

ACE[®] Certifiednews[®]

\$5.00

Volume 16

Issue 3

April/May 2010

AMERICAN COUNCIL ON EXERCISE

A NON-PROFIT ORGANIZATION



AMERICAN COUNCIL ON EXERCISE 

Celebrating 25 Years of Excellence

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GREEN YOUR FITNESS BUSINESS

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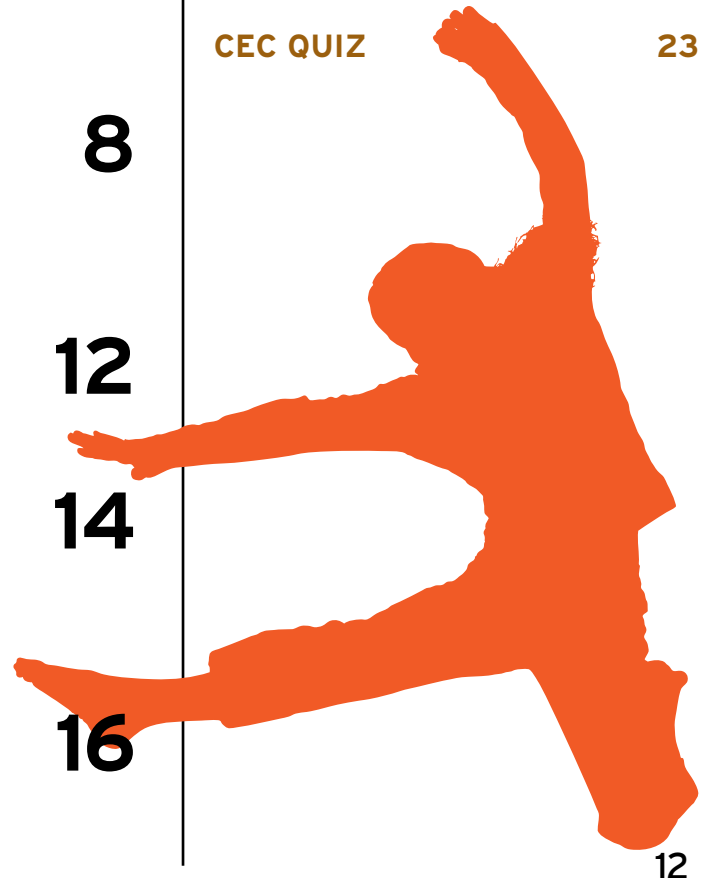
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ACE CERTIFIED NEWS

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CELEBRATING 25 Years OF ACE

COVER
STORY

BY
CARRIE
MYERS

THIS YEAR MARKS THE 25TH ANNIVERSARY OF THE FOUNDING OF THE AMERICAN COUNCIL ON EXERCISE. TO CELEBRATE THIS MILESTONE, WE'RE TAKING A LOOK BACK AT OUR HISTORY, RECOGNIZING SOME OF THE INCREDIBLE PEOPLE WHO HAVE BEEN RESPONSIBLE FOR OUR DEVELOPMENT AND GROWTH, AND LOOKING FORWARD TO THE NEXT 25 YEARS.

In the Beginning

The American Council on Exercise made its official debut in 1985 under the name "IDEA Foundation." Its focus was on certification, research and consumer education. There were other organizations educating fitness professionals, explains Peter Davis, president and CEO of IDEA Health & Fitness Association, but none of them carried national credibility at the time. They were recognized in their respective states, but not necessarily outside their borders. And many of those were educating, but not certifying, professionals.

CARRIE MYERS has a bachelor's degree in exercise science and has been a freelance writer for more than 11 years. She is the author of the award-winning book, *Squeezing Your Size 14 Self into a Size 6 World: A Real Woman's Guide to Food, Fitness, and Self-Acceptance*, and presents, teaches and trains in N.H. and Vt.

Peter and his wife, Kathie, who now serves as IDEA's executive director, were already immersed in the fitness industry as the founders of IDEA—International Dance-Exercise Association—a membership organization for fitness professionals founded in 1982. This was a time when aerobics were in full swing and it was becoming obvious that group fitness was here to stay. As the media was latching onto negative information regarding dance-exercise injuries, Peter and Kathie were realizing the need for some standardization in the industry. They founded IDEA's sister organization, the IDEA Foundation, in 1985, brought Sheryl Marks Brown on as executive director—Peter and Kathie acted as president and vice president, respectively—and began gathering an industry think-tank to generate ideas to standardize guidelines for aerobics instructors. It was no easy task.

Continued on page 4

To our Family of ACE-certified Fitness Professionals



It is no surprise that 2010 is turning out to be a banner year for the American Council on Exercise. We are marking our 25th anniversary and excited to have you join us in the celebration. In this issue of *ACE Certified News*, we take a look back at our history and evolution, and look ahead to some of the innovative programs and projects we're working on for the future.

One of the things I'm most proud of is how ACE has always taken the lead in our industry—from developing new certifications to utilizing new technologies—to give you the tools and knowledge you need to thrive as an ACE-certified Fitness Professional. We also remain committed to finding new and more effective ways to enhance and increase the amount of information and education we offer you every month. With that goal in mind, ACE is working with IDEA to leverage each organization's highest quality services and offerings. Through this initiative, ACE will begin offering all ACE-certified Professionals a co-branded edition of the award-winning *IDEA Fitness Journal* in July,

which is published 10 times per year and features great opportunities to earn continuing education credits (CECs).

Additionally, to take advantage of the incredible opportunities offered by Web-based technologies, in August 2010 we will begin publishing *ACE Certified News* online. You will continue to receive the same high-quality information and education that you've come to expect from ACE—and still earn CECs—but with added features like videos and exercise demonstrations that will enhance your learning experience. We also are doubling the number of issues we publish and you will now receive *ACE Certified News* every month!

So there is no interruption in the delivery of your publications, we want to be sure we have your correct mailing addresses—both physical and electronic. Simply log into your ACE account at www.acefitness.org to review your information. And while you're there, take a minute to complete your online profile listing, viewed by potential clients nationwide.

We're so excited to have you join in this year's celebration and we look forward to sharing many more in the years to come.

**Scott Goudeseune, President and CEO,
American Council on Exercise**

"You have to realize that we were bringing together 50 different organizations, each with their own ideas of what should be included and what was important," notes Peter. "It was quite a feat to come up with that first exam."

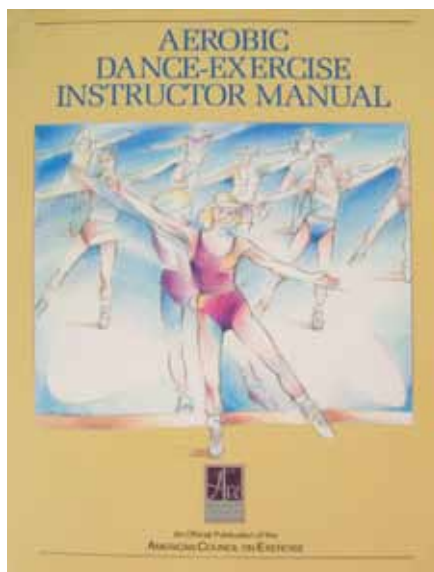
Among this group were nationally renowned experts in the field, including Dr. Kenneth Cooper (Cooper Institute), Jackie Sorenson (aerobic-dancing pioneer) and Judi Sheppard Missett (Jazzercise). Because it was crucial for the exam to be as credible as possible, the group worked with ETS—Educational Testing Services—the same company that devises the SATs.

It was important, explains Peter, that those within the industry, as well as the general public, realize we were taking this effort seriously, as this was a pioneering endeavor to begin overhauling an industry that was taking off in the consumer market, but had no real foundation within itself.

Within one year, 3,000 people had taken the dance-exercise instructor exam, with 66 percent passing on the first try. Where previously there had been no national standards or exam, there were now about 2,000 qualified fitness professionals, giving consumers more confidence that classes were both

Since one of the objectives of the IDEA Foundation was to reach the consumer market, what better way to do that than land a feature in one of the top national consumer women's magazines? *SHAPE* magazine, helmed by future ACE Board of Directors member Barbara Harris, produced a piece discussing how the industry was coming together, further increasing the public's awareness and confidence.

safe and effective. Those passing this initial exam carried the honor of being "Gold certified," as they had only a rough draft of the aerobics instructor manual from which to study. Officially published in 1987, the *Aerobic Dance-Exercise Instructor Manual* soon became the "bible of fitness" for instructors. To ensure professionals were staying up-to-date on the latest information, a continuing-education program was instituted, requiring certified instructors to complete a minimum number of continuing education credits every two years to renew their certification.



The Next Phase

In keeping with the stated objectives of promoting research initiatives and consumer education, the IDEA Foundation awarded its first research grant of \$5,000 to the San Diego Center for Children in 1988 to study the effects of aerobics/dance exercise on children with behavioral and emotional issues. And later that year they teamed up with *USA Today* to sponsor the first "Summer Meltdown Fitness Hotline." The hotline, manned by ACE-certified Fitness

Professionals, received more than 3,000 calls in just 15 hours. People were hungry for accurate health and fitness information. The race was on!

The '90s were setting up to be a huge decade for the organization, starting with its name-change. There was often confusion amongst both consumers and professionals regarding IDEA and IDEA Foundation, unsure of the purpose of either or whether they were even separate organizations. So the board made the decision to institute a name-change. This gave birth to the American Council on Exercise or ACE. To further reduce the confusion, Peter and Kathie stepped down from the board to focus all their energies on IDEA.

As testament to these initial efforts, ACE is now the world's largest nonprofit fitness-certifying organization, with more than 50,000 currently certified professionals holding more than 55,000 ACE certifications in more than 80 countries.

Following ACE's success in creating standards for group exercise—by 1990 more than 30,000 professionals had taken the ACE Aerobic Instructor Exam—it was now time to turn the focus to one-on-one training. Of the more than 600 candidates who sat for that first ACE Personal Trainer Exam, 72 percent passed to become the first ACE-certified Personal Trainers.

The era of personal training had begun! With this came more specialized training focusing on specific groups. Here are a few highlights from what became a decade of substantial growth for the American Council on Exercise:

1991: The *ACE Personal Trainer Manual* was published with Reebok funding publish-

"ACE exhibits integrity for what they do and is committed to elevating their certified professionals to a high level. [They also provide] a much-needed service for consumers. . ."

—Chris Freytag,
Current member, ACE Board of Directors

ing costs. ACE also began publishing the *ACE Insider*, a newsletter that was distributed to 28,000 certified instructors and industry leaders.

1992: A specialty-recognition program was established to acknowledge instructors who had earned continuing education credits in specific fitness categories, such as senior exercise or prenatal fitness.

1993: ACE reached out to America's youth with Energy²Burn. This initial pilot program was conducted in schools throughout Southern California. ACE-certified instructors volunteered to go into fourth-grade classrooms once a week for five weeks. The purpose: To teach kids fitness basics and demonstrate a simple 15-minute exercise routine.

1994: A toll-free hotline, service announcements, a nationally syndicated column and free Fit Facts sheets were used to further promote physical activity to the general public. The specific message: Any and all kinds of physical activity counts. This push in the public sector continued to elevate personal training, and the number of personal training candidates exceeded those of group fitness instructors for the first time. ACE certified its 10,000th personal trainer during this year, and Executive Director Sheryl Marks Brown was named one of the nation's top 10 healthy American fitness leaders by the U.S. Junior Chamber of Commerce.

