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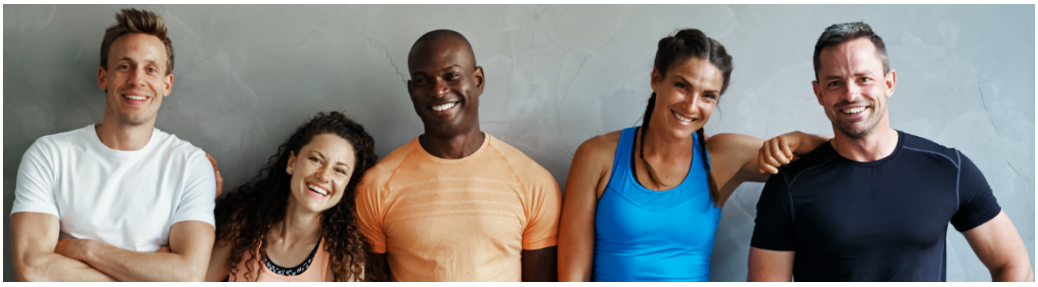

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Foundations of

GLUTE TRAINING

First Edition

ISSA INTERNATIONAL SPORTS SCIENCES ASSOCIATION

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SUBJECTS COVERED

FOUNDATIONS OF GLUTE TRAINING

The kinetic chain

