him contemplating retirement at the age of 34. Between the 2000-01 and 2006-07 seasons, he had played just 200 of 574 regular season games. That's when he came to Phoenix to play for the Suns, where he was introduced to NASM CEO Dr. Mike Clark, DPT, NASM-CPT, CES, PES, and to something called corrective exercise.

Corrective Exercise: Three Steps

- 1** Identify the problem (integrated assessment)
- 2** Solve the problem (corrective program design)
- 3** Implement the solution (exercise techniques)

Corrective exercise works for sports professionals, weekend triathletes, and everyday people.



Yankee Alex Rodriguez believes in the power of corrective exercise.

Clark—who developed the Corrective Exercise Continuum—found that hip tightness may have strained Hill’s ankle by forcing his foot to rotate externally and flatten out. Post-corrective exercise, Hill defied his own history, playing 292 of the past four seasons’ 312 regular season games with the Suns. (He recently signed with the Los Angeles Clippers.) Corrective exercise made news again when Hill recommended it to Yankee slugger Alex Rodriguez.

NOT JUST FOR HEADLINE MAKERS

But corrective exercise isn’t just for high-powered athletes. It works for a wide variety of clients, from professional basketball players and Olympic medalists to weekend triathletes and everyday people hoping to lose pounds and boost fitness.

Take Ayan Ajanaku. She loves tennis—but the sport didn’t always love her back. In 2010, she injured her knee while playing, tearing her ACL, MCL, and meniscus. After surgery and five months of physical therapy, her knee flexion was still just 120 degrees versus the normal 140. “I couldn’t run. Tennis was impossible,” says Ajanaku, 34.

Fast-forward to now: Ajanaku’s moved up in the U.S. Tennis Association’s amateur ratings, playing consistently and comfortably. The key to



WHAT THE SCIENCE SAYS

The Kinetic Chain

Research and real-world testing prove it: Everything is connected in the human body. Understanding the interplay between the muscular, skeletal, and nervous systems in the body’s “human movement system”—also called the kinetic chain—helps clients get more out of every workout, recover from injuries, and prevent new ones. Here are three good examples of how over- and underactive muscles in one part of the body can lead to compensation elsewhere that could cause trouble:

1 BACK STRAIN?

Check feet, too. In one study from Israel’s Tel Aviv University and Tel Aviv Medical Center, researchers found that when 35 volunteers stood on wooden wedges that simulated turned-in (hyperpronated) feet, their hip rotation and pelvic tilt changed in ways that could contribute to lower back pain and stiffness. Increasing range of motion in the ankle and foot muscles could be one step in alleviating the problem.

2 KNEE PAIN?

Look at the strength of hip and trunk muscles. Weakness in hip abductors, external hip rotators, and the muscles involved with trunk lateral flexion can change the alignment of the quadriceps muscle and patella tendon at the knee for the worse. A 10-degree change can increase joint stress 45%. A progression of flexibility, stabilization, and strength exercises for the lumbo-pelvic-hip complex could be a way to reduce stress on the knee joint.

3 CHRONIC ANKLE SPRAINS?

Weak hip abductors may play a role. People who sprain one ankle many times also have weaker hip abductors on that side, a New York Institute of Technology study showed. Protecting against future sprains could involve exercises to increase hip abduction strength.

**AYAN
AJANAKU**

AGE
34

**BEFORE CORRECTIVE
EXERCISE**

"I couldn't run.
Tennis was
impossible."

NOW

She's moved up
in the U.S. Tennis
Association's
amateur ratings
and left knee
pain behind.



BOOST YOUR SKILLS

Earn Your CES Credential

NASM's Corrective Exercise Specialist (CES) credential helps you gain recognition as an elite professional by teaching you how to integrate human movement science with solutions for optimal injury prevention and recovery. Learn to apply the Corrective Exercise Continuum to successfully work with clients experiencing musculoskeletal impairments, muscle imbalances, or rehabilitation concerns. Get all the information you need at nasm.org/ces or by calling **888-897-0159**.



TRY THIS

Correct “Sitting Disease”

Perhaps the body's most powerful muscle group, the glutes “forget” how to fire on all cylinders when your clients (or you) log long hours at the desk, in front of the TV, or behind the wheel.

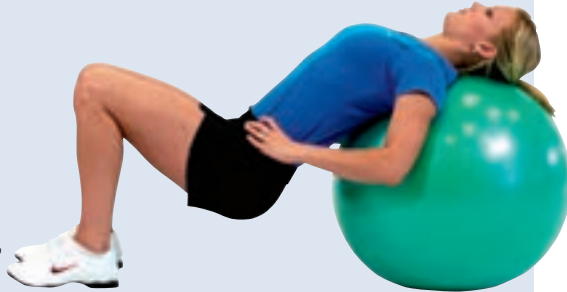
THE RESULT: Everything from walking fast and climbing steps to powering through the finish line at a weekend 5K gets a little—or a lot—more difficult.

Reactivating the glutes as part of an overall corrective exercise program can reduce the chances of pain and strain in the lower back, groin, hamstrings, and quadriceps muscles.

These are just two isolated strengthening exercises that can help, as part of a complete program.

STABILITY-BALL HIP BRIDGE

HOW TO DO IT Start with the stability ball under your shoulder blades, head resting on the ball, hands on hips, and feet flat on the floor hip-width apart. Draw in your belly button while you squeeze your butt muscles. Lift your pelvis until your hips are in line with your knees and shoulders. Lower your pelvis to start position.



SIDE-LYING HIP ABDUCTION WITH EXTERNAL ROTATION

HOW TO DO IT Lie on your side with your back, shoulders, and butt flush against a wall. Keep your top leg against the wall and slide your bottom leg forward a bit to allow the top leg to touch the floor. Lift your top leg as high as you can while keeping the heel in contact with the wall. Once you reach your apex, externally rotate your foot toward the wall. Return to start position. The tempo should be one or two seconds to reach the apex and externally rotate, hold for two seconds, and four seconds to return to start position.



her comeback: Ongoing corrective exercise training techniques she learned from Yusuf Boyd, a Corrective Exercise Specialist (CES), based in Germantown, Tenn.

And then there's Paula Johnson, age 52. She has type 2 diabetes and high blood pressure and needed to lose 170 pounds when her corrective exercise sessions began in early 2012. “I honestly thought I was going to die before I started exercising,” says Johnson, a nurse who lives in Memphis, Tenn. “I would go to work, then come home and go to bed. The circulation in my feet and legs was really poor. I could barely walk from my car to my house.”