1995: ACE was the leader in providing the industry's first certification for Lifestyle & Weight Management Consultants. Two new publications were launched: *ACE Certified News*, an exclusive benefit for ACE-certified Professionals, and *ACE FitnessMatters*, which covered the latest in research, equipment reviews and trends, and was published for both consumer and professional readers.

1996: The *ACE Lifestyle & Weight Management Consultant Manual* was released, blending the sciences of nutrition, exercise and psychology. ACE began studying the safety and effectiveness of fitness products and services, and created a national public relations platform campaign to communicate the results of the studies to the public.

1997: Recognizing the need to help fitness professionals move beyond just being certified and to help them build successful careers and accomplish long-term goals, the

ACE Academy was established. As a result of ACE's commissioned studies, the *Wall Street Journal* designated ACE as the nation's "Workout Watchdog" for serving as a key consumer advocate for fitness products and programs. And for the first time in ACE history, more personal trainers than group fitness instructors were currently certified.

1998: *ACE FitnessMatters* received a new look, transitioning from a newsletter to a new magazine format, but continued to maintain its non-biased status by not accepting outside advertising. ACE also garnered an unprecedented amount of media coverage on a wide range of studies and surveys, including the air glider and the most common exercise mistakes. Having covered children's fitness, ACE's attention now turned to the other end of the spectrum—senior fitness. *Exercise for Older Adults: ACE's Guide for Fitness Professionals* was released to guide fitness professionals on special exercise considerations for a growing older-adult population.

1999: Revisiting America's youth health crisis, ACE's then executive director, Ken Germano, introduced Operation FitKids (OFK), a program dedicated to improving the health and fitness of America's youth through the use of commercial fitness equipment donated by equipment manufacturers and health clubs. Working with local high schools, organizations and youth groups, Operation FitKids created fitness centers, at minimal cost, to provide adolescents and teenagers with greater access to comprehensive physical fitness programs through educational materials, training, mentoring and internships for exemplary participants. To help potential clients find ACE-certified Professionals in their area, ACE introduced its online Professional Registry. And the first ACE Clinical Exercise Specialist Certification Exam was administered, further expanding the knowledge and skills of professionals working with special populations and post-rehab clients.

A New Millennium

Despite unrest during the first few years of the new millennium, including Y2K, 9/11, and the Second Gulf War, ACE continued to plow ahead as a leader in the fitness industry. And the time had come for ACE to establish a more permanent base for its staff and educational activities.

"In February of 2000, the ACE Board of Directors approved a plan submitted by ACE senior staff to begin the search for a

new home for the American Council on Exercise," explains Scott Goudeseune, current ACE president and CEO. "Our lease at the rented facility was coming to an end and it was clear that the organization was at the beginning of a growth period that would require a much larger space."

With a desire to maintain their employee base and remain in one of America's most health-conscious cities, ACE representatives scoured San Diego for a new site. "In searching for a facility, our top priority was to find a location that would allow us to create a work environment that promoted employee interaction and wellbeing, so it was important that the facility contained open-air workspace and adequate room for a state-of-the-art fitness facility for employee use and training workshops," says Goudeseune.

When a suitable location couldn't be found, explains Goudeseune, "we decided to build from the ground up, and moved into the existing facility in December 2001."



Besides a new physical structure, ACE was also due for a Web site overhaul (see sidebar, page 6). Where one of the primary purposes of the initial 1996 Web site was to simply create an online presence, the goal of each redesign since then has been to provide more tools and greater interaction for both fitness pros and consumers. Just this decade alone has seen four major rebuilds.

Another goal of ACE was to create collaborations with other organizations that would help them further their mission outside the industry.

"Over the past decade, we've formed collaborative relationships with a variety of professional organizations," explains Cedric X. Bryant, Ph.D., chief science officer for ACE, "all of which share our mission of enriching quality of life through safe and effective activity. Such collaborations have helped expand our reach and our impact,

Continued on page 6

both within and outside the fitness industry, creating many new opportunities for the professional growth and development of ACE-certified Professionals.”

One of the first of these partnerships was with the International Association of Fire Fighters (IAFF). “Our collaborative relationship with the International Association of Fire Fighters began in 2000,” recounts Goudeseune. “The IAFF approached ACE about creating a credential for the fire service that would enable members of the rank and file to work with their fire service peers to develop and maintain the peak conditioning needed to perform the rigorous duties of their job.”



“The IAFF approached ACE about creating a credential for the fire service that would enable members of the rank and file to work with their fire service peers to develop and maintain the peak conditioning needed to perform the rigorous duties of their job.”

This led to ACE developing a Peer Fitness Trainer Certification (PFT), which was launched in 2002. Today, more than 4,000 fire service men and women have become ACE Peer Fitness Trainers.

In 2003, ACE began a partnership with the American Heart Association (AHA) that positioned ACE as the then-exclusive provider of Heartsaver First Aid, CPR and Automatic External Defibrillator (AED) training within the fitness industry. Holding a first-aid and CPR credential was—and continues to be—an ACE requirement for becoming a certified professional.



“AED devices were starting to become more widespread in public locations,” says Goudeseune, “but their availability in the health-club environment was scarce, in part due to the cost of delivering consistent training for the safe use of the units. The collaborative effort with the AHA placed ACE in a leadership position in delivering AED training to the industry. Today, all current ACE-certified Professionals in North America are required to be AED certified, helping to make health club facilities safer for American consumers.”



In 2007, the ACE/AARP collaboration was created, enabling ACE professionals to be the trusted “trainer of choice” for the more than 39 million AARP members. “The AARP relationship has been beneficial for both parties in raising awareness with the consumer on the benefits of regular physical activity and has opened the door for extended relationships like that with the International Council on Active Aging (ICAA),” adds Goudeseune.

Seeking to further address the needs of specific populations—including older adults—ACE launched the Advanced Health & Fitness Specialist Certification in 2008. The new certification, which replaced the Clinical Exercise Specialist, provides fitness professionals with extensive programming for the diseases and disorders they are most likely to encounter among their clientele. The ACE

Advanced Health & Fitness Specialist Manual was also published later that year.

Taking the Lead on Accreditation

Ironically, the start of the new millennium brought with it issues similar to those confronted by Peter and Kathie Davis when they originally began developing the idea of a non-profit certification organization. As the popularity of health and fitness exploded among consumers, the industry was growing at an equally rapid rate, with the number of certifying agencies increasing exponentially. Today there are more than 70 fitness certification organizations offering an estimated 300 programs. Not surprisingly, this reawakened the issue of standardization within the industry.

Over the years, there has been a lot of discussion about licensure for fitness professionals—similar to how other professions, including physical therapists and occupational therapists, have to be licensed within their respective states. While this remains a hot topic for debate, it has yet to be resolved. In the meantime, the International Health, Racquet, and Sportsclub Association (IHRSA) and the Medical Fitness Association (MFA) stepped in to provide some guidance, recommending that fitness facility operators only hire personal trainers with certifications from agencies accredited through the National Commission for Certifying Agencies (NCCA) or an equivalent accrediting organization. Of course, being a leader

EVOLUTION OF A Web site

In 1996, Web design was in its infancy and companies were just learning how to utilize what was to become one of the most vital and effective ways for ACE to communicate with fitness professionals and consumers alike. Over the years, the ACE Web site has evolved from a simple text-based site to a highly interactive site filled with useful tools and resources. Take a look at how our site has changed over the years. . .



December 1996 – First ACE Web site is Launched



December 1997



May 2000



May 2003

in the industry, ACE was already moving in this direction.

“Our decision to pursue NCCA accreditation is consistent with our commitment to protect the public and offer safe environments for them to take advantage of physical activity,” says Bryant.



Bryant goes on to explain that the NCCA evaluates the processes and systems used

by an organization to identify the professional role and scope of practice, develop exam content, and provide proper exam administration and scoring to ensure the following:

- That the examination process is fair and unbiased
- That the examination accurately measures the minimal competence of the candidate for the profession
- That the public is protected from unqualified or ineffective practitioners
- That the organization has the means to support its professionals

After a thorough review process, ACE earned NCCA accreditation in 2003. As one of only a limited number of fitness certification organizations that meet NCCA qualifications, receiving NCCA accreditation more tightly secured ACE's position as the leader in the industry.

Today and Into the Future

Many of us in the industry have grown alongside ACE, from professional infancy to

Some Roots Run Deep

Reminiscent of early days and nurturing original roots, ACE and IDEA are developing a co-branded version of the *IDEA Fitness Journal* that will be sent to ACE-certified professionals beginning with the July/August 2010 issue. The initiative brings ACE professionals access to the latest industry news and expertise on a variety of fitness and wellness topics, as well as expanded benefits for continuing education courses in every issue.

where we are today. We know we wouldn't be here if it weren't for the organization breaking ground and planting and nurturing new ideas.

“I love the fact that ACE has moved from an organization that primarily served fitness professionals to one that today has a much more far-reaching impact,” says Douglas Brooks, M.S., co-owner of Moves International Fitness with his wife Candice, and an ACE Gold-certified Professional and CEC provider.

As an ACE-certified Professional since 1989 and current ACE Board of Directors member, Chris Freytag has had a front-row seat from which to view ACE's 25-year history. And she's pleased with the changes she's witnessed. “ACE has become very cohesive—a smoothly run ship—with a solid mission and commit-

ted employees,” says Freytag. “ACE exhibits integrity for what they do and is committed to elevating their certified professionals to a high level. [They also provide] a much-needed service for consumers, which helps fitness professionals by creating educated consumers looking for their services.”

Freytag also admires the fact that ACE has become very technically savvy, staying ahead of the curve, which keeps them fresh and innovative. But perhaps what speaks to the highest level of respect, admiration and success of an organization is the bonds they make, both within the walls of the facility, as well as outside them.

“I feel like ACE is a family. The employees really work hard and work together,” says Freytag. “I can tell there is a mutual respect for each other and for the actual company and what it stands for.”

And Freytag, who presents at ACE's Annual Fitness Symposium, believes that sense of family extends beyond the staff to ACE-certified Professionals as well. “Being a part of the ACE symposium is always so inspirational. ACE goes the extra mile to accommodate, educate and inspire their professionals. I feel proud to be a part of the ACE family at those events.”

Given how far ACE has come and what it's already accomplished, what type of future endeavors is it headed for? “Over the years, the successes enjoyed by ACE have been a direct result of the hard work of the many fine ACE employees and ACE-certified Professionals,” says Goudeseune. As examples, Goudeseune cites the recent publication of the fourth edition of the *ACE Personal Trainer Manual*, which includes a comprehensive and individualized approach to training clients called the Integrated Fitness Training Model, the hugely popular ACE Fitness Symposium and expanded consumer outreach.

“The future of the ACE-certified Fitness Professional is extremely bright,” Goudeseune continues. “Movement is an essential component of preventative health-care, and the American Council on Exercise will diligently press forward as a leading contributor in promoting increased physical activity throughout the world. ACE-certified Professionals are well-equipped to attack the obesity crisis facing our nation and ACE's overarching goal is to continue the momentum that we've experienced over the past 25 years by equipping professionals with the tools they need to help all segments of society to experience the innumerable benefits of leading an active lifestyle.”