Lumbopelvic Hip Complex Structure & Function

Movement preparation and muscle activation

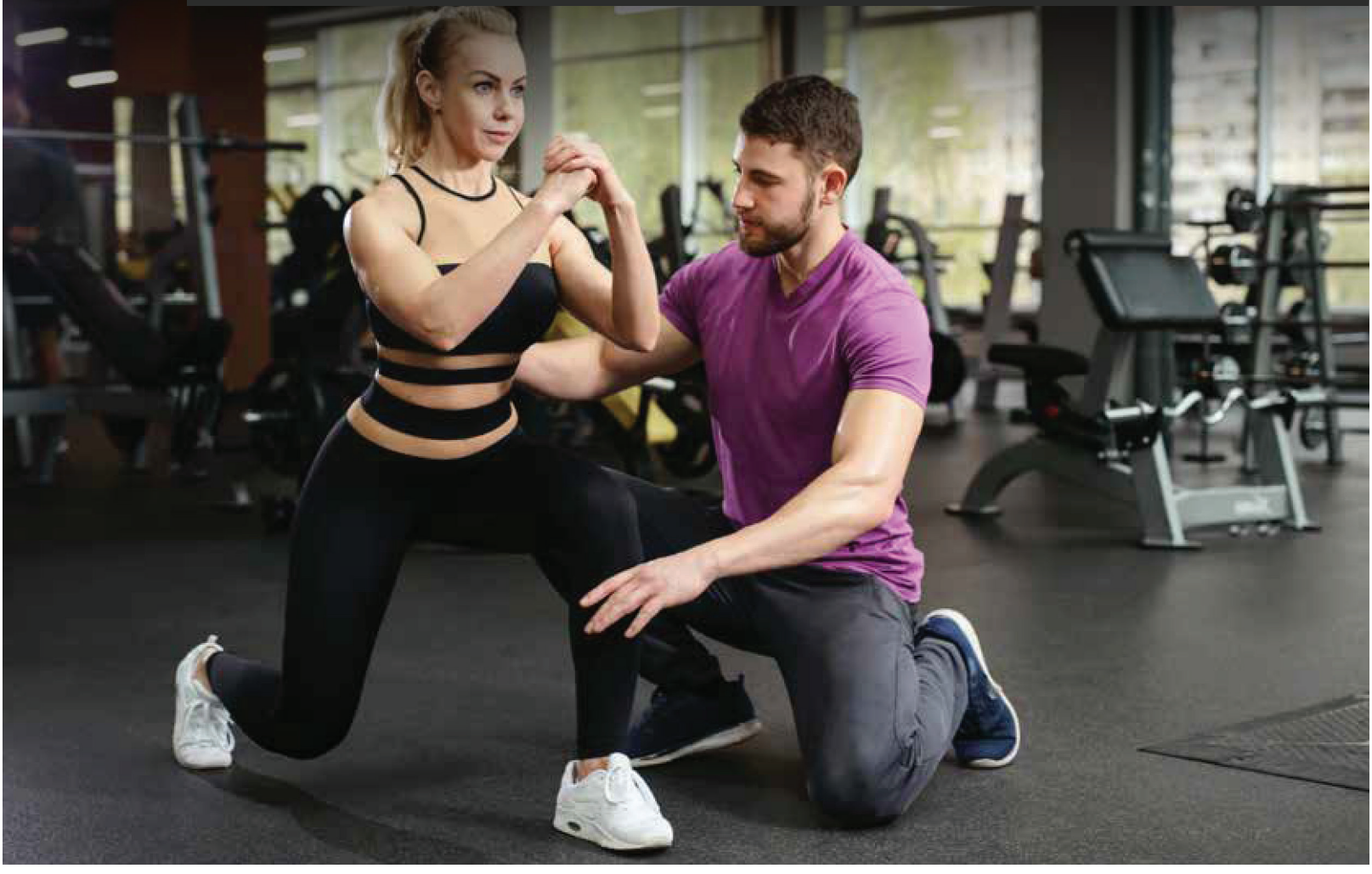
Common glute and hip dysfunctions

Strength training exercises

Marketing and professionalism

Nutrition and Supplementation

Motivating clients



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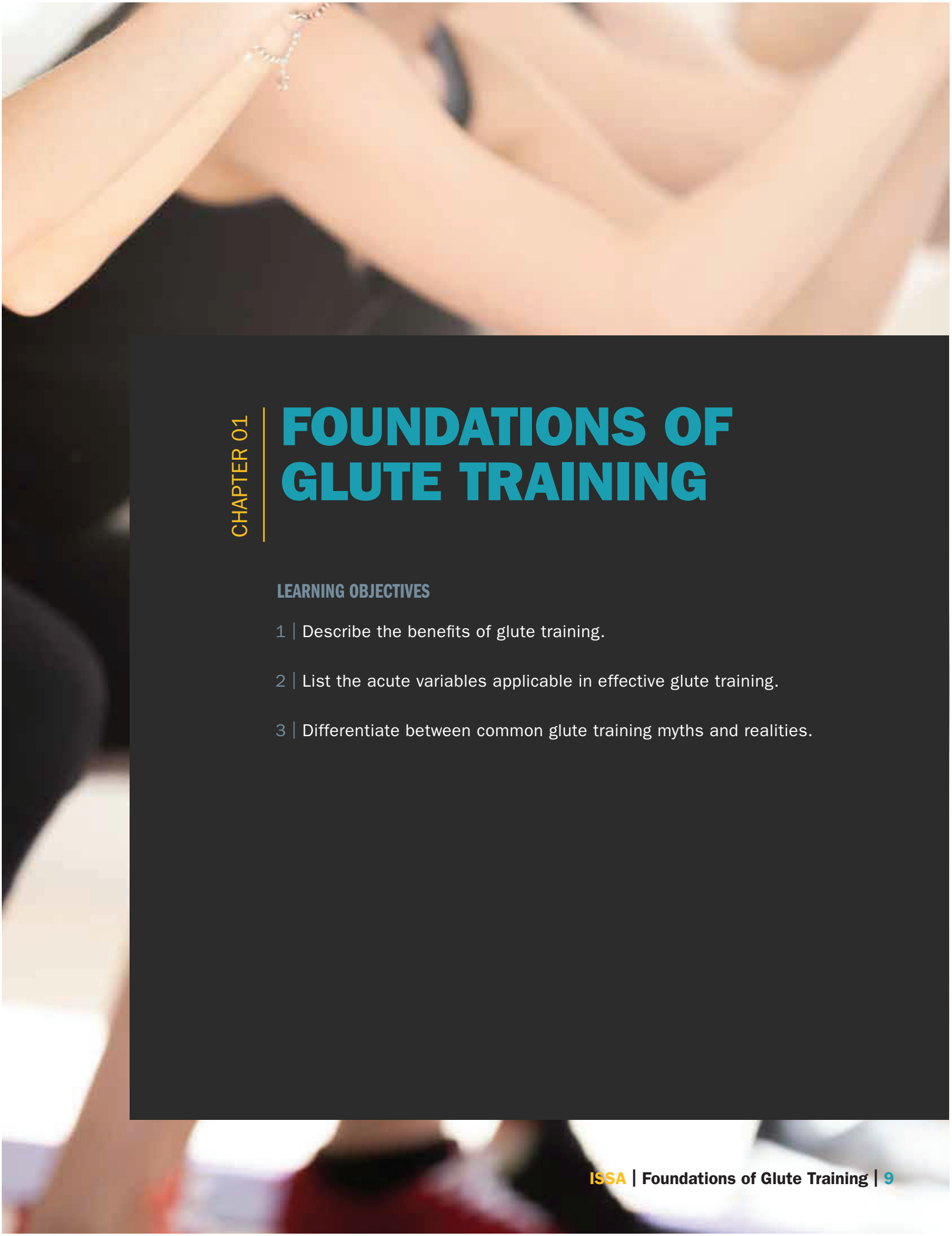