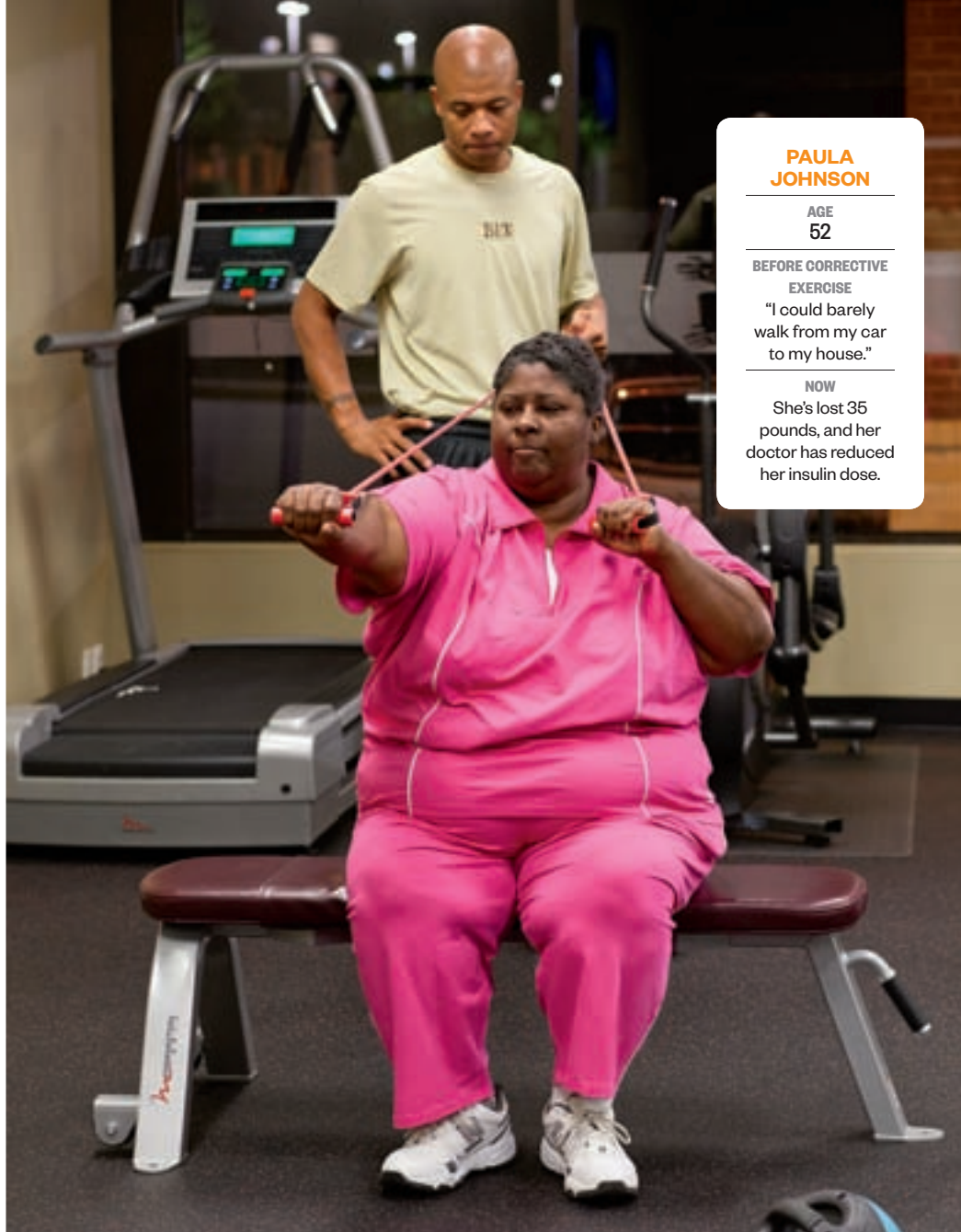
A corrective exercise program has given Johnson a fresh start without fear of injury while she gets in shape. She's lost 35 pounds and has enough energy and endurance to help care for a new granddaughter. Her doctor reduced her insulin dose, and the circulation in her legs has improved. This fall, she's planning to get back to a favorite pastime—attending college football games. “My sons are taking me to the game between Grambling State and Jackson State,” she says. “I can't wait.”

NEW HOPE IN CORRECTIVE EXERCISE

“Corrective exercise finds and overcomes the imbalances and impairments that lead to injuries and that make you less efficient and less powerful when you exercise or compete,” explains Boyd, a former NBA athletic trainer with the Memphis Grizzlies who has since opened his own health-and-wellness studio, BIOMechaniks. “It's like a baseball pitcher with a shoulder restriction who wants to throw faster. You have to correct the restriction first.”

The process begins with an assessment that checks for muscle imbalances and movement compensations—including under- and over-active muscles—along the kinetic chain. “Clients often think they're stuck with lower back pain or knee problems, for example,” Boyd says. “When they learn it's due to a muscle imbalance involving other areas of the body, they start seeing things differently.”

“Clients start feeling results in about four weeks. They have less pain and more flexibility.” —YUSUF BOYD, CES



PAULA JOHNSON

AGE
52

BEFORE CORRECTIVE EXERCISE

"I could barely walk from my car to my house."

NOW

She's lost 35 pounds, and her doctor has reduced her insulin dose.

NASM Corrective Exercise Specialists then follow the Corrective Exercise Continuum, a four-part protocol: Inhibit, Lengthen, Activate, Integrate. Corrective exercise sessions begin with inhibiting and lengthening overactive or tight muscles that have been working overtime to compensate for inactive muscles elsewhere in the body. This often involves foam-roller work (self-myofascial release) to release tension, and static stretches that lengthen these often-tight muscles. Underactive muscles are then activated with isolated strengthening moves. Finally, integrative exercise teaches newly balanced muscles to work together in a healthier way. "Clients start feeling results in about four weeks," Boyd says.

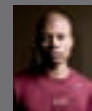
"They're really happy. They have less pain and more flexibility."

Ajanaku lived it. When she thinks back to how she felt before, she remembers the pain. The stiffness. The limitations. "Corrective exercise changed all that."

But that's not the end of the story. "After my knee improved, I went back to Yusuf for more corrective work to prevent tennis injuries," Ajanaku says. "If you're going to play a sport hard, you have to work on your weak points and be balanced."

Clients who've finished corrective exercise should still incorporate some moves into a short prep before beginning any workout, says Boyd. "It's like changing the oil in your car," he says. "When you take care of your body, it takes care of you." ■

MEET OUR EXPERT



YUSUF BOYD
NASM-CPT,
CES, PES,

LAT, ATC, CKTP

Boyd knows the power of corrective exercise—it resolved his knee pain. Assessments showed Boyd's flat feet were causing overpronation. With corrective exercise, he has been able to fix the issue.

THE SECRET WEIGHT-LOSS TOOL

ALTHOUGH YOUR CLIENTS MAY HAVE NEVER HEARD OF OPT, IT CAN HELP THEM FINALLY SHED THOSE EXTRA POUNDS FOR GOOD. HERE'S HOW TO CLEARLY COMMUNICATE THE BENEFITS.

BY JOE KITA



Optimum Performance Training™ (OPT™)

is a systematic approach that uses integrated training methods to help your clients reach their individual goals. It is particularly effective for a sedentary, overweight population that has more structural imbalances and susceptibility to injury than ever before. By taking your clients through different levels of training—stabilization, strength, and power—you'll minimize their risk of injury and maximize their results. You can also help them lose weight.

The OPT model begins with the Stabilization Level. It's the foundation upon which the entire model rests. Exercises that build joint stability, boost coordination, improve posture, and enhance communication between all of the body's systems are emphasized over a period of two to six weeks, based on a client's needs. Most programs don't offer anything like this. Without building this base, novice exercisers, especially those who are overweight, are more likely to injure themselves and end up back on the couch.

SHARE THIS

*OPT is personal,
integrated,
research-based,
and effective!*

The Strength Level continues to enhance stabilization endurance while increasing prime mover strength and building lean body mass. Super sets, a training method that pairs traditional strength exercises (barbell bench press) with stability challenging moves that target the same muscles (push-up on a stability ball), are the basis for Phase 2 of this level—the most appropriate phase in this level for weight-loss clients.

The Power Level is optional for weight-loss clients and should only be used after successful completion of the Stabilization and Strength Levels. Although this phase of training may seem more appropriate for athletes, it's a great way to offer a calorie-expending workout.

If you're an NASM Certified Personal Trainer, OPT provides an opportunity to help weight-loss clients. According to the latest stats from the Centers for Disease Control and Prevention, approximately 68% of U.S. adults are overweight or obese. Nearly half of gym-goers cite weight loss as their primary reason for working out. To help you promote OPT for weight loss, here are six key benefits of the system and how to share this information with potential clients in an engaging way that can make them want to include OPT as a top tool in their weight-loss plan.

"IT'S ABOUT YOU"

Most weight-loss programs are generalized across a broad audience. Followers, regardless of age or ability, eat only certain foods and exercise in very specific ways. While results can come quick, they usually don't stick. That's because we have little in common with Terry Bradshaw or Marie Osmond. As most overweight people are already aware, one size never fits all.

OPT is exactly the opposite. It's an extremely personal approach to training. Clients aren't blindly duplicating a specific plan that has supposedly worked for millions. Each person is given a comprehensive assessment to start. While some portions are standard for everyone, much of the testing is customized to their personal goals, needs, and abilities. Based on the results, an individualized training program is developed.

"Although you can take any person, from a 14-year-old kid to a 25-year-old professional athlete to a 70-year-old sedentary female with chronic disease, and plug them into the OPT model," explains Scott Lucett, senior research director for NASM, "each program will be different. They'll move through it in a progressive, systematic manner that fits their individual abilities and needs, so it's more likely they'll stay with it and reach their goals."

As they adapt to exercises and movement patterns, you'll adjust acute variables such as repetitions, sets, training intensity, and rest intervals. Continual assessments allow you to monitor your clients' progress and adjust their programs to ensure success. No two workout plans will be the same and how each client progresses through the training phases will vary. Some clients may move quickly from one phase to the next. Others will spend more time in the early phases without ever doing some of the higher ones, yet all will be more likely to achieve their personal goals.