Today, ACE's Web site serves as an online community for ACE-certified professionals to interact freely with each other, consumers, the media and the fitness community (site connects to ACE's Facebook, Twitter, and YouTube accounts as well as discussion boards). We've also enhanced our outreach to exam candidates by providing clear step-by-step guidance on exam preparation and study assistance tools. And, in addition to making it easy to quickly access the information users need, we've expanded our consumer-focused content to help fulfill our mission, reach the general public and promote a healthy and fit lifestyle. 🏃



June 2007



September 2009

PERSONAL TRAINING FOR THE 21ST CENTURY

ACE Integrated Fitness Training™ (IFT™) Model for Resistance and Movement: Phases 1 and 2



This is the second article in a four-part series covering the new ACE Integrated Fitness Training Model.

BY
FABIO
COMANA,
M.A., M.S.

WHILE ALL CLIENTS SEEK GOALS THAT VARY ALONG THE HEALTH-FITNESS-PERFORMANCE CONTINUUM (FIGURE 1), THEY ALL FUNDAMENTALLY SHARE ONE TRAINING OBJECTIVE: TO IMPROVE THEIR EFFICIENCY OF MOVEMENT.

Although forward progress through this continuum is logical, it is the responsibility of the fitness professional to assess the appropriateness of progression and consider the need for initial regression that addresses the foundational elements of restoring good posture, improving stability and mobility throughout the kinetic chain, reestablishing core function, developing balance and promoting movement efficiency.

The ACE Integrated Fitness Training (IFT) Model not only encompasses the current scope of practice for personal trainers, coaches and practitioners, but also includes a programming blueprint to address the need for stability and mobility, and for training movement. Additionally, the model addresses the notion of *dysfunctional fitness*, a concept gaining greater attention among fitness professionals. As technology continues to advance the complexity of exercise equipment, many exercises and drills have become equally technical, increasing the potential for poor technique, overuse and injury. As most deconditioned adults exhibit limited mobility and stability throughout the kinetic chain, they resort to compensated movement patterns when performing complex exercises or when using advanced equipment. This raises the concern whether exercise, without regard to the individual's levels of stability and mobility or their movement efficiency, is actually doing more harm than good.

The first two phases of the ACE IFT Model serve as a critical foundation to all training and is the basis from which load and performance training should begin. The goal of this article is to discuss key concepts of each phase and introduce a template developed within the IFT model that progresses individuals in preparation for more traditional load and performance training. (See the February/March 2010 issue of *ACE Certified News* for an overview of the entire ACE IFT Model.) It should be noted that educating clients and athletes on the importance of this foundation can prove challenging. Fitness professionals can address this need by emphasizing both the short- and long-term benefits to fitness, performance and overall quality of life. While clients present with goals consistent with load training, they may require a few weeks to months of initial training emphasizing these prerequisites. This does not disqualify them from performing resistance training, but we must recognize this need and temporarily de-emphasize load or volume training with external resistance. Load or volume training without first addressing these prerequisites may exacerbate existing compensations and dysfunction.

FABIO COMANA, M.A., M.S., is an exercise physiologist and spokesperson for the American Council on Exercise, and faculty at San Diego State University (SDSU) and the University of California San Diego (UCSD), teaching courses in exercise science and nutrition. He holds two master's degrees, one in exercise physiology and one in nutrition, as well as certifications through ACE, ACSM, NSCA and ISSN.

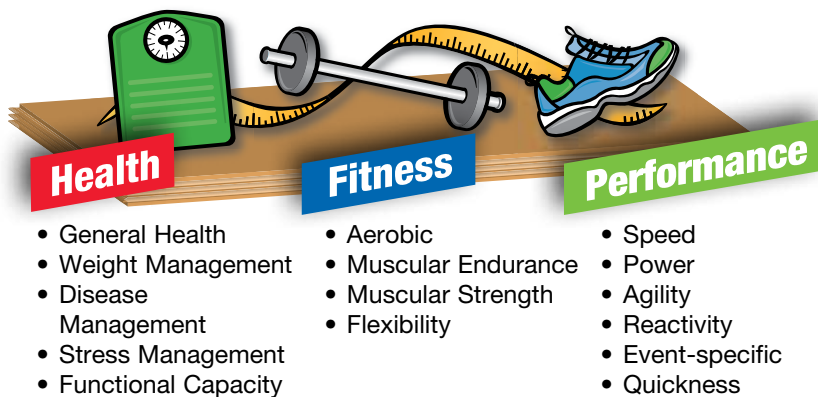


Figure 1: The Health-Fitness-Performance (HFP) Continuum

Before discussing programming components of each phase, it may be useful to first define the terms.

- Joint stability is the ability to maintain or control joint movement or position. This is achieved by the synergistic actions of the components of the joint (e.g., muscles, ligaments, joint capsule) and the neuromuscular system, but must never compromise joint mobility.
- Joint mobility is the range of uninhibited movement around a joint or body segment. This is also achieved by the synergistic actions of the joint components and neuromuscular system, and also must never compromise joint stability.

Movement generally begins from a position of good, static posture. While all joints demonstrate varying levels of stability and mobility, they generally favor one over the other depending on their function. For example, the hips are highly mobile, demonstrating significant movement in all three planes, whereas the lumbar spine is more stable, demonstrating limited ranges of movement. Likewise, the glenohumeral joint is highly mobile, whereas the scapulo-thoracic region is more stable, providing a solid platform from which upper-extremity pulling and pushing movements occur. If we examine the relationship of stability and mobility throughout the kinetic chain, we note an interesting relationship exists (Figure 2).

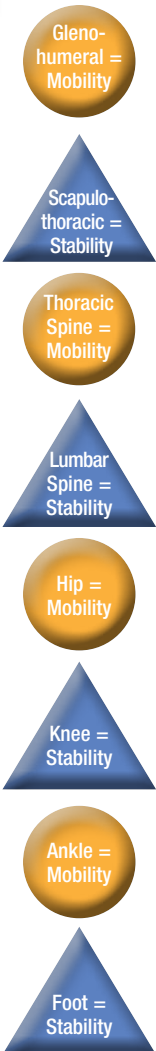


Figure 2: Mobility and Stability of the Kinetic Chain

Individuals who exhibit good posture with muscle balance generally demonstrate an appropriate relationship between stability and mobility throughout the kinetic chain. Concerns arise, however, with individuals who exhibit poor posture and muscle imbalances. What happens to joint movement along the kinetic chain when appropriate levels of mobility are lacking?

- Adjacent, more stable joints may need to compromise some degree of stability to facilitate the level of mobility needed at the moving joint. For example, if a client exhibits excessive kyphosis (loss of thoracic mobility) and attempts to extend the thoracic spine, the body may resort to increasing lumbar lordosis to compensate for the lack of thoracic mobility.
- A moving joint will seek to achieve the desired range of motion by incorporating movement into other planes. For example, if a client performs a hip-extension movement (sagittal plane) and lacks flexibility within the hip flexors, external rotation of the leg and hips into the transverse plane may occur, producing a compensated movement pattern.

Phase 1: Stability and Mobility

The primary objective of Phase 1 is to reestablish appropriate levels of stability and mobility within the kinetic chain, beginning with the most proximal region of the body and gradually progressing toward the distal segments. Figure 4 presents a template for this progression.

The lumbar spine is most proximal to the body's center of mass (COM) and the core. Programming should focus initially on promoting stability of the lumbar region through the actions and functions of the core. Given the impact of poor posture upon muscle hypertonicity (tight lumbar extensors), there may also be a need to promote muscle extensibility by stretching the lumbar extensors (e.g., using cat-camels). Once some stability in this region is achieved, the focus of

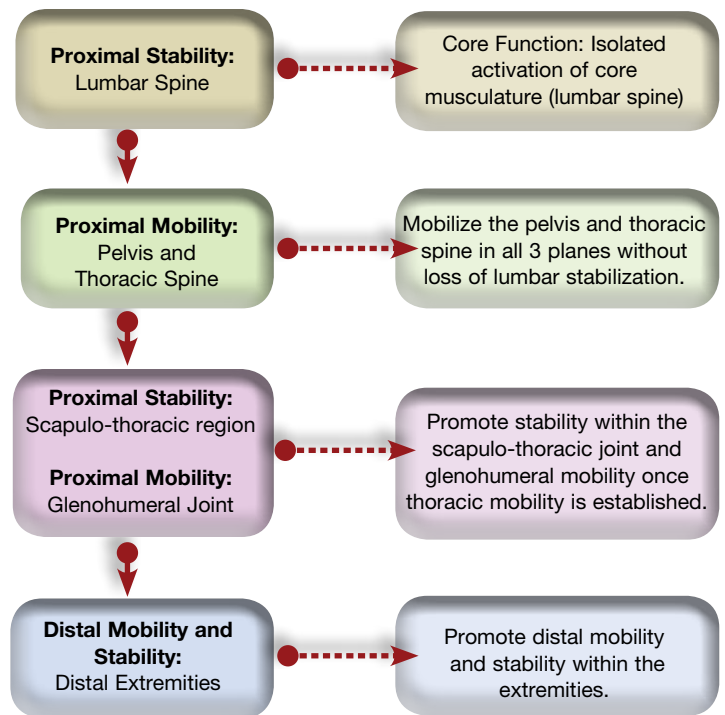


Figure 3: Programming Components of Phase 1: Stability and Mobility Training

the program should shift to addressing adjacent segments; specifically the hips and thoracic spine; then stability within the parascapular muscles of the scapula-thoracic region; and, finally, mobility throughout the distal segments. Attempting to improve a client's mobility within distal joints without first developing proximal stability will likely compromise stability within these segments. Without appropriate joint stability, muscles normally involved in mobilization of a joint may need to alter function and offer stability to the joint. For example, a lack of scapula-thoracic stability may force the deltoids, normally responsible for glenohumeral movement, to compromise their force-generating capacity and assist with scapular stability. For more in-depth information on this subject, refer to Chapter 9 of the *ACE Personal Trainer Manual* (4th edition).