CHAPTER 01

FOUNDATIONS OF GLUTE TRAINING

LEARNING OBJECTIVES

1 | Describe the benefits of glute training.

2 | List the acute variables applicable in effective glute training.

3 | Differentiate between common glute training myths and realities.

POSTERIOR CHAIN:
The structure and muscles making up the backside of the body from heel to head.

The bottom line has been identified in glute-focused training: Some people focus on the **posterior chain** for aesthetics—the look—while others, rightfully, treat it as the foundation of strong, athletic, and balanced movement. No matter the reason for training the backside, there are effective strategies as well as strategies that are missing the mark.

Anatomical Terminology: "Trainer Speak"

Fitness professionals may not use anatomical terminology every day when speaking with clients, but the science, research, and educational materials they learn from do. The following are common anatomical terms used in fitness and human biomechanics that will be used throughout this course.

ANATOMICAL LOCATION TERM	DEFINITION
Anterior or ventral	Front of the body relative to another reference point
Posterior or dorsal	Back of the body relative to another reference point
Superior	Above a reference point
Inferior	Below a reference point
Medial	Position relatively closer to the midline of the body
Lateral	Position relatively farther from the midline of the body
Proximal	Position closer to a reference point
Distal	Position farther from the reference point
Bilateral	Refers to both sides
Unilateral	Refers to only one side
Superficial	Near the surface
Deep	Farther beneath the surface
Cephalic	Toward the head
Caudal	Toward the bottom
Prone	Lying facedown
Supine	Lying on one's backside

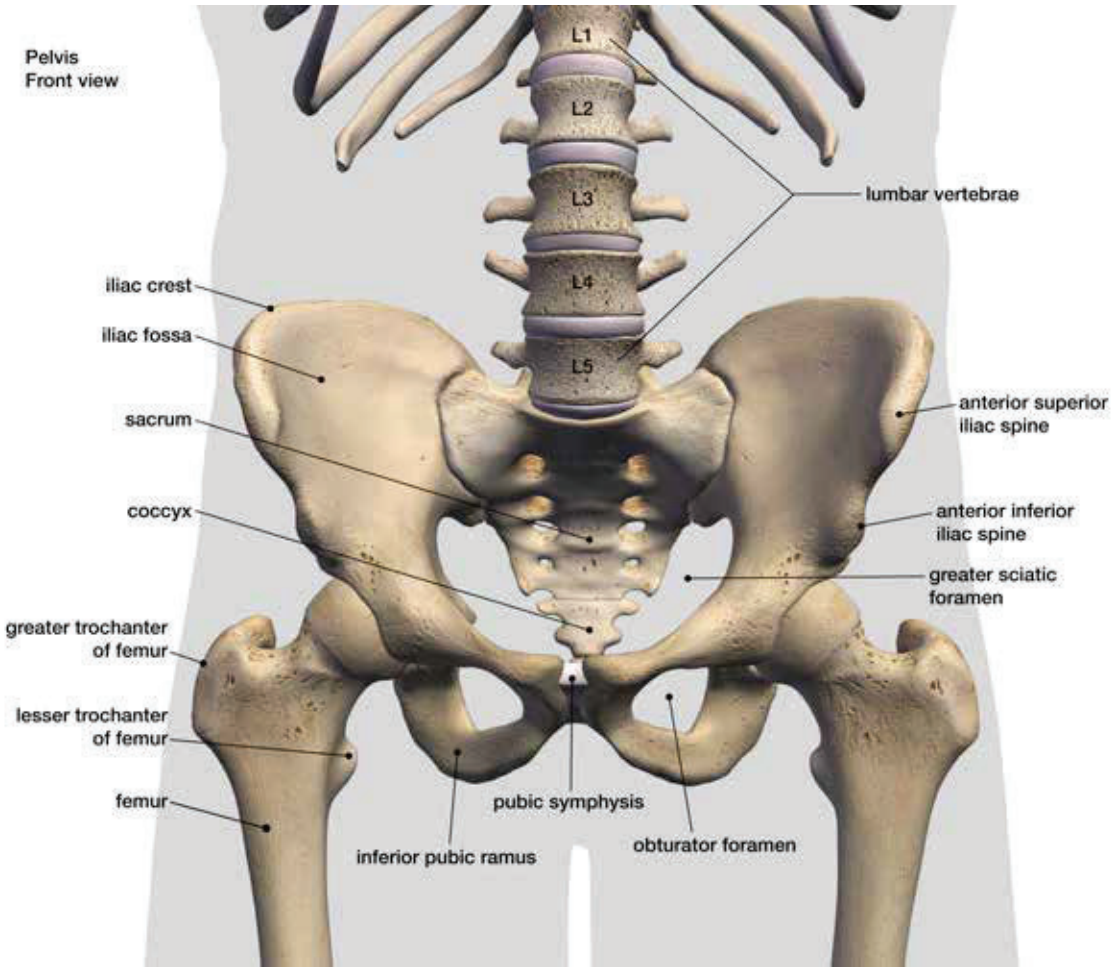
Similarly, the terms to reference anatomical movement will be used often.