"IT'S EXPANSIVE, NOT RESTRICTIVE"

OPT is based on the principle of integrated training. It utilizes various components of exercise programming—such as flexibility, core work, balance, plyometrics, speed, agility, strength, and cardio. By comparison, other weight-loss programs are often built around a single infomercial machine or a particular type of focused training. The OPT program offers more variety to train the body better. Different tissues in the body each respond to different workouts based on the principle of specificity or specific adaptation to imposed demand (the SAID principle). Including a wide variety of workouts prevents muscle imbalances and ensures that your clients are improving in all areas of fitness—flexibility, endurance, neuromuscular coordination, body composition, posture, strength, and power—not just one.

All modalities of resistance training (machines, free weights, rubber tubing, kettlebells, and suspension body-weight training) and



The Stabilization Level of the OPT model contains only Phase 1: Stabilization Endurance.



BOOST YOUR SKILLS

Be a Weight Loss Specialist

The new NASM Weight Loss Specialist (WLS) credential brings you the knowledge you need to work with overweight clients—from moderately overweight to morbidly obese. WLS covers the physiology and psychology of weight loss, in addition to the current nutritional and physical activity guidelines specific to weight-loss clients. The WLS credential also details how to apply the exclusive OPT model when designing exercise programs for weight-loss clients. Learn more at nasm.org/wls or call 888-729-0286.



WHAT THE SCIENCE SAYS

The Truth Behind Weight-Loss Myths

We asked trainers about the biggest weight-loss mistakes they see clients making.

FLAW Trying to “out-exercise” bad eating habits

FIX Exercise is only one part of this key equation: $\text{Calories Burned} > \text{Calories Consumed} = \text{Weight Loss}$.

FLAW Believing carbs are evil

FIX Carbohydrates don't cause weight gain; excess calories (of any kind) do. In fact, when you're training hard, you need complex carbohydrates for fuel. Without them, your body will resort to using protein and hinder your ability to build muscle.

FLAW Doing insane reps of crunches to target belly fat

FIX Spot reduction is physiologically impossible. A total-body training plan like OPT combined with a healthy diet will help you trim fat all over.



THE PROMISE

See faster results with less risk of injury.

trans fats; limit sugar, sodium, and alcohol—but that's because this is the wisdom that once learned, applied, and combined with exercise, works long term.

“YOU'LL SEE RESULTS FASTER”

Beginning with the Stabilization Level, the OPT models sets your clients up for long-term weight-loss success. “The more flexibility you have and the more stable you are, the more capable you will be of taking on the higher-intensity phases of training seen in the Strength and Power levels of the OPT model,” Lucett says. Indeed, one study found that among sedentary adults starting an exercise regime, 50% to 90% injured themselves within the first six weeks.

Beyond injury prevention, the proprioceptively enriched activities in this phase require the body to recruit more muscles to stabilize and coordinate movements. In addition, the exercises are typically performed in a circuit fashion, moving from one exercise to the next with little rest in between. The result is a higher caloric demand during your workout and greater improvements in body composition. In a study from Laval University in Quebec, researchers found that people who did high-intensity, short-duration workouts, like those emphasized with OPT, lost three times more fat than those doing longer, more moderate intensity workouts.

This type of training also increases excess post-exercise oxygen consumption (EPOC), in which the body's metabolism is elevated following exercise. As the body works to replenish energy stores, lower body temperature, and return to a resting state, you continue to burn calories at a higher rate. It's much like the way a car engine stays warm for a period of time after it has been driven.

Some clients may question why Stabilization is so important and even complain that it's a waste of time for weight loss. “Just because it's the first

proprioceptive training (stability balls, BOSU,[™] foam pads, and vibration platforms) can be easily incorporated into the OPT model. Functional exercises that are multijoint and multiplanar and mimic everyday activities are also part of the program. As far as motivation, long-term compliance, and just plain fun are concerned, there is no comparison.

“Anybody, anytime, anywhere—that's how we describe OPT,” says Lucett. “There are so many options. You can do it in a gym or outside on a field. No workout is ever the same, and that means the body always has something new to adapt to, which enhances caloric expenditure. Plus, the client never gets bored, which helps with compliance.”

“IT'S NOT ANOTHER DIET”

Chances are your potential clients will have already tried some best-seller diet and moved on. They've learned the hard lesson that although a fad diet may spur short-term results, it's difficult if not impossible to sustain over time. What they really need is a commitment to making healthier choices that works in real-life settings.

“The No. 1 rule of weight loss,” explains Brian Sutton, NASM's director of content development, “is simply to consume fewer calories than you burn. So, rather than fad diets, NASM's nutritional recommendations are based on the USDA's 2010 Dietary Guidelines for Americans [cnpp.usda.gov/dietaryguidelines.htm].”

Now, you've heard this advice before—eat more whole foods; cut back on saturated and



TRY THIS

The Workout That Burns More Fat

Circuit workouts

are key in Phase 1. A vertically loaded circuit routine (see page 20) can practically eliminate rest intervals between exercises by alternating body parts. For example, after working the chest, you move onto the legs, then the back, and so on. By the time you return to the chest exercise on the next round, those muscles

are well recovered and you haven't wasted any time with longer rest periods. Combined with low loads, high reps, and functional moves, this type of workout expends more calories than traditional strength workouts in which you do multiple sets of an exercise with longer rests in between. Adding bursts of cardio exercise into the mix kicks up the

energy expenditure even higher. In a study published in the *Journal of Sports Medicine and Physical Fitness*, men and women who performed circuit workouts that combined resistance and aerobic exercise burned up to 24% more calories compared to traditional resistance-only circuits. The result is shorter workouts that burn more fat.

“ANYBODY, ANYTIME, ANYWHERE— THAT’S HOW WE DESCRIBE OPT.”

—SCOTT LUCETT

phase does not mean it's easy," Lucett points out. "It can actually get you to your goal faster." There are several reasons for this: There's less risk of injury; the workout format burns more calories than traditional routines; plus, it readies the body to handle more intensive calorie-combusting work in the subsequent Strength and Power phases.

“YOU’LL AVOID A PLATEAU”

Because of its integrative nature, the OPT model constantly confuses the body. It never knows what type of exercise or workout to expect next. The OPT model can be constantly adapted to a client's abilities. For example, in Phase 1, movements can progress from the floor with two legs to the floor with a single leg or onto a BOSU. This has positive fat-burning effects. Just as the body likes cheating, it also prefers expending as little energy as possible. That's why most people who depend on one activity for fitness and weight-control usually hit a plateau. After muscles learn a new movement, they become more efficient and expend fewer calories doing it. With the OPT program, continual reassessment of your clients will ensure that you mix up their plan before a plateau sets in.

"To get results, you have to change things up," explains Sutton. "The term 'muscle confusion' has been popularized lately, but that's just another name for periodization, which has been around a long time. The OPT model is based on two types of periodization. Linear is where you

progress from one level to the next, say four weeks each in the Stabilization then Strength then Power Levels. Undulating is where you vary workouts within the same week, say Stabilization on Monday, Strength on Wednesday, and Power on Friday. Both approaches confuse the body and help you avoid plateaus."

High-intensity, short-duration programming will also make your clients better fat burners to help ward off plateaus—and speed results. After just two weeks, women who did this type of training increased the rate at which they burned fat by 36%, according to a study from the University of Guelph in Ontario, Canada.

“YOU’LL BURN CALORIES AT REST”

Your clients can burn calories doing any type of workout, but the OPT program will turn up their metabolism even when they're not exercising. This happens in two ways: first, by kicking up their EPOC. Research shows that metabolism can remain elevated for 12 to 24 hours after a workout and burn up to about 127 extra calories (beyond those burned while exercising). That may not sound like a lot, but if your clients did this type of workout three times a week, they could lose about an extra six pounds a year.

They'll also burn more calories by building more lean body mass. Muscle is more metabolically active than fat, even at rest. The more muscle your clients have, the more calories they'll burn all day long, making weight loss easier. ■

MEET OUR EXPERTS



SCOTT LUCETT
NASM-CPT,
PES, CES

Lucett enjoys hiking, mountain biking, trail running, playing sports, and playing the drums.



BRIAN SUTTON
NASM-CPT,
PES, CES

Sutton enjoys a variety of outdoor and sporting activities including basketball, golf, and hiking.

BURN UP THE CIRCUIT

Help your clients ignite their fat-burning engines with our calorie-torching full-body workout.

Grab your stopwatch for this workout—the goal is to perform each exercise for 60 seconds with controlled movements. Some clients may need to start with 30 seconds initially, until their fitness levels increase.

THE SIMPLE (YET EFFECTIVE) PLAN

► **Keep moving.** After warming up, complete one round of all nine exercises with minimal rest between moves. Clients who are more fit should aim to complete two to three rounds, with a two-minute break between rounds.