Programming Guidelines for Phase 1

Consider the following basic guidelines when programming within Phase 1:

1. Promote conscious awareness of postural deviations.
 - ✓ Posture is controlled subconsciously by lower portions of the brain, and most individuals who exhibit poor posture are not consciously aware of their alignment.
 - ✓ Conscious awareness shifts control to higher regions of the brain and helps reeducate faulty neural information. This is a critical first step to restoring good posture.
2. Distinguish between correctible and non-correctible postural compensations.
 - ✓ Most compensations and muscle imbalance originate from correctible factors, including inactivity, repetitive motions, awkward positions, work environment, side dominance, improper exercise technique and poorly designed training programs. However, some can be attributed to non-correctible or potentially non-correctible factors, such as congenital conditions (e.g., scoliosis), pathologies (e.g., rheumatoid arthritis), structural deviations (e.g., tibial torsion,

Continued on page 10

- femoral anteversion), or trauma (e.g., surgery, injury, amputations).
- ✓ Coach; don't manually move the joint, but rather ask the client to move his or her joint according to your cues.
3. Evaluate the client's intention to make lasting improvements.
 - ✓ Working with your client for three hours a week to improve posture can be negated quickly if he or she does not make any real commitment to change during non-training hours.
 4. Always respect scope of practice and the need for referral to qualified professionals.
 - ✓ You are not qualified to diagnose injuries or medical conditions. If your client is experiencing musculoskeletal pain, refer him or her for medical evaluation.
 5. The time required to successfully establish stability and mobility depends upon individual differences such as current conditioning level, past experiences, body type, abilities, attitudes, adherence, motivational levels, emotional make-up, learning style and maturation level.
 6. A deconditioned individual generally lacks the ability to stabilize his or her own body.
 - ✓ The initial emphasis in restoring good posture and this relationship of stability and mobility should focus upon muscle isolation in a supported environment (e.g., using the floor, walls, back rests) before introducing integrated (whole-body, unsupported) exercises.
 - ✓ The use of supports also offers an additional benefit of kinesthetic and visual feedback critical to helping clients understand alignment of specific joints (e.g., when lying on the floor the individual can feel the contact points with the floor when joints are placed in a good postural position).
 7. Restoring good posture essentially involves improving extensibility in the tightened, hypertonic muscles, while improving muscular endurance (targeting type 1 fibers) in the weakened postural (tonic) muscles. However, it is not as simple as just stretching tight muscles and strengthening weak muscles. Physiological and morphological changes will establish kinetic chain stability and mobility. These concepts are discussed in detail in the *ACE Personal Trainer Manual* (4th edition).
 - ✓ The tightened muscles need to undergo a morphological change to add sarcomeres back in series within the myofibrils, which re-establishes the muscle's normal length-tension relationship.

- Following current ACSM guidelines for flexibility is generally insufficient to bring about these changes.
- Passive elongation for sustained time periods (as long as possible), coupled with conscious awareness of proper joint alignment, are keys to success.
- This will reduce nerve tonicity (nerve tone) of the muscle and establish normal neural function (neural re-education).
- ✓ Weakened (lengthened muscles) must also undergo a morphological change to reestablish the muscle's normal length-tension relationship and promote a healthy force-coupling relationship at the joint.
 - Traditional strength training involving dynamic movements and full ranges of motion are not opti-

- mal for facilitating the initial adaptations needed for good posture.
- Target type 1 fibers within the postural muscles by implementing sustained-duration isometrics or lower-intensity, higher-volume dynamic contractions.
 - Isometrics are favored as the muscle is strong in the lengthened position, but weak where it needs to maintain good posture. By contrast, dynamic movement may utilize momentum to power muscles through weaker positions (Table 1).

Phase Two: Movement

Engrams are presumed encodings that occur within neural tissue that provide a physical basis for the persistence of memory. Learned movement patterns are essentially

TABLE 1
RESTORATIVE EXERCISE PROGRAMMING GUIDELINES (F.I.R.S.T)

Training Variables	Stretching Tightened Muscles	Strengthening Weakened Muscles
Frequency:	Frequently as possible <ul style="list-style-type: none"> • Improvements are dose-related 	Frequently as possible <ul style="list-style-type: none"> • Improvements are dose-related
Intensity:	Initially: Static stretching: <ul style="list-style-type: none"> • To point of tension • Control joint movements in bi-articulate muscles Later: Dynamic patterns: <ul style="list-style-type: none"> • Controlled tempos • Maintain full neuromuscular control of movement 	Provide small overload in controlled positions. <ul style="list-style-type: none"> • Target type I fibers; only 30–70 % of maximal voluntary contraction (MVC) are needed • Higher intensities generally evoke faulty recruitment patterns • Focus on strengthening with joints in good positions • Use body's resistance or fixed surfaces
Repetitions and Sets:	Static stretching: <ul style="list-style-type: none"> • 2–4 reps x 30–60 sec each Dynamic movements: <ul style="list-style-type: none"> • 1–2 sets x 5–10 repetitions 	Isometric contractions: <ul style="list-style-type: none"> • 2–4 reps x 5–10 sec each • Emphasize uniplanar action Dynamic contractions: <ul style="list-style-type: none"> • 1–3 sets x 12–15 repetitions with slow, controlled tempos • Introduce tri-planar action
Timeframe	<ul style="list-style-type: none"> • Plan sessions between 30–45 minutes. • Plan, on average, 1–3 months of participation pending the degree of imbalance, volume of exercise performed or until noticeable body alignment and movement efficiency is restored. 	

stored engrams that we call upon to perform our activities of daily living, yet we possess the capability to fine tune them as needed to meet the demands of the task performed. Consequently, the notion of training and coaching movement patterns rather than teaching exercises appears to provide a solid foundation to training. Human movement can essentially be broken down into five primary movements that encompass all activities of daily living (ADL):

- Single-leg movements (e.g., single-leg stance and lunging)
- Bend-and-lift movements (e.g., squatting)
- Pushing movements (primarily in the vertical/horizontal planes)
- Pulling movements (primarily in the vertical/horizontal planes)
- Rotational (spiral) movements

Movements can be as simple as a single primary movement or as complex as combining several into an integrated movement pattern. Consider, for example, a woman picking up her child and then turning to place the child in a highchair. She performs a bend-and-lift movement; a rotational movement; a single-leg movement to walk; a pushing movement extending her arms to place her child in the highchair; and a pulling movement to resist gravity while lowering her child into the highchair.

As we spend the majority of our day moving our own body, bodyweight training is the most appropriate modality to use during this stage. However, it is appropriate to include some light resistance to increase system overload once the client develops good form in performing the primary movement patterns. Segment learning of each movement pattern utilizing the part-to-whole approach and introduce progressions appropriately:

- While most ADL are performed with the lower extremity operating in a closed-chain environment (e.g., moving against the floor) and the upper-extremity operating in an open-chain environment (e.g., pushing and pulling on doors), the initial use of supports offers greater kinesthetic awareness to movement quality. Coupled with visual feedback, this helps cue the clients to improving their movement efficiency.
- Incorporate extremities and the head/torso as drivers to increase system overload, balance, and additional stability and mobility demands (e.g., driving both arms towards the floor during a bend-and-lift movement).
- Teach movement in all three planes,

beginning with the sagittal plane, then the frontal plane and lastly the transverse plane.

- Introduce three-dimensional demands upon the body, both in the stable, closed-chain and freely moving, open-chain segments (e.g., performing a bend-and-lift movement in a staggered-stance position with the lead leg positioned in slight internal rotation while driving the upper extremity in the transverse plane).

During this phase, it is critical to coach movement effectively. We must always understand the objective behind every movement pattern or exercise we program, as well as the role of individual body segments within the kinetic chain required to perform that movement or pattern. The acronym M.O.V.E. can be used to teach movement patterns effectively (Figure 4).




Figure 4: The M.O.V.E. Acronym for Coaching Movement

For example, when performing a bird-dog movement, you should first identify what joint movements and planes of movements are desired (e.g., Which joints should remain stable and which are mobile? Is the movement in the sagittal or frontal plane?)

Once you have explained and demonstrated the movement, allow the client to practice and observe his or her performance. You must identify whether the desired movements occurred (e.g., Did the lumbar spine remain stable during hip extension? Was there rotation through the hips?). Next, and most importantly, you

must validate why the compensations occurred (e.g., Was the increased lordosis during hip extension due to a lack of core stabilization, or a lack of hip flexibility, or both?). Finally, your ultimate responsibility is to educate the client to correct his or her form by identifying problematic areas and segment learning as needed.

As with Phase 1, the timeframe needed to train these movements successfully depends on individual differences, including current conditioning level, past experiences, body type, abilities, attitudes, motivational levels, emotional make-up, learning style and maturation level.

Once your client demonstrates movement efficiency, he or she is ready to move into Phase 3—the Load Training phase—of the ACE IFT Model. However, many of the three-dimensional movement patterns with various progressions should remain part of the client's maintenance plan to continually reinforce good movement habits. Incorporate these movements into dynamic warm-ups, structure them as complementary drills (exercises) to the client's Phase 3 or 4 workouts or even program them as complete stand-alone sessions. 

Phases 3 and 4 of the ACE IFT Model will be discussed in part three of this series.

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BY
AMANDA
VOGEL, M.A.

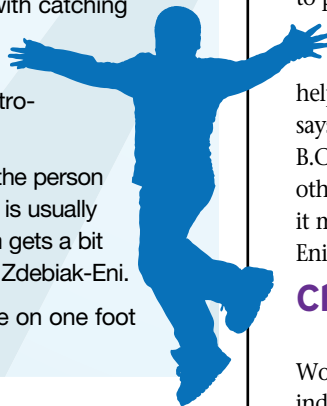
FUN Factor

Social Ice-Breaker

TO HELP PARTICIPANTS IN HER BOSU CLASSES

get to know each other, Leanne Zdebiak-Eni, a group fitness instructor and owner of Island Pilates and Fitness, plays the following game after completing the warm-up.

- Organize participants into groups of about five. Have each group set up their BOSUs in a circular formation (or simply stand in a circle if they aren't using BOSUs). Each client stands on the BOSU (or floor) facing into the circle.
- Give each group one toning ball—about 3 to 5 pounds—or a small medicine ball. Cue participants to throw the ball randomly around the circle.
- As participants get comfortable with catching the ball and maintaining balance, ask them to say their name when they catch the ball as a way to introduce themselves.
- Next, have them say the name of the person they are throwing the ball to. "This is usually where the atmosphere in the room gets a bit louder, with lots of laughter," says Zdebiak-Eni.
- For variations, clients can balance on one foot or add more people to the circle.



WHEN WAS THE LAST TIME YOU NOTICED ONE OF YOUR CLIENTS OR GROUP PARTICIPANTS SPONTANEOUSLY LAUGHING AND CHEERING AS THEY WORKED OUT? SURE, THEY PROBABLY SHOW SMILES OF APPRECIATION AND AMUSEMENT. BUT "CRACKING UP" WITH LAUGHTER?

I had this thought recently while watching a pair of participants in my indoor boot camp-style class. The two women were laughing non-stop as they ran side by side, taking turns bouncing a stability ball around a simple obstacle course. They were playing—and they just happened to be working out, too.

As fitness pros, we do our best to make exercise enjoyable, but quite often the "fun factor" that makes an exercise session truly special is only a small part of the equation, or missing altogether. "The fun factor in fitness boils down to one key strategy: Create an amazing experience," says Trina Gray, who developed a six-week fitness and nutrition program called Corporate Challenge and owns Bay Athletic Club in Alpena, Mich.

While safety and appropriate exercise programming are always foundational to a good workout, weaving the fun factor into a class or training session usually has little to do with what you teach. Rather, it's how you teach that resonates. "People remember more about how you make them feel and less about the exercises you select," says Gray. With that in mind, here are ideas for infusing more fun into your training sessions, boot camps and/or fitness classes.

Entertain a Party Atmosphere

Any time you can make a class or group training session buzz with a party atmosphere, the fun factor naturally follows. So consider yourself a "party planner" for your classes and training sessions, says Gray. "Instructors and trainers should work on building a list of contacts in their area," Gray advises. "Post a message on Facebook or Twitter or send a direct text to your list inviting people to class with a message such as: 'Are you ready to punch some calories away and kick up some fun? Let the countdown to TurboKick begin! See you and a friend at 5:30 tonight!'"