TERM	DEFINITION/ACTION
Flexion	Movement decreasing the angle between two body parts
Extension	Movement increasing the angle between two body parts
Hyperextension	Position extending beyond anatomical neutral
Abduction	Movement away from the midline
Adduction	Movement toward the midline
Medial rotation	Rotational movement toward the midline
Lateral rotation	Rotational movement away from the midline
Elevation	Movement in a superior direction
Depression	Movement in an inferior direction
Pronation	Turning the palm or arch down
Supination	Turning the palm or arch up
Dorsiflexion	Flexion of the foot upward (superiorly)
Plantar flexion	Extension of the foot downward (inferiorly)
Inversion	Movement of the sole toward the median plane
Eversion	Movement of the sole away from the median plane
Circumduction	Circular movement of a limb extending from the joint where the movement is controlled
Lateral or external	Anterior surface moves toward the midline
Medial or internal	Anterior surface moves away from the midline
Lateral flexion	Flexion in the frontal plane
Protraction	Abduction of the scapula
Retraction	Adduction of the scapula

STRUCTURE AND SHAPE

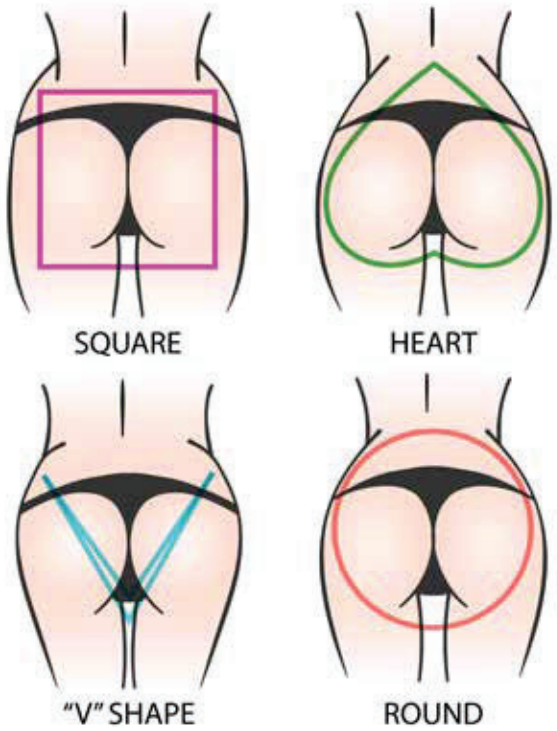
The structure of the skeleton determines an individual's body shape. Those with a wide rib cage will likely have broad shoulders. Similarly, someone with a wide pelvis will have a wide backside. Muscle mass and fat distribution play into the aesthetic glute appearance as well. These two factors can be directly modified with physical training or cosmetic procedures, but the structures of the hips and femur cannot. Structures that most greatly affect the shape of the glutes naturally are the length of the femur head and, most importantly, the shape and orientation of the pelvis.