► **Check your pace.** Exercises should be completed at a slow and controlled tempo, taking between four and seven seconds per repetition.

► **Round it out.** For exercise modifications, along with warm-up, flexibility, core, and balance activities to complete the workout, visit thetrainingedgemagazine.com.

WHAT'S BEHIND THE BURN?

The exercises in this workout focus on Phase 1: Stabilization Endurance of the OPT™ (Optimum Performance Training™) model. The goal of this phase, in addition to improving muscular endurance and joint stabilization, is to develop neuromuscular efficiency and postural control. Exercises performed in the Stabilization Endurance phase are typically done in a circuit with short rest periods and high repetitions.

High-intensity, short-duration programming has been found to have better results for fat burning and weight loss when compared to other program designs. With the inclusion of cardiovascular-based activities, this circuit will also keep the heart rate elevated, increasing fat oxidation and calorie expenditure even more.

Also important to note: **When clients perform Phase 1 programming, their bodies are recruiting more muscles to stabilize and coordinate movements** in these proprioceptively enriched activities, which can provide an increased caloric demand and further improve changes in body composition.

CUSTOMIZING THE CIRCUIT

► **Check against assessments.** Keep in mind that this group of exercises is intended as a good starting place. Exercise selections and intensities must be appropriate for each client's abilities and fitness level, which requires proper screening and evaluation prior to beginning an exercise program.

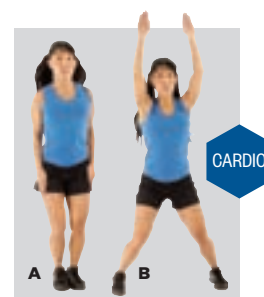
► **How often?** Work from your client's goals and progress. An initial recommendation for weight loss is to do a workout, such as this circuit, two to three times per week, in conjunction with cardiorespiratory training to further enhance caloric expenditure.

► **How long?** Keeping exercise repetition tempo slow and controlled further enhances the development of endurance and stabilization. A client may initially spend four weeks of training in Phase 1. Each client's abilities and progress are unique. Some may spend an extended amount of time in Phase 1, while others may quickly establish stability and endurance and be ready to move on sooner.

MOTIVATION THROUGHOUT PHASE 1

Clients (and sometimes even trainers) can get impatient to move beyond Phase 1. Remember that **Phase 1 lays the foundation for more demanding strength activities.** It's crucial for all individuals, no matter their goals, as it prepares them for the higher demands of training in phases 2 through 5. Without sufficient development of stabilization, clients are at an increased risk of injury. Also, don't forget to cycle back through this phase between periods of higher training intensities. This allows for proper recovery and maintenance of high levels of stability, ensuring optimal strength and power adaptations.

1 JUMPING JACKS

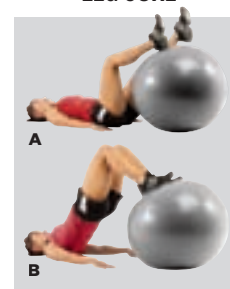


HOW TO DO IT

A Start with both legs together and arms at your sides.

B Jump and separate your feet a little wider than shoulder-width apart while lifting your arms high to the sides and then overhead. Bring your arms back down to your sides while quickly bringing your feet back together. Repeat.

6 STABILITY BALL LEG CURL



HOW TO DO IT

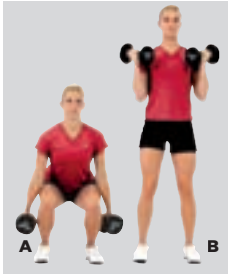
A Lying on your back, position your feet on top of the ball with your hands on the floor by your sides, palms down.

B Keeping your hips lifted off the floor, press your feet down into the ball and roll it toward your butt by bending your knees. Pause and slowly roll out by straightening your legs. Repeat.

For workout modifications and more resources, go to thetrainingedgemagazine.com.

HIGH-INTENSITY, SHORT-DURATION PROGRAMMING HAS BEEN FOUND TO HAVE BETTER RESULTS FOR FAT BURNING AND WEIGHT LOSS WHEN COMPARED TO OTHER PROGRAM DESIGNS.

2 SQUAT TO CURL

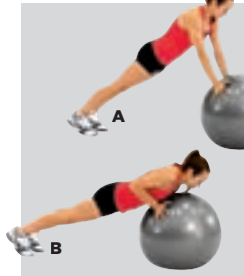


HOW TO DO IT

To start, hold a dumbbell in each hand at your sides (palms facing in) with your feet straight and shoulder-width apart.

- A** Squeeze your butt muscles and perform a three-quarter squat.
- B** Stand and curl the dumbbells to chest height. Lower the dumbbells, and return to start. Repeat.

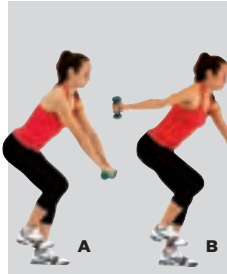
3 STABILITY PUSH-UPS



HOW TO DO IT

- A** Begin with your feet together, toes on the floor, and your hands on top of the ball, slightly wider than shoulder-width apart. Draw in your navel and contract your glutes.
- B** With your back flat, slowly lower your body, contracting and lowering the shoulder blades. Push back up to start. Repeat.

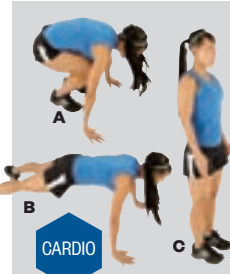
4 SINGLE-LEG COBRA



HOW TO DO IT

- A** Stand on one leg with dumbbells in front of your body, drawing in your navel while leaning forward slightly.
- B** Pull the arm opposite of the stance leg back and down (keep your thumb pointing up). Pause and return to the start position. Repeat. After 30 seconds switch sides.

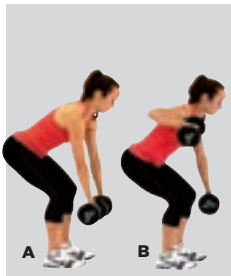
5 BURPEE



HOW TO DO IT

- A** Bend your knees to place your hands on the floor slightly wider than shoulder-width apart.
- B** Extend your legs behind you until your hips and knees are in line. Draw in your navel and squeeze your butt muscles.
- C** Quickly pull your knees to your chest; stand up straight. Repeat.

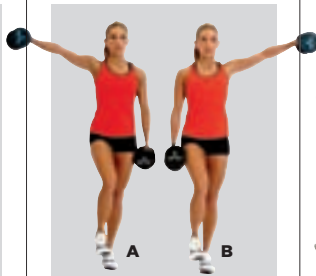
7 ALTERNATING DUMBBELL ROW



HOW TO DO IT

- A** Standing with your feet pointed ahead and a dumbbell in each hand, draw in your navel. Bend slightly at the waist and let your arms hang in front.
- B** Row one dumbbell, bringing your thumb toward your armpit while contracting your shoulder blades together. Return to start position, repeat with opposite arm.

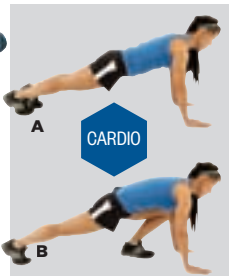
8 SINGLE-LEG LATERAL RAISE



HOW TO DO IT

- With dumbbells at your sides, stand on one leg with your foot pointing forward and your knee slightly bent.
- A** Draw in your navel and raise one arm out to shoulder level (palm down); avoid shoulder shrugging and back arching. Pause, then return to start.
- B** Repeat with other arm after 30 seconds. Switch legs after one set.

9 MOUNTAIN CLIMBERS



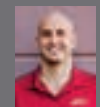
HOW TO DO IT

- A** Start in the standard push-up position, hands under the shoulders, body in a straight line, on the balls of your feet. Bring your right knee up toward your chest and touch your foot to the floor.
- B** Quickly switch legs by shooting your right leg back as you bring the left knee up toward your chest. Repeat.



Tip The goal is to perform each exercise for 60 seconds with controlled movements. Some clients may need to start with 30 seconds initially, until their fitness levels increase.

MEET OUR EXPERT



MIKE FANTGRASSI
NASM-CPT,
PES, CES

Fantgrassi is NASM's student success manager and has worked as a fitness manager, nutrition coach, personal trainer, and metabolic technician. He enjoys mountain biking, watching FSU football, and UFC.

A Powerful



Adventure racer
Dennis Wright
didn't think
he would ever
compete again.