Going to a party where you don't know anyone can be intimidating, so help participants get acquainted. "The fun factor starts with learning names," says Leanne Zdebiak-Eni, owner of Island Pilates and Fitness in Courtenay, B.C. "But it eventually leads to people actually getting to know each other. Usually when someone feels comfortable enough to let loose a little bit, it means they are having a good time." For a social ice-breaker game Zdebiak-Eni uses in her classes, see the sidebar at left.

Cheer On Team Spirit

Everyone likes to feel part of the party, and Josh Crosby—an L.A.-based World Rowing Champion and co-founder (with fitness pro Jay Blahnik) of an indoor rowing program called Indo-Row—uses this knowledge to build up the

fun factor in his classes. He groups participants into teams according to a theme, such as countries, universities or '80s rock bands. Each team works and rows together to accomplish a shared goal. "The energy that participants get from one another is contagious, which helps everyone increase their results," says Crosby.

Assembling participants into teams works especially well in indoor rowing and group cycling—where each row of machines or bikes represents a team. But you can also use this technique to play "cardio games" like relay races or obstacle courses in small-group training and boot camps.

And with creativity, you can bring the element of team spirit to traditional group exercise, as well. For example, in step or hi-low, Gray suggests trying an army boot-camp chant or high-school cheer. "Rewrite the lyrics to fit your class," says Gray. Include humorous lines if you can. "Have the two sides of the room compete in saying it with the most spirit." Or form circuits where participants exercise in small teams, motivating each other through mini-circuits and competing in team-based cardio drills.

One key to making team training fun is to ensure that participants with different abilities and fitness levels feel both successful and properly challenged. Since participants might move around at different speeds and intensities, come prepared with multiple options—such as brisk walking, jogging or sprinting—and consider arranging teams so each one represents participants with varied skills and abilities.

Play Up a Novelty

Part of what makes the team approach especially attractive is that it's often tied to imaginary scenarios that are novel for participants. For example, indoor-cycling programs and classes like Indo-Row are known for their lively race sequences. Since most participants would never actually row down a World Championship race course or cycle in the Himalayas, the novelty factor adds an element of fun that participants don't get to experience in everyday life.

In addition to using a rowing machine with a unique water-filled flywheel that creates the sound of waves, Indo-Row plays up the fun factor with relay race scenarios—an exciting novelty for most people. "Everyone goes as hard as they can for a short distance then passes the 'baton' to the next person," says Crosby. "You race with your team against other teams, all vying for the 'gold medal.' The cool-down is a trip into the 'Awards Dock' to pick up the medals." Such a concept could also work in boot camps and indoor cycling.

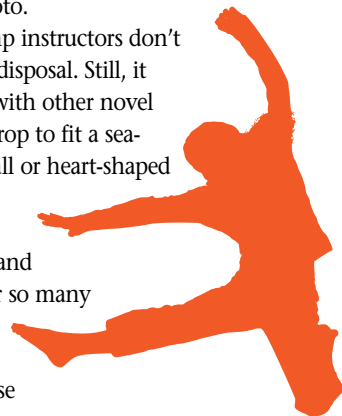
You know the fun factor is in full effect when you notice participants really "letting loose" during imaginary races. "Sometimes the quietest, most unsuspecting rowers are the ones pulling their 'buns' off and screaming for their teammates," says Crosby.

If creating imaginary scenarios wouldn't work in the types of classes or training sessions you teach, consider using unexpected equipment to deliver novelty. "I'm really not a machine guy," says Jon-Erik Kawamoto, a strength coach and owner of JKConditioning in Burnaby, B.C. Instead of traditional equipment, he gets his clients having a good time, and a good workout, with novel exercise tools such as tractor tires, water-filled kegs, sledge hammers, sandbags and weighted

sleds. "When I incorporate non-traditional workout equipment, my clients don't feel like they're working out," says Kawamoto. "Flipping an old tractor tire down an alley is far more mentally and physically challenging than sitting on a leg-extension machine," he says. And trying something so out-of-the-ordinary naturally boosts the fun factor. "When clients who might only be used to machines see sledge-hammer hits to a tire in their sessions with me, it piques their interest," says Kawamoto.

Of course, most group fitness and boot-camp instructors don't have tractor tires and sledge hammers at their disposal. Still, it is possible to safely bolster fun in your classes with other novel items. For example, Gray suggests bringing a prop to fit a seasonal theme. "Use a pumpkin as a medicine ball or heart-shaped paper plates for discs."

Whether you teach one-on-one or lead a group, be creative about how you help clients and participants enjoy the exercise experience. "For so many people, the workday is pretty serious," says Zdebiak-Eni. "It's important for them to have a laugh once in a while and realize that exercise really can be fun!"



Be a Party Planner!

TRY THESE TIPS FROM TRINA GRAY, OWNER OF BAY

Athletic Club, for entertaining participants with a party atmosphere in your classes or training sessions.

-  **Be a D.J.** Create a playlist with a theme, such as American Idol night or Dancing with the Stars tunes. Or bring in a collection of your participants' favorite songs.
-  **Be a fashion icon.** Wear funny items when you teach, such as boots, hats, knee-highs, bandanas or athletic jerseys.
-  **Be a coach.** Start class off with a locker-room-style speech. Set the intention, visualize the goal and create the feel of a team.
-  **Be a game show host.** Have teams tally the number of exercises they can do collectively in one minute, such as standing TRX rows, crunches, squats on a BOSU or medicine-ball tosses.
-  **Be a tour guide.** Send participants on a scavenger hunt around your facility or take an indoor class outside.
-  **Be a photographer.** Take candid class photos for no special reason and post them around the club. "Showing people in class having fun is better advertising than a class schedule!" says Gray.

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GREEN Your Fitness Business

B EING GREEN HAS NEVER BEEN MORE IN VOGUE—OR MORE IN DEMAND. CONSIDER, FOR EXAMPLE, THAT ACCORDING TO A RECENT STUDY, 82 PERCENT OF AMERICANS SAY THEY ARE BUYING GREEN PRODUCTS AND SERVICES, EVEN THOUGH THEY MAY COST MORE.

BY
KAREN
ASP

Want to capitalize on that trend? Make your personal training business more environmentally friendly and, while improving the health of your clients and the earth, you might also boost your bottom line.

The Pros of Going Green

No matter what level you take it to, going green makes sense, especially for fitness professionals. “Becoming green is an extension of what fitness is all about,” says Rachel Devlin, general manager of the Green Fitness Studio in Brooklyn, N.Y. “We’re helping individuals get healthy so it only makes sense to help make their environment and the planet as healthy as possible.”

To that end, the Green Fitness Studio has implemented numerous practices that point toward the green message and living healthier because of it. For instance, it uses natural cleaning supplies and launders gym towels in energy-efficient machines with eco-friendly detergents. The floors in the fitness studio are made of bamboo, a sustainable product, while floors in the workout area are made of recycled rubber. All of the gym equipment is either remanufactured or self-powered. Water in the fountains and showers is filtered at the source, and when members join, they receive a stainless steel bottle, as plastic bottles are discouraged. The studio uses compact fluorescent lights, does its billing and contracts on a paperless system, and

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features eco-friendly touch-screen computers, which it says saves up to 48 percent power when compared with HDTV, Devlin says. Even the juice bar is environmentally friendly, using ingredients that are local, organic and sustainable.

But the real highlight is the living roof, a 2,000-square-foot area covered with sod. Not only does the roof cut energy output to cool the gym, it also serves as an outdoor studio for yoga classes during warmer weather. “Clients are able to bring elements of nature into their workout, which helps them see the importance of being green,” Devlin says.

Reducing operating costs is yet another benefit to becoming more environmentally friendly, especially if you own your own studio. At the Green Microgym in Portland, Ore., for example, owner Adam Boesel estimates that the initiatives he has undertaken have cut his carbon emissions by 60 percent, which has lowered both water and electricity costs. For instance, just having a power strip on every TV (there are three in the gym) that members turn on and off has cut 10 percent to 20 percent off the electricity bill.

What else has he done to reduce his expenses? The gym’s Energy Star-labeled fans have their own switch so members can operate them. When the gym is empty, lights, TVs and fans are off. The treadmills in Boesel’s gym use 30 percent less electricity than regular models, and other cardio equipment like ellipticals and stationary bikes actually produce energy as people pedal so that the more clients sweat, the more energy they produce for the facility.

In the end, you might find that you can literally cash in on being greener, as it could bring you new clients. For example, Ryan Kollock, CEO and owner of Code Green Fitness in Laguna Beach, Calif., recently signed one client who was deciding between Code Green Fitness and three

other gyms. Even though Kollock was more expensive than the other gyms, the man chose Code Green Fitness. "Being more of a green business swayed his decision my way," Kollock says, adding that he has no doubt his green mission has brought other clients to him as well.

Why It Isn't Always Easy Going Green

Unfortunately, greening a business doesn't come without its obstacles. If you are building a new facility, you might face dilemmas about how green you want to go. Take building materials, for instance. "If you use a green building material that has to be shipped from far away," says Devlin, "you have to decide whether that will negate the environmental savings."

And even though you are promoting a green message, you might have to make compromises. That was something the Green Fitness Studio ran into when it first decided to serve its smoothies in real glasses. Yet after realizing that clients don't want to take time to drink a smoothie on site, but would rather take it with them, the studio found biodegradable cups. "We want to bring these green initiatives to clients without complicating people's lifestyles," Devlin says.

Implementing Green Practices in Your Business

Fortunately, you don't have to overhaul your entire business to go green, especially if you own a studio that wasn't built green, as tearing it down would have a negative impact on the environment, or you operate out of facilities that you don't have control over. "Doing little things can make a huge difference," Kollock says.

Whether you own a studio or club, operate from an existing club, or work out of clients' homes, consider putting these 10 strategies to work:

1. Promote recycling. Place recycling bins around your studio, especially near trash bins. Then recycle as much as you can in your office, paying attention to paper, cardboard, newspapers and beverage bottles.

2. Discourage the use of plastic bottles. Encourage your clients to sip out of BPA-free bottles instead of plastic water bottles. You might even give them one as an incentive when they hire you or join your club.



recycled paper and environmentally friendly ink.

4. Design eco-friendly fitness programs. Keep the environment in mind when designing training programs for your clients, Kollock says. For instance, could your clients walk or run outside instead of using a treadmill? Can you challenge

them to sneak in more cardio by driving less? Maybe they can bike to the library or run to the YMCA. You also can encourage clients to do bodyweight exercises instead of buying the latest piece of equipment.



5. Reduce electrical use. Always turn off lights in areas that aren't being used, and if possible, replace lights with energy-efficient compact fluorescent lights. The International Health, Racquet & Sportsclub Association also recommends installing large ceiling fans to cut down on air conditioning needs. And unplug any equipment that is not being used. Another interesting fact: Treadmills use the most electricity when set at a zero incline; as soon as you add an incline, you reduce the amount of energy used by as much as half, which is something to consider when working with clients, Boesel says.

6. Opt for sustainable foods. As much as possible, eat organic or locally sourced foods. That goes, too, for any food items that you sell or give away as incentives.




7. Sport organic duds. Even if you don't own a studio where you can sell organic apparel, you can still wear them. And fortunately, organic apparel choices are rapidly expanding as brands like Prana, lululemon, Green Apple Active and Athleta continue to increase their organic offerings.