Figure 1.1 Pelvis and Femur Structure



Plastic surgeons identify four major glute shapes by appearance and based on the structure of the pelvis: square, heart, "V," and round. Most often, the shapes are related to the shape of female glutes, but they do apply to both men and women.

Figure 1.2 Common Glute Shapes



The square glute shape is created by higher hip bones and usually a longer femur head. People with this glute shape often have "hip dips" caused by the gap between the greater trochanter of the femur and the inferior anterior edge of the iliac spine. They may also have excess fat deposited above the pelvis known as "love handles."

The round glute shape has a fuller fat distribution in the middle of the glutes and a moderate-width pelvis. This shape is characterized by a relatively small natural waist, contributing to the full appearance of the glute. The heart-shaped glute, also called pear-shaped, is considered one of the most naturally feminine shapes with the fat distribution lower on the glute and into the thigh. Excess fat storage with this glute shape can cause saddlebags—the fat stores on the lateral aspect of the thigh. Estrogen causes women to store bodyfat in the hips and thighs, but this hormonal effect can shift with age to promote more fat storage around the midsection. Males with high estrogen can also see this fat distribution pattern. The tapered look of this glute shape makes it one of the most sought-after shapes for cosmetic procedures.

The V-shaped glute occurs when the fat distribution is higher on the glute with a tapering toward the bottom. Associated with age-related hormone changes and extreme weight loss, this shape can occur in men and women.

THE GLUTE OBSESSION

Fashion influences a lot of fitness trends. The days of flat bottoms and a skinny physique are behind us, and a fit, athletic, full-bottomed look is what a lot of people strive for—men and women alike. Any strength and conditioning coach understands the benefits of strong glutes as well.

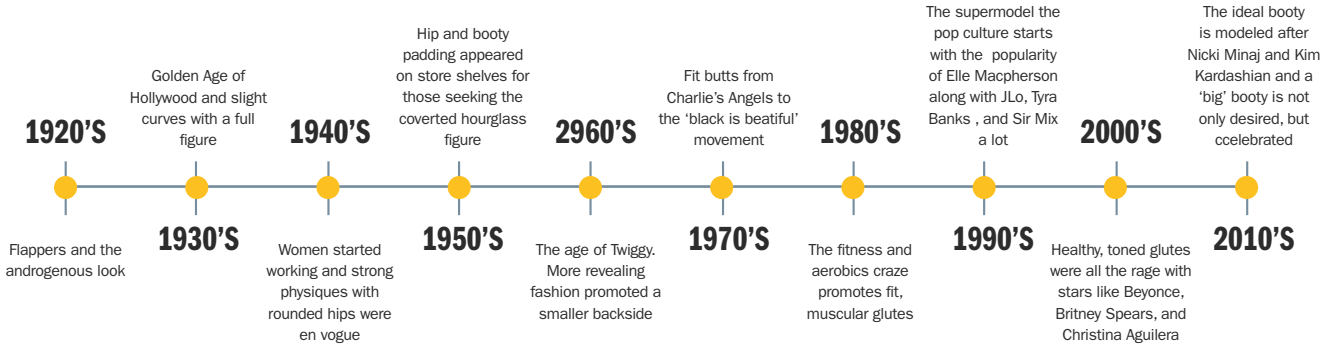
In 2018, more than 1.8 million cosmetic surgical procedures were performed in the United States, according to the American Society of Plastic Surgeons. Around 24,000 of those procedures were to build, reconstruct, or reshape the buttocks—a 19 percent increase from the previous year. The numbers are even higher outside of the United States. Brazil logged 63,925 buttocks augmentation procedures back in 2013. Between the years 2000 and 2018, social media, smartphones, and an increasingly connected society have driven the 10–17 million total cosmetic procedures performed annually, including Botox, breast augmentations, and brow work.