Combination

THESE LETTERS—OPT + PES + CES—HELPED THIS ENDURANCE ATHLETE RECOVER FROM INJURY AND REACH EVEN GREATER GOALS. HERE'S HOW IT CAN WORK FOR YOUR CLIENTS.

BY BRIAN FISKE

PHOTOGRAPHY BY BRAD DECECCO

Dennis Wright loves fitness challenges. The 49-year-old construction-company owner from Germantown, Tenn., is a die-hard adventure racer. He's competed in multiple sports (including trail running, mountain biking, and paddling) in events like the 30-hour USARA Adventure Race National Championship, the 36-hour Berryman Adventure race, and a number of other 10- and 12-hour events. That's why, two years ago during a visit to New York City, hopping into a 5K run in Central Park didn't seem like a big deal.



BOOST YOUR SKILLS

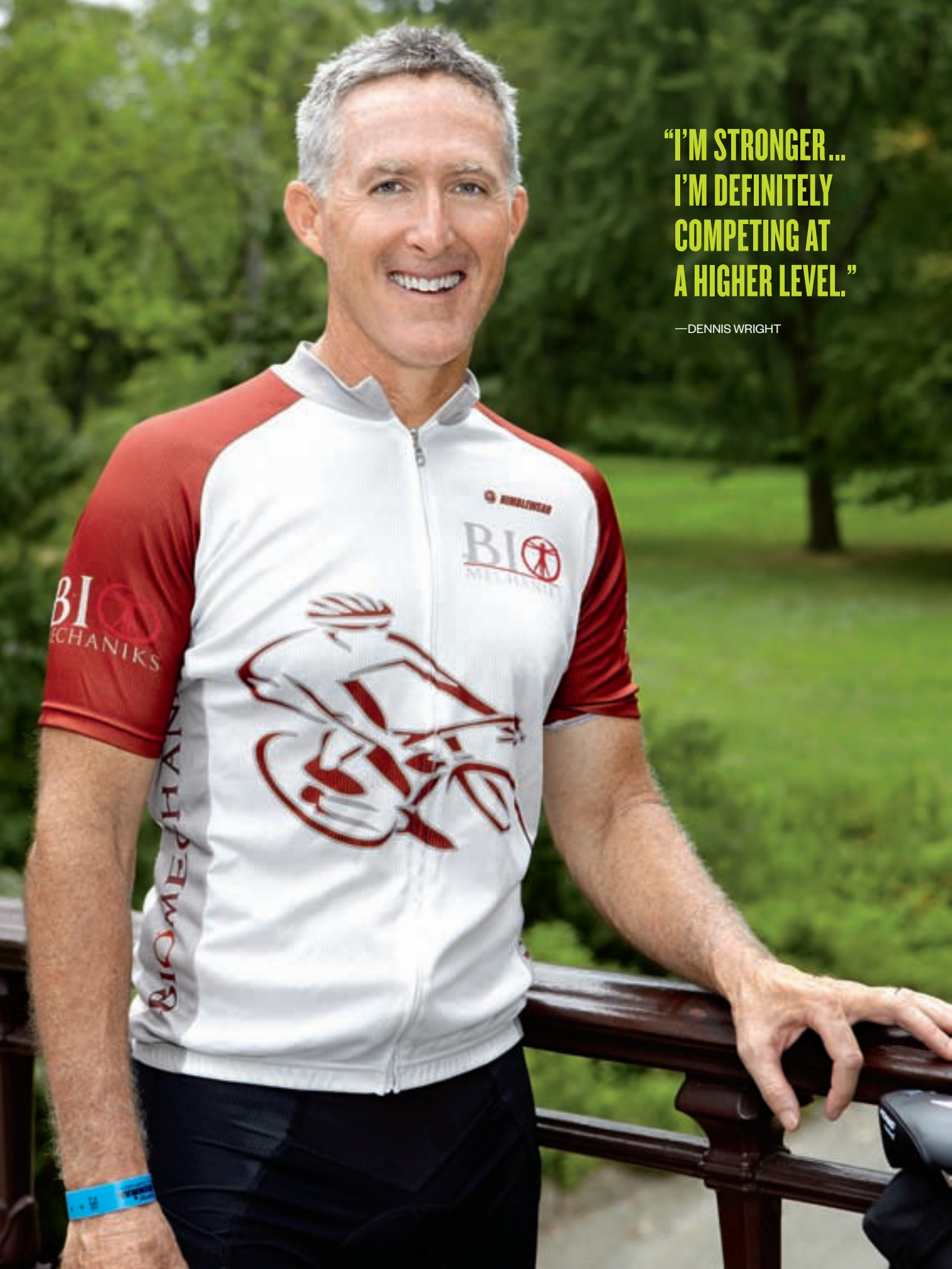
Earn Your PES Credential

NASM's Performance Enhancement Specialist (PES) credential helps personal trainers, athletic trainers, chiropractors, physical therapists, coaches, and other sports professionals work with athletes at all levels, from the secondary education and university tier to professional- and Olympic-level athletes. PES covers human

movement science, postural considerations, the elements of an integrated performance profile and assessment, integrated program design, and nutrition. It's based on scientifically valid evidence and applications that deliver the improvements athletes require. Learn more at nasm.org/train or by calling **888-403-8392**.

**“I’M STRONGER...
I’M DEFINITELY
COMPETING AT
A HIGHER LEVEL.”**

—DENNIS WRIGHT



But during the run, Wright experienced a small tear in his hamstring. At the time, he didn't think much about it. Unfortunately, it soon went from minor tweak to a chronic annoyance that turned any run into a painfully low-speed affair.

"It nagged me for two years," Wright says. "And it seemed like nobody could help the problem. I went to two different orthopedic doctors, had cortisone shots, worked with two different physical therapy groups. I even went to a chiropractor, and nobody could help. Then a friend said I should visit Yusuf Boyd, that he was a former trainer for the Memphis Grizzlies, and that he could fix me. I didn't believe it, but I went."


Now, less than a year after starting work with Boyd—an NASM Master Instructor and owner of BIOMechaniks in Germantown, Tenn.—not only does Wright say that his hamstring is fixed, but he's also performing at a whole new level. In fact, he's feeling so strong that he competed in the Ironman U.S. Championship in New York City. And it's all thanks to NASM's Optimum Performance Training™ (OPT™) model, Performance Enhancement Specialist (PES), and Corrective Exercise Specialist (CES) programming working hand in hand.

FINDING THE FIX

"When Dennis came to me, he was basically at the point where he was thinking he couldn't compete, and it was like death for him," says Boyd. "I convinced him to stop everything he was doing so that we could control the environment and find out what was really going on."

Boyd's initial assessment didn't focus solely on Wright's hamstring. Instead, he used the movement assessments that serve as a base for PES and CES programming, and they helped him find the problems that everyone else had overlooked.

"With the overhead squat assessment and the

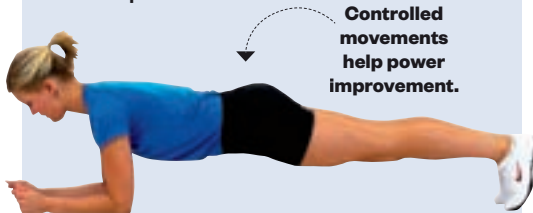


TRY THIS

Prone Iso Abs

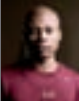
"This is far more effective at building strength and stabilization than just holding the position for the usual 45 to 60 seconds," Boyd explains.

HOW TO DO IT Lay face down on a mat on the floor. Move into a position similar to a push-up, but hold yourself up on your forearms and toes. Keep your body in a straight line from ears to toes with no sagging or bending. Hold for five seconds, then lower back to the floor for a brief second and return to start position.



single-leg squat assessment, I found that the range of motion in his left ankle was very limited. He had some other movement issues (an excessive forward lean, for one) that were probably the reason why he tore his hamstring," Boyd says. "Without PES training, I would have fallen along the same lines of all of the other experts Dennis had seen for his problem. But I was able to take a different approach, and it worked."

MEET OUR EXPERT



YUSUF BOYD
NASM-CPT,
CES, PES,
LAT, ATC, CKTP

Boyd is a former assistant athletic trainer with the NBA's Memphis Grizzlies and an eight-year veteran of the Army Reserve. He is avid about helping all kinds of people reach their fitness goals.