8. Cut the chemicals. Reduce your clients' exposure to chemicals as much as possible by switching to all-natural cleaners with non-toxic compounds. If you're painting, choose low- or no-volatile organic compounds (VOC) paints and coatings, and if you're replacing carpets, consider buying Green Label carpet, which identifies carpet with low VOC.

9. Buy used or recycled equipment. Whether you're in the market for a new piece of cardio equipment or a strength-training tool, check Web sites like eBay or Craigslist, or sporting goods stores like Play It Again Sports, before you buy new, Kollock says.

10. Donate used goods. Before you throw anything away, think about whether somebody else might be able to use it. You can always sell equipment through eBay or Play It Again Sports. Or consider donating equipment and products. For instance, old tennis balls might go to local schools, used towels might benefit a local animal shelter or used yoga mats could go to recycleyourmat.com.

Once you have initiated green practices into your business, tell your clients what you're doing—it may give you an edge over other fitness professionals or clubs in your area—and offer tips they can follow for living a "greener" lifestyle. "Many people are still learning about how to live greener, which is why it's important to offer practical tips and strategies they can use in their own lives," Devlin says.

In the end, you might find that these green practices help keep you in business longer. "Building a sustainable business means that you'll be around for the long haul, even during a slowed-down economy," Boesel says. 

Training Mixed Martial Arts Athletes

USING THE ACE INTEGRATED FITNESS TRAINING™ (IFT™) MODEL



SINCE ITS ORIGINS AS THE GREEK PANKRATION IN 648 BC, COMBAT SPORTS HELD MODEST INTEREST AMONG ATHLETES UNTIL 1993, WHEN THE FIRST MODERN MIXED MARTIAL ARTS (MMA) COMPETITION WAS STAGED IN THE U.S. UNDER THE ULTIMATE FIGHTING CHAMPIONSHIP (UFC) BRAND.

**BY
FABIO
COMANA,
M.A., M.S.**

This full-contact, combat sport incorporates a wide variety of traditional and non-traditional fighting techniques, and is enjoying surging popularity, especially among males ages 18 to 34. Part of the attraction with MMA, which is widely considered to be one of the most grueling sports, lies in the variety of techniques fighters employ to take on their opponents.

Given its popularity, it is increasingly likely that you will encounter clients seeking your training expertise in MMA. This presents a challenge for trainers lacking firsthand exposure or experience with the sport. Doug Balzarini, an ACE-certified Personal Trainer and a strength and conditioning coach at Fitness Quest 10 in San Diego, encountered such a challenge in 2008. Armed with a keen interest, but minimal knowledge of the sport and its training techniques, he set out to develop his MMA knowledge and skill. Today, Balzarini not only trains seven professional MMA athletes, but also competes in MMA as well.

If we examine the scope of services we offer as personal trainers, we will likely notice a unique evolution. Personal training was once practiced as a pure science focused primarily upon the health-related parameters of fitness. In recent years, however, it has been evolving into an art form that not only encompasses a wider array of research-driven training techniques for health- and skill-related parameters of fitness, but also considers

the individual's psychological and emotional dimensions of fitness. The MMA athlete exemplifies the need for this new art of training. He or she needs to develop many fitness parameters, subscribe to the latest metabolic-based training methods, and devote significant time to training their mental resilience or toughness. Recognizing the importance of this evolution to the art of personal training, ACE developed the Integrated Fitness Training® (IFT® Model), which serves as an effective training template to guide trainers working with individuals with traditional or unique needs, like the MMA athlete. This article will discuss how trainers can follow the training phases developed around the IFT Model to help MMA clients achieve their highest levels of success.

First Steps in Training the MMA Athlete

The MMA athlete will likely devote much of his or her training to the Performance and the Anaerobic Endurance/Anaerobic Power phases of the IFT model. (See February/March 2010 issue for an overview of the ACE IFT Model.) However, you should never assume that because your client has performance goals, they should automatically default to these advanced phases. A thorough needs-assessment will determine your client's point of entry into the model.

Success in MMA demands knowledge and application of physics, kinesiology and biomechanics, particularly knowledge of movement and planes of movement (kinematics), levers and leverage, ground and reactive forces, and linear and angular kinetics (causes of movement). Integrating this knowledge into your training methods will certainly offer your athlete a strong competitive advantage. Achieving this advantage, however, is contingent upon your client possessing adequate levels of stability and mobility throughout the kinetic chain, and efficiency in their movements. Balance, bilateral symmetry, movement speed, force generation and acceptance all depend upon these elements and the MMA athlete will never realize his or her true potential until they have first attained appropriate levels of stability-mobility and can move efficiently. As a personal trainer,

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you may need to develop these foundational prerequisites before implementing more advanced forms of training to develop maximal strength and power.

Trainers must also consider the cardiorespiratory-training program. Like other combat sports (e.g., boxing), the structure of MMA competition involves timed rounds of combat, usually between three and five minutes in duration. The event allows only brief active or passive recoveries during or between the rounds (one minute), which places extreme physiological demands upon the energy systems. These high-intensity work rates and high work-to-rest ratios can quickly deplete the anaerobic pathways, leaving the athlete vulnerable to attack. While much of the MMA athlete's energy-system training will focus upon enhancing the anaerobic pathways, aerobic efficiency proves critical in promoting faster recoveries between rounds and during the later stages of the event. You will, therefore, need to determine if there is a need to regress the athlete's cardio program to earlier phases initially to build his or her aerobic efficiency.

As is the case in many competitive sports, your athlete will probably work with two or more coaches, one of whom will develop and train the technical skills and fighting disciplines required for success in the sport. Additionally, he or she will likely work with a strength and conditioning coach who understands the demands placed upon the body by that sport, and seeks to prepare the athlete both physiologically and psychologically. A university-based or professional strength and conditioning coach can fulfill such a role (and can do so without necessarily needing firsthand experience within that particular sport, although it is certainly beneficial). To successfully develop your knowledge and skill sets, you must first conduct a thorough needs assessment of both the sport and the client.

Step One: Conduct a needs assessment.

- Watch the sport, take notes and ask questions.
 - ✓ Gain exposure and understanding of the sport and its rules by watching how MMA athletes train and fight. Do not be afraid to gather information from top-level coaches and athletes.
- Identify your client's fighting background, preference and style(s), and determine which styles favor their strengths and which styles expose their weaknesses.
 - ✓ Draw up a list of the health- and fitness-related parameters needed to achieve success and shore up their weaknesses (Table 1).
 - ✓ While fighters tend to favor specific fighting styles, they need a diverse arsenal of weapons to utilize in any position, whether to attack or defend.
 - Some fighters favor “stand-up” fighting where they avoid going

Table 1: General Health- and Skill-related Parameters Needed for MMA Fighting

Health-related Parameters	Skill-related Parameters
Maximal muscle strength	Balance
Muscle endurance (to a lesser extent)	Speed, agility, quickness (SAQ)
Flexibility	Coordination
Good aerobic efficiency	Reactivity (considered part of SAQ)
	Power
	Anaerobic endurance

to the ground and try instead to fight on their feet using kicks and punches. This form draws from sports such as boxing, kick-boxing, Muay Thai and karate.

- Some fighters favor “clinch-style” fighting, where they attempt to tie their opponent in a clinch and then utilize close-quarter elbows, punches, knees and stomps, or employ takedowns or throws. This form draws from sports such as wrestling, Judo, Krav Maga and Muay Thai.
- Some fighters favor “ground, ground-and-pound or grappling” fighting where they intentionally take their opponent to the ground, assume a dominant position then employ punches and submission holds. This form draws from sports such as Brazilian Jiu-Jitsu, Sambo, Judo and Shoot Wrestling.
- Time the work-to-rest ratios to understand the role of the energy pathways during an event.
- Talk to the medical staff and identify the prevalent injuries. Your training program should focus on strengthening these areas where possible. Unfortunately, the nature of MMA fighting causes many injuries that are inevitable and vary by fighting discipline. In general, lacerations with bleeding occur most frequently, while sprains (ankle, knee), joint dislocations (shoulder, elbow) and bone breaks (nose, extremity) are also common.
- Identify what sports psychology strategies are appropriate for your client. It is human nature to avoid injury and pain, but MMA fighters are a unique breed in that they not only accept the fact that pain is inevitable, but also come to embrace it.
- Know your science. Beyond physiology and nutrition, knowledge of physics, kinesiology and biomechanics is critical to success in training clients participating in this sport. Shore up your knowledge in these areas to give your client any advantage possible.

BALZARINI'S ADDITIONAL RECOMMENDATIONS:

- ✓ Maintain open communications channels with your client's manager and coaches. Strength and conditioning is one piece of their training program, and should be structured to complement their technical and fighting program.
- ✓ Identify the strength and weaknesses in the fighting styles of your client's opponent and plan appropriately.
- ✓ Be flexible with each session—modify your sessions according to injuries or tender areas resulting from their other training sessions.

Step Two: Conduct your assessments.

The ACE IFT Model offers both functional and physiological assessments trainers can utilize. Considering how many fitness parameters the MMA athlete needs, you should begin with the more relevant assessments that affect posture and movement efficiency. While you never want to overwhelm your client with assessments, select those you deem most important from the following list (refer to the ACE IFT Model for many of these protocols):

- Static postural assessment
- Bend-and-lift screen
- Push screen
- Pull screen
- Rotational screen
- Dynamic balance test or a more advanced static balance test (e.g., Y-excursion or balance test)

Continued on page 18

Next, consider selecting assessments more specific to the sport of MMA (several protocols are included within the ACE IFT Model).

- Upper- and lower-extremity strength (dead lift, squat, bench press)
- Power (snatch, clean-and-jerk)
- Aerobic capacity (VT1-HR test, 1½-mile run)
- Anaerobic capacity (VT2-HR test, 300-yard shuttle test, heavier kettlebell snatches until fatigue)
- Agility (pro-agility or hexagon cone drill)

You might also opt to devise your own MMA-specific tests to mimic many of the key movements, intensities and durations performed during an event. For example, evaluate the time to complete, or the ability to complete (to point of fatigue), a circuit (no rest) of explosive dead lifts (with your weight class) followed by a barrage of punches to a heavy bag, followed next by vertical jumps with an explosive high-knee drive, and then finishing with throw downs using a heavy bag to a dominant position. Consider devising tests that identify your client's weaknesses and not merely their strengths (e.g., for a client lacking quickness, test his or her ability to move rapidly and reactively between markers while performing some strength feat at each marker to induce fatigue). Balzarini favors implementing four- to five-minute circuits that entail multiple MMA-specific movement patterns and intensities, and monitoring how his clients' performance improves during the training program.

Lastly, collect any relevant psychological information on your client that will allow you to strategize mental-skills training for gaining that competitive edge. For example, the Yerkes-Dodson Inverted-U curve examines decision-making abilities and performance under different levels of arousal and anxiety. This will help you identify what level of arousal is needed for your client to train and perform optimally.

Step Three: Design your Program.