Surgeries from a licensed and reputable doctor can cost upward of $10,000. This price is too high for many who still want the full-figured results. Those who partake in the legal and illegal sides of buttocks enhancement are from all backgrounds: transgendered people, males, and females. People are turning to illegal clinics and injectables not approved by the Food and Drug Administration in America when the cost is too high—but at what price?

BODY SHAPE OVER THE YEARS

Over time, as fashion, home life, nightlife, and pop culture evolve, so do body type and glute trends. A desirable body type is not only influenced by clothing and those modeling it but also by the social happenings in the country and the world.

For example, many women filled the jobs left behind by men in America in the 1940s during World War I. A strong, muscular physique was desirable, but so were full hips to attract the soldiers coming home. Supermodels came and went from the 1960s through the 1990s, promoting a lean, straight look not unlike the androgynous look of the 1920s flappers.



Today, the "ideal" backside takes many forms, but generally a full, big glute is the goal. Driven by the tight-fitting fashion of the moment and the music, television, and pop culture apps like Instagram and TikTok, the big bottom is here to stay.

Training systems, gimmicks, and fix-it-quick programs for glute training abound online and in bookstores. However, putting in the work—and not cheating—will get the desired results. No amount of surgery or injectables will provide the benefits of a functional glute training protocol. A structured, focused glute program is the best way to achieve useful, long-lasting results. One must also have a detailed knowledge of the musculature of the hamstrings, quadriceps, and **lumbopelvic hip complex (LPHC)** to fully understand how to properly build an effective glute program. Some great leg exercises can engage the glutes when executed properly, but many of them focus on the hamstrings and quadriceps as well. Focusing on the wrong exercises will lead to overdominant quadriceps and hamstrings and can impede the function of the major glute muscles.

LUMBOPELVIC HIP COMPLEX (LPHC):
The core; the musculature of the spine, pelvis, and hip.

ESSENTIAL STRENGTH

The glutes specifically provide stability and support for the hips during a normal gait. They are also essential aspects of functional and athletic movements like lateral cutting, jumping, running, and many multijoint leg exercises. As part of the LPHC, they provide critical trunk support to keep individuals upright and mobile. With that in mind, everyone can benefit from a glute training program.

Research has uncovered that weak ankles, shin splints, back pain, knee pain, and even hip pain can all be a result of weak or inactive glutes! It's estimated that approximately 19 percent of people have chronic knee pain, 80 percent will experience back issues in their lifetime, and around 14 percent will have hip issues. These statistics are bolstered by the fact that nearly 60 percent of Americans have a sedentary lifestyle, and nearly 25 percent of Americans are completely inactive.

Hip Musculature and Ankle Stability

Research suggests that individuals with weak hip musculature are more likely to sprain or roll their ankles. A lack of postural control is created when the muscle activity of the glutes and core is weak. This can impair joint movement more inferior along the posterior chain.

Physical therapy for ankle sprains often includes both hip and ankle exercises to rehabilitate and strengthen.

Enter the fitness professional. Both general fitness trainers and glute specialists have the opportunity to work with literally anyone, prevent and ease movement dysfunctions, and help people move and feel better.

BENEFITS OF GLUTE TRAINING

The four main benefits of strong, mobile glutes are simple:

1. Reduce or prevent knee pain
2. Reduce or prevent back pain
3. Increase power and athletic performance
4. Better-looking buttocks

The glutes control hip extension along with the rest of the LPHC, which also controls trunk flexion and extension. Both contribute to core stability, allowing the abdominals, obliques, and erector spinae to do the job of keeping the body upright and stable. Without a strong foundation, movement patterns can be altered, and muscular relationships can be changed. Individuals should avoid having a prime mover acting as a stabilizer when the stabilizers are weak or inactive. Weaknesses and improper movement patterns will inevitably affect joint and muscle movement and pain in all regions of the back and the knees.

DID YOU KNOW:

Did you know one in four adults over the age of 65 will fall and injure themselves this year? Many elderly people lack the hip and core strength to support themselves.

Speaking of falls, they are in the top three causes of injury-related deaths in the United States, along with poisoning and motor vehicle accidents. They are all completely preventable.

More than 17 percent of college athletes injure their knees each year and must miss seven or more days of participation.

About 9 percent of high school athletes have hip injuries each year.