WHAT THE SCIENCE SAYS

Look at the Full Picture

"One of the great things about PES is that it's proven by research," Boyd says. NASM compiles data from studies, and its curriculum is frequently updated to reflect the latest findings. "A perfect example is all of the data that's come out recently on stretching," Boyd says. "The research states that stretching will decrease performance. This is true; however, most stop reading there and say that you should never stretch. Actually, it's OK to stretch if you have movement compensations that need to be corrected. It's just important to reactivate those muscles before activity to avoid the decrease in performance. It's not a matter of saying, 'I can't stretch anybody.' It's knowing when and where to use it appropriately. And that's where NASM's programs help."

Know this stretching myth.



“WE’RE MAKING PEOPLE BETTER... IT’S PHENOMENAL TO BE ABLE TO HELP PEOPLE ACHIEVE THEIR GOALS.”

—YUSUF BOYD, PES

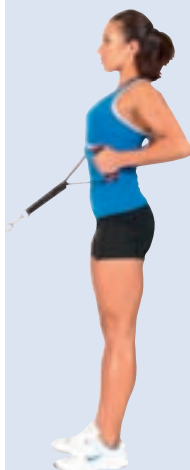
Boyd’s plan for Wright focused on a few key areas that involved a combination of corrective exercise and performance enhancement: increasing the range of motion in Wright’s ankles; building his core strength; promoting proper lumbo-pelvic-hip complex mobility; and breaking up the scar tissue that had formed on Wright’s hamstring so that the range of motion was improved there as well. From there, effective exercises, controlled movements, and commit-



TRY THIS

Squat to Row

“This exercise promotes range of motion in the ankles and hips, upper body and glute strength, and proper posture,” Boyd says.



HOW TO DO IT Attach universal grips (straps with handles) to the low pulley of a cable station; or use resistance tubing that’s anchored to the floor. (Start with a light weight until you master the move.)

Facing the weight stack or anchor point, grab the ends of the tubing or machine handles with a neutral grip (palms facing each other) and take a few

steps back. Keep your back straight and your arms extended in front of you and squat until your thighs are at least parallel to the floor, keeping your knees from going in front of your toes. Keep your heels planted on the floor. (Ideally, your upper body and shins will be along parallel lines to each other.)

Stand as you pull the handles to the bottom of your rib cage, keeping your elbows in and squeezing your shoulder blades together. Extend your arms as you lower back into the squat. Repeat.

ment to the program powered Wright’s performance improvements. (Two exercises that were particularly beneficial for Wright in both the Stabilization and Strength Endurance phases are highlighted, at right and on page 25.)

“What you get with PES training is a better understanding of how to evaluate and progress an athlete based on how they move,” Boyd says. “Along with helping him overcome his injury, PES helped me improve his run and bike times, and helped him get stronger by keeping his endurance level up so that his body didn’t break down and fail during these long adventure races.”

In fact, Boyd believes if Wright had been following an OPT-based training model from the start, he could have avoided his hamstring injury. “Most endurance activities lead to overuse injuries because of their repetitive nature,” Boyd says. “It’s very important to factor this into the training plan to avoid these injuries. If you don’t, expect them to arise.”

TAKING IT TO THE NEXT LEVEL

During those first weeks of working with Boyd, Wright still figured that his injury was something he would live with for the rest of his life.

“Everything I read from other runners basically said this was chronic, that you could reduce the pain and inflammation but it wasn’t going to go away. And I was pretty much resolved that that was going to be the case,” Wright says.

But as the weeks progressed and the workouts intensified, the hamstring issue started going away. And now? “I don’t even think about my hamstring anymore,” Wright says. “Even so, as long as I train and race, I’m going to continue to work out with Yusuf. Thanks to him, I’m stronger, and I’m running better and faster. I’m definitely competing at a higher level.”

With Boyd’s help, Wright has been able to reach goals for better performance and less risk of injury in endurance events. The targets for Wright were to increase hip mobility and stability, and increase cardiovascular endurance.

According to Boyd, Wright’s progress is due to the specific training provided by PES, and that’s ultimately what makes his work as a NASM trainer so rewarding. “I can’t explain how good of a feeling I get from knowing that I helped an individual achieve what they were trying to achieve,” Boyd says. “PES and CES are our advantages. We’re making people better. It’s phenomenal to be able to help people achieve their goals.” ■

YOUR BEST FUEL

For endurance events, nutrition is key and timing is everything.

Every endurance athlete needs two types of equipment. There's the external equipment, such as apparel and sport-specific gear. Then there's the internal kind—food and fluid.

But just as important as what you choose for nutrition and hydration is the timing, says Leslie J. Bonci, director of sports nutrition at the UPMC Center for Sports Medicine in Pittsburgh and author of *Sports Nutrition for Coaches*.

To make reaching goals easier (for you or your clients), try this plan.

1 BEFORE THE EVENT

Many athletes believe in carb-loading, but Bonci disagrees with this philosophy. "Most people don't carb load, they carb explode," she says. Instead, she recommends eating only one additional carbohydrate serving per meal—such as a small piece of fruit, a slice of bread, or a half-cup of rice—starting three days before a race. "Small amounts of carbohydrates act like a safety net in the gut, helping the muscles store more glycogen and hold onto liquid better," she says. The night before an event, add a bonus carbohydrate—such as a bowl of cereal or a yogurt parfait.

One additional point to consider: How much do you sweat? If you're a heavy sweater, add a little more salt to meals. For instance, eat salted crackers or cook rice in broth.

Regarding hydration, women need a baseline of 90 ounces of fluid a day while men need 125 ounces daily. Yet most athletes don't need to slug extra fluid during pre-race



YOGURT is a perfect snack for the night before an event.

preparations. Not only will the additional carbohydrate servings help hold water, too much water could interrupt sleep.

2 DURING THE EVENT

Generally, athletes should eat a meal two to three hours before the event, even if you have to get up, eat, and then return to bed. Aim for 100 grams of carbohydrates, 15 to 20 grams of protein, 10 to 20 grams of fat, and 20 ounces of liquid (preferably water). Heavy sweaters should again add some sodium.

One hour before, athletes should swig another 20 ounces of liquid and consume 30 to 50 grams of carbohydrates.

Then for the first hour of the event, athletes should stick with

GINGER turns out to be a delicious recovery secret to prevent muscle soreness.



water. How much you'll need, though, varies. Knowing your sweat rate can help.

After that first hour, the focus should switch to carbohydrates, but how much again depends on individual needs. Generally, athletes require anywhere from 30 to 90 grams of carbohydrates per hour (most are at the lower end of this spectrum). Whether that comes via sports drinks or gels is up to the athlete. Heavy sweaters should include sodium.

3 AFTER THE EVENT

Within the first 15 to 30 minutes of finishing, consume a recovery snack with about 50 grams of carbohydrates and 12 to 15 grams of protein. Good choices include chocolate milk, yogurt, or a bowl of cereal. Also, focus on rehydrating throughout the day, consuming 24 ounces of liquid per pound of body weight lost.

One surprising post-event recovery food: ginger. "Research suggests that ginger works as an anti-inflammatory to prevent muscle soreness," Bonci says. Mix minced ginger in a smoothie, add candied ginger pieces to trail mix, or steep tea with ginger.

4 ALL THE TIME

While carbohydrates are the main focus leading up to an event, endurance athletes shouldn't overlook daily protein needs (many are guilty of eating too little). Protein is crucial for increasing the number of oxygen-carrying enzymes in the blood, forming red blood cells, and replacing the body's protein stores, Bonci says. In general, endurance athletes should consume between 0.6 and 0.7 grams of protein per pound of body weight each day.

—Karen Asp

MEET OUR EXPERT



LESLIE J. BONCI
MPH, RD,
CSSD, LDN

Bonci loves wasabi-flavored anything.