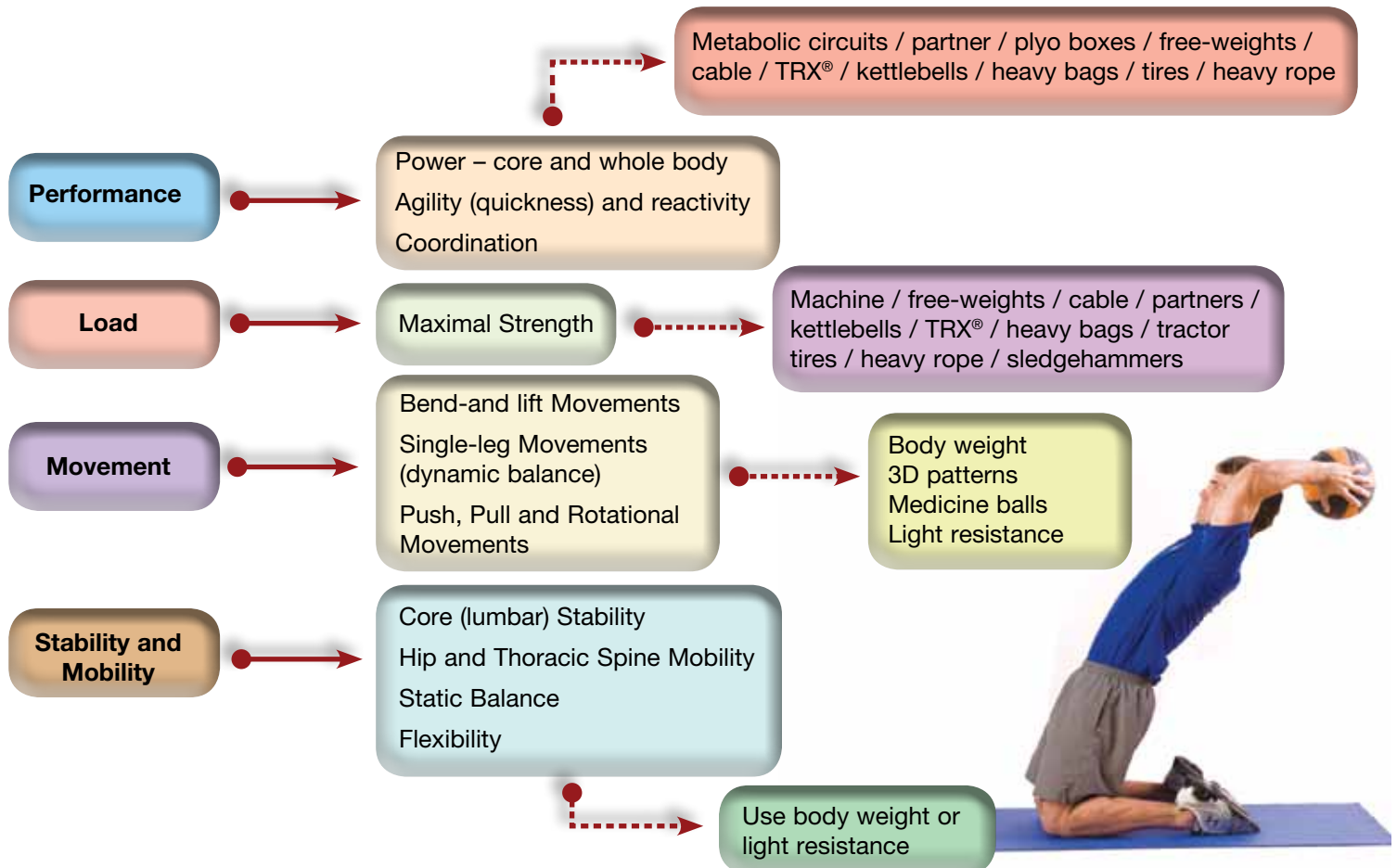
The ACE IFT Model works as a continuum. From the needs and assessment data, determine your client's point of entry into the model for resistance/movement and cardiorespiratory training (Figures 1 and 2). Whether your client is currently competing, planning to compete in the near future or simply enjoys practicing MMA, identify your program macrocycle, mesocycles and microcycles. Although clients will ultimately devote much of their training to the Performance, Anaerobic Endurance and Anaerobic Power phases, allocate time to the prerequisite phases if needed, to build a strong foundation. Your exercises and movement patterns will most likely be generalized initially (non-MMA specific; e.g., balance, developing the five primary movement patterns, general core conditioning), but must progress to mimic MMA activities.

Continued on page 24

BALZARINI'S FAVORITE EXERCISES INCLUDE:

- ✓ Tire flips using a 420-pound tire (a 750-pound tire for stronger athletes) to train maximal strength
- ✓ Sledgehammers (wood chops) to the tires to train explosive slams and throws
- ✓ Heavy ropes (floor slams, tug-of war) to train grip strength and core power
- ✓ Heavy medicine ball work (30–65 pounds) to train core power, slams and throws
- ✓ Exercises using the TRX to train core strength/power, balance and control of body movement bilateral body symmetry

Figure 1: Training the MMA Athlete Using the ACE IFT Model for Resistance and Movement



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Introducing the New *ACE Personal Trainer Manual, 4th Edition*

The American Council on Exercise is proud to introduce the Fourth Edition of its *ACE Personal Trainer Manual*. This all-new textbook, which was written by a group of 14 industry experts, is designed to fill an important need in the fitness industry. In the past, many newcomers to personal training would read a textbook presenting fitness assessments, detailing resistance-, flexibility-, and cardiorespiratory-training programs, and providing motivational tools, and ask the same question: “Okay, so now what?” In other words, how does the reader assimilate all of this seemingly disparate information into a safe and effective training program for each of his or her clients?

The *ACE Integrated Fitness Training™ Model (ACE IFT™) Model*, which is a central feature of this new manual and is presented in **Part III: The ACE Integrated Fitness Training Model** (Chapters 5–12), was created to serve as a blueprint when meeting, assessing and training clients, from recently sedentary adults who are just getting started and seek improved overall health, to elite-level athletes working to enhance a specific aspect of their athletic performance. After introducing the various components of the ACE IFT Model, detailing the various assessments that personal trainers have at their disposal, and covering functional, resistance and cardiorespiratory training, this part of the textbook closes with **Chapter 12: The ACE Integrated Fitness Training Model in Practice**. This chapter offers six case studies that are representative of the types of clientele that personal trainers can expect to see over the course of their careers. Each case study presents the health history of the client, along with his or her goals, and then follows the client over the course of the program, offering progression templates, discussing obstacles and possible solutions along the way. This chapter is designed to help the reader synthesize the material presented in the previous seven chapters in a very practical sense. By combining the ACE IFT Model with appropriate leadership and implementation strategies as presented in **Part II: Leadership and Implementation** (Chapters 2–4), personal trainers can provide a truly individualized, integrated approach to achieving optimal health, fitness and performance.

Of course, to be successful as a personal trainer, there is other foundational information that individuals need to understand and be able to utilize. **Chapter 1: Role and Scope**

of Practice for the Personal Trainer defines the personal trainer’s role within the healthcare continuum and details the scope of practice. In addition, this chapter discusses various avenues of career development for personal trainers.

Chapter 13: Mind-body Exercise explains how mind-body fitness, which includes everything from classical forms of yoga and tai chi to more contemporary options like the Alexander Technique and Nia, fits into the modern fitness industry.


Chapter 14: Training Special Populations presents essential information for working with individuals with various diseases and disorders once they have been cleared to exercise by their physicians. These two chapters comprise Part IV: Special Exercise Programming Topics.

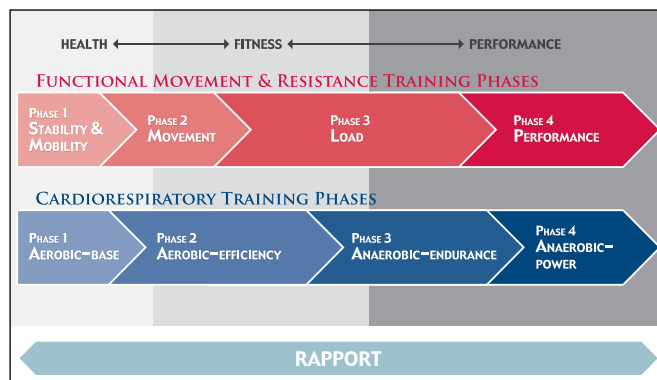
Part V: Injury Prevention and First Aid is also composed of two chapters. **Chapter 15: Common Musculoskeletal Injuries and Implications for Exercise** begins by explaining common tissue injuries before presenting guidelines for managing these common injuries, including rotator cuff injuries, carpal tunnel syndrome, ankle sprains, and plantar fasciitis.

Chapter 16: Emergency Procedures discusses emergency policies and procedures for fitness facilities. Common emergencies ranging from choking and asthma to stroke and neck injuries are also discussed.

The final two chapters combine to form **Part VI: Professional and Legal Responsibilities and Business Strategies**. **Chapter 17: Legal**

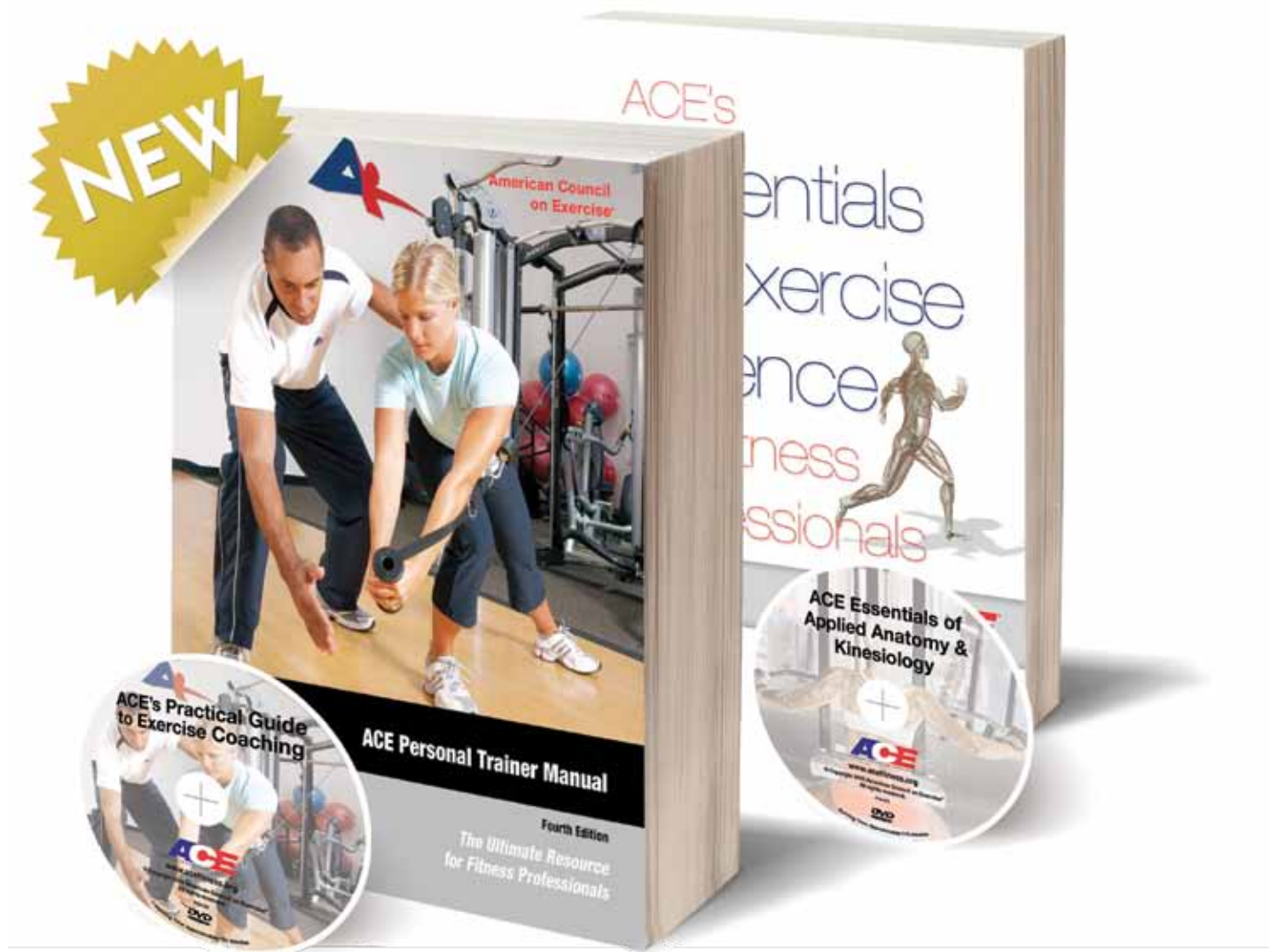
Guidelines and Professional Responsibilities addresses many of the standard legal and business concerns that personal trainers may have regarding business structure, employment status, contracts, insurance and risk management. **Chapter 18: Personal-training Business Fundamentals** presents a topic new to ACE textbooks: How to thrive on the business side of your personal-training career. This chapter covers creating a brand, financial planning, choosing a business structure and effective marketing practices.