Also, 80 percent of Americans have a sedentary job and are inactive to lightly active otherwise.

STRENGTH AND AGILITY

AGILE:
Able to move quickly and easily.

Agility is not just for athletes. Being **agile** means one can move easily, and it is a quality that everyone needs to have. Quick changes of direction, walking up stairs and missing a step,

or a slip on a wet surface all require the body to react quickly to avoid a fall or acute injury. Strong glutes are essential for the agility we need to make it through daily life, let alone a basketball game.

Agility also covers the ability to abduct and adduct the leg quickly, forcefully kick, and remain coordinated. The coordination required to perform **triple extension** or a proper deadlift is more than most people would think. Triple extension is the sequential extension of the ankles, knees, and hips. Each requires a sequential and effective muscle action contributing to the next to create the overall movement.

TRIPLE EXTENSION:
The sequential extension of the ankles, knees, and hips.

Athletes Have the Glute Advantage

One 2016 survey of NCAA athletes looked at the prevalence and causes of ankle injuries in college athletes. The relationship between glute and hip strength and ankle injuries is scientifically supported. Of the 1,076 athletes, 3,861 musculoskeletal injuries were recorded over two years. Of those, 27 percent (1,035) were foot and ankle injuries.

The researchers collecting this data found that more than 75 percent of those foot and ankle injuries occurred in athletes who participated in women's gymnastics, women's cross country, women's soccer, and men's cross country.

The interesting part is that most of the injuries were related to ligament injuries, tendinopathies, fascia issues, or bone stress injuries—not muscular weakness. Dr. Jason Lake is an orthopedic surgeon specializing in the foot and ankle at OrthoArizona in Phoenix, Arizona. He confirmed the conclusion, stating, "Rarely do I see athletes come in for muscular ankle injuries. [My conclusion] is that they have stronger glutes and better lower-limb control than the general population due to [the nature of] their [physical] training."

CORRECTIVE EXERCISE AND OTHER THERAPIES

There are many therapies and training techniques for addressing weak or inactive glutes, improper movement patterns, or chronic muscular pain. Exercise became mainstream in 600 BC with the advent of sport and the Olympics. Stronger, faster, and bigger was always the goal when it came to fitness and training. Through the 1980s in the United States, gyms and aerobics became the norm for physical fitness as well as a social outlet. It wasn't until the late 1990s and early 2000s that **corrective exercise**, **physical therapy**, and **sports performance training** became popular.

CORRECTIVE EXERCISE:
Training techniques aimed at correcting movement patterns and muscular imbalances for more efficient, pain-free movement.

PHYSICAL THERAPY:
The treatment of disease, injury, or deformity by a licensed therapist using physical manipulation methods.

SPORTS PERFORMANCE TRAINING:
Athletic training aimed at improving the skills required for a given sport.

These methods and techniques all have the goal of optimal, pain-free movement. When executed correctly, they address the cause of the imbalance as opposed to the symptoms or compensations. There is no one way to perform corrective exercise or physical therapy. Sports performance training is also unique to the individual and specific to the sport being played. However, the methods these therapies are based on have given rise to the prominence of glute-specific training. As noted, many dysfunctions throughout the body are a result of a glute imbalance.

If a glute specialist doesn't understand anatomy and how the body moves, they cannot affect changes in themselves or a client. Glute specialists must first identify what is not working properly before they can begin to address it. By the end of this course, a glute specialist will be able to do just that. By keeping assessments specific and programming appropriate, the adaptations will come.

BEYOND THE SQUAT

The uneducated trainer or gym goer would rely on movements like the squat or the dead lift to strengthen or build the glutes. The knowledgeable, glute-minded individual would understand there is so much more than a squat required to be effective. Compound movements like a squat or dead lift not only require a full-body, concerted effort, but it takes time to build up the strength to execute the movements properly. In fact, an effective program to improve a squat would include isolation of the glutes, hamstrings, core, and quadriceps on the path to the end result.

The ISSA Glute Specialist credential is designed with variability in mind. Fitness professionals will learn proper posture and form for exercises designed to activate, strengthen, and grow the glutes and legs. The affiliated musculature of the LPHC is not neglected. Fitness professionals will learn how to identify dysfunctions that affect the glutes, isolate and work to

fix those dysfunctions, and incorporate corrective exercise techniques into training sessions for optimal, pain-free movement while building stronger glutes.