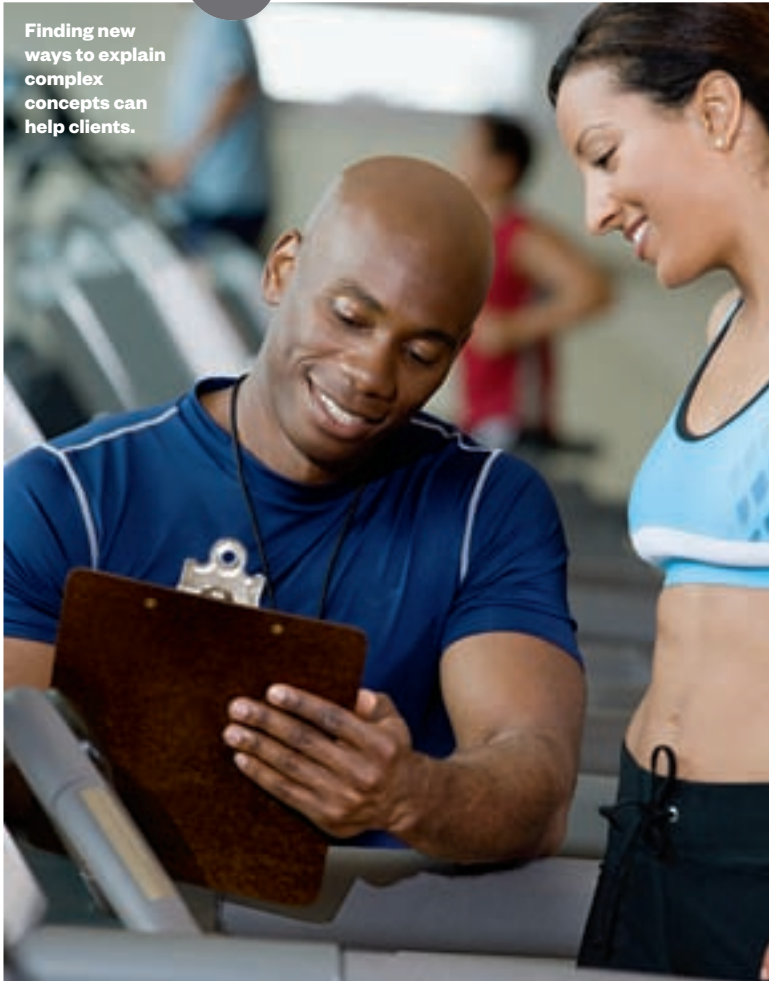
Her snack motto: "Bring on the heat instead of the sweet."

Q

BREAK IT DOWN

HOW CAN I EXPLAIN CORRECTIVE EXERCISE TO A NEW CLIENT?

Finding new ways to explain complex concepts can help clients.



A Think of the body as a home. If you have all the house lights on, your electric bill is going to show that the energy you're using is significantly higher than if you sat around in the dark all the time.

As an NASM Corrective Exercise Specialist (CES), what I do is determine where your muscle imbalances are (most of us have them) and pinpoint which muscles are not being utilized as they should (lights off, no energy output).

Through isolated strengthening and dynamic movements, I will turn that muscle on (lights on, use of energy). Ultimately, I want every muscle in your body "turned on" with no compensations.

Just like the lights in a house, the more muscles you have working properly, the more energy your body will require. The more energy you're using, the easier it will be to achieve your body-fat goals.

As for building muscle and increasing performance, corrective techniques work in a similar way. For an athlete, once you get all the muscles activated properly (minimal to no imbalances), you will become more explosive and powerful, with quicker reaction times and improved speed, simply because all of your muscles are working together and each muscle is doing what it was designed to do.



EXPERT: TAYLOR CARPENTER, NASM-CPT, CES, is based in Charlotte, N.C., where he grew up surrounded by baseball fields, basketball courts, tennis courts, and biking trails that inspired his love of fitness.

IMAGE SOURCE (TRAINER WITH CLIENT)

Q

FITNESS MOTIVATION

What's the best way to motivate a client who's hit a plateau—no longer losing weight or improving strength or speed?

A One of the best tools a trainer has is the ability to listen. First, reevaluate goals—adjust some initial goals and add new (appropriate) challenges based on current assessments. Try to discover what motivates a particular client most (maybe losing weight, health issues,

or improving performance). You'll also need to uncover any barriers keeping a client from making good food choices or exercising on his or her own time. Consider treating a client who has hit a plateau like a new client to help you view the person and situation with a critical

Q **NUTRITION BOOST** Are there any watch-outs when using quick-energy, high-carbohydrate gels, blocks, and “beans” in training and competition?

A Fuel is critical, but hydration always comes first. Balance refueling with rehydration (seven to 10 ounces of water or another fluid every 15 minutes). It’s important not to let these or any fuels impede fluid absorption into the body. Drinks containing up to a 4% to 8% carbohydrate solution will not impede water uptake. (Powerade and Gatorade are around 5.8%). But gels, blocks, and “beans” are very concentrated, containing 20% to more than 50% carbohydrates (for one, G Series Fit 01 Prime bites). Athletes should know that these need to be consumed with water. Some favor taking a gel alone, then following it up with fluid 15 minutes later. Although not a bad strategy, it may slow the rate at which the fluid leaves the stomach. And while these products do contain some electrolytes, the ratios of sodium to potassium are not optimal (for better taste), thus when coupled with dehydration may still lead to “hill illnesses” like muscle cramping.

Timing is also a concern. Not eating for a few hours before you exercise will have detrimental effects upon performance. These convenient packs can sustain performance, but you cannot neglect the need to pre-fuel. Pre-fueling will

top off your reserves and help you maintain effective blood sugar levels.

Don’t try these products for the first time on an event day. Some are higher in fructose, which is absorbed more slowly than glucose. Its presence in the gastrointestinal tract during the stress of exercise can cause diarrhea or other gastro distress. Test your choices beforehand to know how you’ll react.



EXPERT: FABIO COMANA, NASM-OPT, CES, PES, director of continuing education for NASM, pre-fuels with whey isolate chocolate shakes for resistance training, adding half a banana if there’s a cardio/circuit element.

Make sure clients know what to pair with concentrated carb sources.



EXPERT: CHERILYN HULTQUIST, PhD, assistant professor in the department of exercise science and sport management at Kennesaw State University in Kennesaw, Ga., finds her motivation in teaching group exercise classes. Knowing members are counting on her helps her maintain high energy.

eye and be sure that the plateau is not due to a stale training routine.

One thing we often forget: Hitting a plateau means that some uphill progress has been made. So help your client celebrate those accomplishments as you work together to make adjustments.

Q **A COMPETITIVE EDGE** How does breathing affect performance?

A Airflow is designed to come in through the nose, where the air can be warmed, humidified, and filtered before it goes into the lungs. Pressure receptors in the nasal cavity sense airflow and send feedback to the brain that everything is OK. Your brain then allows your nervous system to operate the rational parasympathetic system, rather than the reactive sympathetic system. Your parasympathetic nervous system aids in creating regular breathing patterns, normal heart rate, and rational thought. While this won’t help if a lion is attacking, it is a more effective system to govern your daily thought processes and actions.

Physical performance can be affected as well. When we “stress” (mouth) breathe, our reactive sympathetic nervous system is in charge. That can make us play “scared” or “tight.” When I was a live-in intern at the Olympic Training Center the year prior to the Sydney Olympics, breathing exercises were part of every athlete’s pre-competition ritual. On your next “recovery” run, bike session, or other workout, try only breathing in and out through your nose. Of course, with high-intensity work, you will most likely need to breathe in through your nose and out through your mouth. The harder you work, the greater the volume of CO₂ you have to expel quickly.



EXPERT: BRETT KLIKA, CSCS, director of athletics at Fitness Quest 10 in San Diego, has found that a focus on proper breathing has helped him handle higher intensity cardio and weight training and recover more quickly.



To help encourage nose breathing, take a big gulp of water and keep it in your mouth as long as you can.

? **HAVE A QUESTION YOU'D LIKE US TO COVER?**
Send it to us at thetrainingedge@nasm.org.



A measured, realistic approach works best.

Great Expectations

Get ideas for keeping it real *and* keeping clients happy.

One of the more challenging aspects of the trainer-client relationship is making sure clients' expectations and goals match what's realistic. "You will not believe how many times clients have asked about increasing height," says David Van Daff, NASM-CPT, PES, CES, NASM's vice president of public affairs. "But a personal trainer needs to provide a pathway for clients to reach realistic goals."

Here, Van Daff shares how trainers can address three common client expectations:

EXPECTATION Extreme, fast weight loss

Clients may see weight loss on TV shows like *The Biggest Loser* and believe a trainer will help them lose 30 pounds in a month.

REALITY Safe, healthy weight loss is gradual and should be about one to two pounds a week. When a client wants to lose a lot of weight, don't say it can't be done. Instead, offer a road map to do it safely. Stress that the best way to ensure the weight stays off is to lose it gradually.

EXPECTATION Spot reducing

Frequently, clients ask trainers to help reduce the amount of flab on specific body parts such as the belly, hips, and thighs.

REALITY Explain that the body doesn't operate that way. Stick to measurable goals, such as body-fat percentage, resting heart rate, weight, or inches lost, so that a client can gauge progress.