Our goal when putting together this textbook was to meet the needs of personal trainers at every stage of their careers, from deciding whether to work as an employee or independent contractor to owning one’s own fitness facility, from training people who walk in off the street to specializing in a niche clientele that allows you to increase your income and become a recognized expert in your community. 



The ACE Integrated Fitness Training Model

Now available for purchase!



The *ACE Personal Trainer Manual*, 4th Edition, is a full-color set that has been completely overhauled to reflect the most up-to-date information available, and is a great addition for your library that you'll reference time and time again. It also prominently features the innovative, new ACE Integrated Fitness Training™ (ACE IFT™) Model for exercise program design.

Features of the ACE IFT Model include:

- A simple, systematic approach to exercise programming that is relevant, appropriate, effective and adaptable for ANY client's unique characteristics.
- Straightforward methods for customizing fitness programs and progressions for ALL individuals for cardiorespiratory, functional, resistance, balance, flexibility and core training.
- Effective strategies tailored to each client's readiness to change that promote trust, healthy behaviors and program adherence.
- Solutions that drive client participation and retention.

Purchase this valuable reference set today for only \$99.95 You'll receive the new manual along with these all-new companion reference materials: *ACE's Essentials of Exercise Science* book and two informative instructional DVDs: *ACE's Practical Guide to Exercise Coaching* and *ACE's Essentials of Applied Anatomy & Kinesiology*.

Functional Training & Assessment Workshop



Cost: \$175 CECs: 0.8

Date & Location: May 7, 2010
Dallas, TX (Empower Conference)

Date & Locations: May 15, 2010
Atlanta, GA; Austin TX;
Overland Park, KS; New York, NY;
Portland OR; San Diego, CA

Functional training continues to grow in popularity as the foundation for fitness and sports conditioning programs. Training to improve posture, movement efficiency and overall muscular performance related to a variety of activities defines functional training. Enhance your knowledge and applied skills with the latest tools and techniques in personal training to stay ahead of the game.

The one-day (8.5-hour) ACE Functional Training workshop teaches the important concepts of functional training by instructing personal trainers on how to:

- Conduct postural assessments and movement screens
- Develop core-training progressions
- Design exercise progressions for postural compensations
- Implement effective dynamic warm-ups
- Introduce sport-conditioning principles into your clients' training programs

Training the Core Webinar

Cost: \$34.95 CECs: .2

Dates: April 26 (Mon.)

Start time: 7 p.m. Eastern
(4 p.m. Pacific)



"Core training" has become a buzz phrase in the fitness world. But what does it mean? How does it work? And how can you as a personal trainer, group fitness instructor or other fitness professional develop strategies to use core training as an effective tool for your clients' goals? In this live webinar, learn techniques to design a core training program that prepares the body to produce, stabilize and control force in a three-dimensional environment – the way the muscles naturally work on a daily basis. Enjoy the benefits of an ACE instructor in the comfort of your own home through our convenient online webinars. This webinar will be held 4:00-6:00pm Pacific on the dates specified.

Upon successful completion of this course, you will be able to:

- Identify the anatomy of the core.
- Categorize the muscles responsible for providing mobility and stability of the core.
- Understand how to assess muscular endurance of the core muscles.
- Identify the stages of progression for designing an exercise program for core muscles.

- Design an exercise program to enhance endurance, strength and power of the core.

For additional information
or to register, go to
www.acefitness.org/liveprograms

Heartsaver First Aid with CPR and AED Workshop

Cost: \$99 CECs: 0.6

ACE and the American Heart Association (AHA) have teamed up to deliver a dynamic message of hope — the hope of saving lives. New treatments have improved the possibility of survival from cardiovascular emergencies, cardiac arrest, and stroke in a fitness setting where individuals are most at risk when exercising. Increasing public awareness of the importance of early intervention and ensuring greater public access to defibrillation will save many lives.

The seven-hour Heartsaver First Aid with CPR and AED training course will provide fitness professionals with the critical lifesaving skills needed to care for a victim of an illness or injury until EMS arrives.

Course materials will be shipped to you prior to the live workshop date. Please review the materials and bring them with you to the workshop.

The course runs from 9:00 am to approximately 3:30 pm on the date selected.

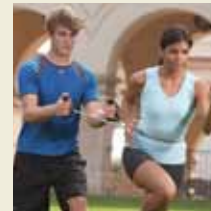


April 10, 2010
Raleigh, NC

April 17, 2010
Chicago, IL
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San Diego, CA
Washington, DC

Personal Training in Practice: Effective Tools & Techniques

Cost: \$249 CECs: 1.6



A must-have practical training experience for personal trainers or those seeking to update their toolbox. ACE's new interactive two-day workshop provides a comprehensive learning opportunity you won't find elsewhere. Traditional personal training workshops are generally limited to physiological assessments, program design and exercise instruction, but ACE goes beyond this to include sports conditioning, balance and the core, weight management and the behavioral and emotional components essential to creating an overall experience for your clients that empowers them towards long-term change. This is the true art of personal training.

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ACE Certified News

Continuing Education Self-test

To earn 0.1 continuing education credits (CECs), you must carefully read this issue of *ACE Certified News*, answer the 10 questions below, achieve a passing score (a minimum of 70 percent), and complete and return the credit verification form below, confirming that you have read the materials and achieved a minimum passing score. In a hurry? Take the quiz online at www.acefitness.org/cnquiz for instant access to CECs.

Circle the single best answer for each of the following questions.

- Load or volume training without first addressing _____ may exacerbate existing compensations and dysfunction.
 - Readiness to change
 - 1RM strength
 - Stability and mobility
 - Dynamic flexibility
- Which of the following is **NOT** a basic guideline to consider when programming with Phase 1 of the ACE IFT Model?
 - Attempt to correct all postural compensations.
 - Promote conscious awareness of postural deviations.
 - Evaluate client's intention to make lasting improvements.
 - When necessary, refer to qualified professionals.
- Small fitness businesses that want to "go green" should _____.
 - Completely overhaul the way they do business.
 - Dispose of energy-inefficient machines and buy new ones.
 - Understand that it will complicate their members' lifestyles.
 - Realize that even small changes can make a big difference.
- Which of the following is **NOT** one of the six skill-related parameters needed for MMA fighting?
 - Coordination
 - Anaerobic endurance
 - Agility
 - Muscle endurance
- A client is ready to move into Phase 3 of the ACE IFT Model—the Load Training Phase—when he or she _____.
 - Demonstrates movement efficiency
 - No longer needs to perform three-dimensional movements
 - Exhibits perfect posture at all times
 - Has correctly reprogrammed all stored engrams
- The MMA athlete will never realize his or her true potential until they have first attained _____.
 - A high level of pain tolerance
 - A high level of aerobic endurance
 - Adequate stability and mobility
 - Mastery of numerous MMA disciplines
- What is the anticipated or average timeframe for a restorative exercise program?
 - Two to four weeks
 - Six to eight weeks
 - One to three months
 - Three to six months
- Which of the following is **NOT** a recommended step to take when conducting a needs assessment for a MMA client?
 - Learn as much as you can about the sport.
 - Focus solely on your client's strongest style of fighting.
 - Identify the sport's prevalent injuries.
 - Identify appropriate sports-psychology strategies.
- Which of the following is **NOT** recommended to increase the fun factor of group fitness classes?
 - Create a party atmosphere.
 - Take candid class photos.
 - Spontaneously choose participants to lead segments of the class.
 - Create teams and cheer participants on.
- Small fitness businesses that want to implement green practices should _____.
 - Choose HDTVs over touch-screen computers.
 - Use sustainable materials like bamboo and recycled rubber.
 - Promote use of BPA-free plastic bottles over stainless steel.
 - Eliminate all fans and air conditioning.

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I attest that I have read the articles in this issue, answered the test questions using the knowledge gained through those articles and received a passing grade (minimum score: 70 percent). Completing this self-test with a passing score will earn you 0.1 continuing education credit (CEC).

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Training Mixed Martial Arts Athletes Using the ACE IFT Model

Continued from page 18

After your hypertrophy mesocycle to build mass (Load Phase), focus next on building maximal strength, a critical component for the MMA athlete. It is during this phase that you will have the opportunity to get creative, introducing training specificity through many non-conventional, functional-training practices and the use of equipment that mimic the sport (e.g., heavy rope, heavy bags, tractor tires, partner resistance, TRX®, kettlebells). While these movement patterns are specific to MMA, your work-to-rest ratios in the maximal strength mesocycle will not be because longer recoveries are needed to promote maximal strength. You will introduce more realistic work-to-rest ratios during the performance phase of your program. Once you have trained maximal strength, your program should now shift focus to developing anaerobic power, emphasizing explosive movements with intense bouts of work and short rest intervals. Exercises using the TRX, bodyweight training with partners, tire flips and heavy bag/dummy partners are effective training modalities. Plan to incorpo-

rate the planes and sequences of movements, and specific durations of high-intensity work that your athlete needs for his or her event. Develop metabolic circuits—three to five minutes of high-intensity work using a variety of available equipment with short (≤ 1 minute) active and passive rest intervals. Each circuit should include movements and techniques that mimic the fighting style of your athlete.

Conclusion


Training the MMA athlete requires a complex and multi-faceted approach involving modalities and progressions that can prove to be a significant challenge for most of us. Given the nature of this sport and the number of health- and fitness-related parameters needed for success, trainers should consider following a comprehensive training model that addresses these wide-ranging needs. Whether you're working with an MMA athlete or a client with health, fitness or performance-based goals, subscribing to the ACE IFT Model will help ensure your client's success. 

Figure 2: Training the MMA Athlete Using the ACE IFT Model for Cardio Training