GLUTE PROGRAMMING: A QUICK GLANCE

This all-encompassing look at the glutes will address the anatomy of all musculature involved as well as how to activate, strengthen, and grow the glute muscles specifically. Isolated **muscle hypertrophy** can be achieved without affecting change in the prime movers of the legs, or they can be affected together. Exercise selection, training volume, load, sets, and repetitions will determine the training adaptations. These are known as **acute training variables**. When it comes to glute training, exercise selection is arguably the most important of these variables.

This one-of-a-kind course will address not only how to create an effective program but also the necessary details on how to plan each workout, each week, and the client's program as a whole. Fitness professionals will be fully prepared to create effective programs on a timeline and with a purpose from the moment they earn their credential.

MUSCLE HYPERTROPHY:
The enlargement of muscle fibers resulting in an increase in overall muscle size and cross-sectional area.

ACUTE TRAINING VARIABLES:
Components clarifying how an exercise is completed in a training program.

Demystifying the Myths of Glute Training

There are so many opinions on training glutes and how it all works. By the end of this course, fitness professionals will be more than able to dispel any untruths about training the derriere and prove their knowledge with nothing but results! It's important to get to the bottom of some of the many myths surrounding building a better booty.

Is a nice butt all about genetics?

Yes and no. Genetics can only get an individual so far. Genes determine the physical attributes of one's frame, contributing to the general size and shape of the glutes. However, the muscularity and strength of the glutes—like any muscle in the body—can be trained with hard work and a little patience. Fat distribution can also be manipulated.

The squat and dead lift are all that is needed, right?

Wrong! The squat and dead lift are great full-body movements, but they recruit mostly the hamstrings and quadriceps, especially for those with weak or inactive glutes. To improve the strength and function of the glutes, exercises focusing directly on the major glute musculature are needed, and those exercises will be discussed in this course.

Can the glutes be trained every single day?

Well, the gluteus maximus is the largest muscle in the human body! While glute muscles generally recover quickly from training, daily training is not advisable. Three to five times a week is doable with the proper programming and recovery.

Is body weight and resistance band / loop training the best for glutes?

Resistance bands and exercise loops are a great tool for glute training. However, they are definitely not the only option! They are great for muscle activation and to add resistance to a movement pattern, but to build size and strength, loads in the form of kettlebells, dumbbells, and barbells are necessary.

Is glute training all about training volume?

Short answer: no. There are many important acute training variables for specific glute-focused training. Training volume, or the overall number of sets and repetitions, is just one. Others include tempo, time under tension, rest, and intensity.

Only females want better glutes, right?

The biggest myth of them all! Is there anyone who wouldn't want a better-looking bottom? Glute training is more than just appearance. Strong glutes help with balance, back and knee pain, and athletic performance efforts like running, cutting, and jumping. For that reason, everyone can benefit from glute training!

Does being sore mean the glutes weren't trained hard enough?

Not at all. Soreness is not an indicator of how hard the glutes have been trained, or any other muscle for that matter. And sometimes, the soreness doesn't start for a few days. In other cases, soreness is simply an indicator that an individual didn't recover properly with optimal nutrition or other techniques. If a lot of volume was performed in a recent workout, it was training for muscular endurance. This type of training doesn't necessarily result in microtears in the muscle fibers, which is what causes post-workout muscle soreness.

Will blasting cardio make glutes look more shapely?

Nope. Cardio sessions will blast calories and help burn fat. If the goal is to lower bodyfat percentage, which may make the glutes look "better" as a side effect of a body composition change, then clients should go for it! But cardio does not challenge the glute muscles in a way that will make them grow.

Is there a magic food to build glutes?

Also a no. There is never a magic solution that can replace consistency in nutrition and with training. Hypertrophy training in general is best supported by a diet with protein for muscle repair and carbohydrates for cellular energy and repair.

During this course, fitness professionals will learn everything they need to know when considering the principles of program design, exercise selection, and training periodization while creating or executing glute training protocols. These foundational concepts provide a systematic structure while allowing for individualization of training that will guarantee results in any client. Good luck and bottoms up, fitness professionals!