EXPECTATION In-the-gym relationship

Some clients think that trainers train them for one or a few sessions a week and then leave them to do everything else on their own.

REALITY Clients may not know that trainers offer exercise, nutrition, and lifestyle programs that cover both in *and* out of the gym. Trainers keep clients motivated and encouraged beyond their sessions. And if a client's sessions are coming up for renewal, be sure to review the benchmarks that have been achieved so far and remind the client about previous—perhaps not-so-successful—ways he or she has tried achieving and maintaining fitness-related goals. Think of selling a package of services instead of just workout sessions.

KEEP IN TOUCH

Fitness Spending Trends

Recognize areas of opportunity in fitness training.

Those participating in fitness-related activities are currently planning to spend the same or a little more in the coming months, according to the Physical Activity Council's *2012 Participation Report*.

The report also found that the number of inactive Americans rose to 68.2 million in 2011, an increase of about 1 million since 2010. According to the inactive, the activities most likely to get them off the couch include swimming and working out with weights and machines.

The Fit 5

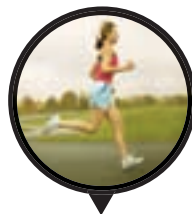
According to the Sporting Goods Manufacturers Association's *2012 Tracking the Fitness Movement Report*, the five most popular fitness activities in America are:



WALKING



TREADMILLS



RUNNING/JOGGING



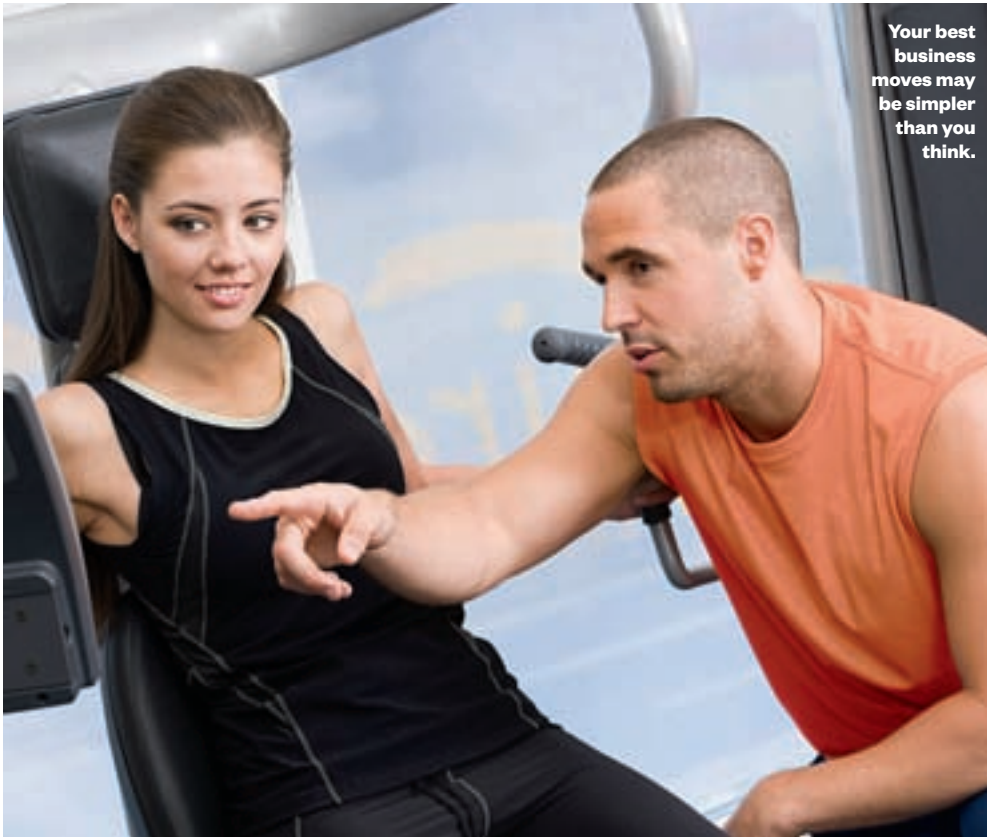
DUMBBELLS



WEIGHT MACHINES

NEW FROM NASM

Your best business moves may be simpler than you think.



A HEALTHY BUSINESS

MARKET YOURSELF: 5 SUREFIRE WAYS

Your best clients may be people you don't know yet. The only way to connect with those potential clients is to market yourself. Here, Barry Smith, NASM-CPT, PES, CES, Texas and Oklahoma regional vice president of My Fit Foods, shares his best marketing tips:

- 1 REINFORCE RESULTS.** At least once a month, evaluate current clients' goals and show them how they've progressed. Acknowledging results will lead to referrals. (Be ready with business cards they can share.)
- 2 ELECT YOURSELF MAYOR.** Spend some time each day walking the gym floor and introducing yourself and offering help. When you're friendly and available, you'll establish relationships that can lead to new clients.
- 3 TUNE INTO YOUTUBE.** Make videos of your workouts in different situations, from talking one-on-one with clients to leading a large, high-energy group. Potential clients want a glimpse of what their trainer will be like.
- 4 COLLECT CLIENT TESTIMONIALS.** One of your best marketing tools is before-and-after photos of clients along with recommendations. With permission, you could also post these photos and testimonials on Facebook or the gym's website.
- 5 ALWAYS BE AUDITIONING.** While you're in the gym working with a client, think of it like you're performing for your next clients—because you are. When you craft interesting workouts and get results, potential clients will notice.

KETTLEBELL CLASSES

This past summer, NASM partnered with KettleBell Concepts to teach trainers how to deliver kettlebell programs to their clients. There were sessions throughout the country. To learn about upcoming events near you, check out nasm.org/locator.aspx.

WOMEN'S FITNESS SPECIALIST

Connect to the growing women's fitness market, from teenagers to seniors. The course includes a manual, nutrition information, exercise libraries, and downloadable programming. \$299; nasm.org/wfs; 888-809-7395

GOLF FITNESS SPECIALIST

Train clients to improve their golf performance by increasing strength, endurance, and flexibility. You'll also learn to recognize and prevent common golf injuries. The course includes a program manual, exercise library, and online presentations. \$249; nasm.org/gfs; 888-894-5015

Don't Forget Your CEUs

To celebrate the launch of *The Training Edge*, we are offering 0.2 CEUs from this issue for **\$15**—more than half off!

HURRY!

Offer expires 12/31/12
Follow the three simple steps on page 2.

TREND LINE

74

THE PERCENTAGE OF BABY BOOMERS

ages 50 to 55 who say that a regular fitness routine is important to their mental well-being. Food for thought when designing your next marketing program or group training session.

SOURCE: UNITED HEALTHCARE

Natural Menopause Relief



Women suffering from menopause-induced hot flashes or night sweats may be able to reduce or eliminate them by losing at least 10 pounds or 10% of their body weight. In the research, the women followed a diet low in fat and high in whole grains, fruits, and vegetables.

SOURCE: KAISER PERMANENTE DIVISION OF RESEARCH

Shed the Baby Weight

Women who exercise at low or moderate levels during pregnancy are more likely to return to prepregnancy weight within eight weeks of giving birth than women who skip the gym or trainer.

SOURCE: MEDICINE & SCIENCE IN SPORTS & EXERCISE



24

The percentage that employment of fitness trainers and instructors is expected to grow between 2010 and 2020. It's a great time to invest in continuing education and take your fitness career to the next level.

SOURCE: U.S. DEPARTMENT OF LABOR, OCCUPATIONAL OUTLOOK HANDBOOK, 2012-13 EDITION

5.6

The number of years by which ex-smokers boosted life expectancy when they added 30 minutes of moderate exercise to their daily routines.

SOURCE: WORLD HEART FEDERATION



EXERCISE

A CURE FOR THE COMMON COLD



People who exercised for eight weeks reduced the incidence, duration, or severity of acute respiratory infections by 30% to 40%.

SOURCE: UNIVERSITY OF WISCONSIN SCHOOL OF MEDICINE AND PUBLIC HEALTH



CAN YOU MAKE UP FOR PAST MISTAKES?

With the NASM-CES, you will.

Correct their bad habits. Prevent injuries. Improve their health.

There's a ton of bad information out there. And poorly trained trainers. So with some new clients, you'll need to erase and reshape years of bad behavior. Or help them get back on the road to health, correcting muscle weakness or injury. That's why you need our **Corrective Exercise Specialist** credential. It will give you the skills and tools necessary to develop injury-prevention programs—and help those who may have already made past mistakes learn the right way. The NASM way.

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