Welcome to YOUR FIT NEWS!

In This Issue: **August/September 2006**

"Program Design" Mike Greeves, CEO, Hyperstrike.com

What's in a Program Design?

By: Mike Greeves, CEO, Hyperstrike.com

There are a thousand training programs out there. How do you know which is a good training program? Many are created with the "fun factor," pointing out that if you like it you'll keep at it. Unfortunately, by pumping the exercise program full of fun factors, its effectiveness is compromised – while the fun might get you going at the beginning, too much of a focus on fun instead of result won't get you far. Other programs are way too serious, telling you to "lift heavy or go home." While this is good for various competitive lifters, it won't give you a complete fitness program.

HyperStrike has been lucky in that thousands of people contact and tell us about their own exercise programs – enough so that we have a good insight into what a lot of people are doing out there. We are constantly told that they weren't getting the kind of result they wanted. After reviewing their programs, we can see why. It's in their program design.

A program design can bring great result or it can bring days, months or years of work with nothing to show for. Below we tell you some of the elements you should look for in a program design, so that you'll get the result you want and which you (and others) can see.

A Good Goal and a Good Plan

We can't emphasize enough that when you exercise you must have a clear goal and a solid plan to reach it. It is not enough to just exercise because you think it's good to do it. In the investment world, you wouldn't just put money into stocks because you think it's good to invest; you'd find the best stocks that give you the biggest returns. Otherwise you'd waste your time and your money. When you exercise, you should choose the best way to exercise in order to maximize your result and reach your goal.

Your goal, of course, is to become physically fit for whatever it is you want to do, whether it is for sport, work, life or looking your best. If you're reading this, then it is obvious that you want to be fit and you want to look great.

Just like vague communication can disrupt or destroy a project, having a vague idea of what "being fit" is can disrupt or destroy your achievement of it. You should clearly have a working definition of fitness. Only then can you implement a plan to achieve it.

HyperStrike is here to define fitness for you, and then it is our job to give you the plan that helps you achieve it.

Fitness and Body Image

We know that most people want to look good and that they realize to do this they must improve their fitness. Yet, we've found that most have only a vague idea of what fitness really is. Fitness should not be casually connected to just low body fat and good muscular definition. Rather, it is deeply related to your physical capacity to do many things: A jack of all trade; an all-around great "athlete." When you're fit, any physical task can be done well and nothing is left for compromise! This is true fitness. With a good exercise program, anyone can attain it.

When you are truly fit, your body will reflect your condition. It is not the other way around. Just as form should follow function, so too should looks follow fitness. Make yourself fit first, and then you'd be amazed at how your body responds with how it looks! The body works more efficiently this way!

Body Part Myopia

The focus on exercising individual body parts (biceps curls, calf raises, etc.) is a method that is

several decades old, and was given birth to the mass from the subculture of bodybuilding. While an "older" method doesn't make it invalid, it neither qualifies it as "tried and true" or the best way to exercise.

The program found in today's mass market has its root in bodybuilding, perpetuated by articles found in bodybuilding magazines, written by bodybuilders for bodybuilding purpose. A lot of these authors are themselves competitive bodybuilders, and by their nature they have the kind of time and training commitment that are daunting to most of us who live "normal" lives. But even if we're willing to commit to the time and the training, there's still something that most of us wouldn't do that bodybuilders do: Anabolic steroids.

While using steroids, almost any kind of exercise regimen works. The hormones that are responsible to trigger muscular development and fat burning are controlled by the administration of various steroids and illegal fat burners. This practice for the most part is unspoken and unrevealed in popular literature. And yet these bodybuilders continue to give us articles on "how they do it" through training.

Most of us chose to go without the legal and physical risks associated with steroid use. So we should think twice about using the exercise programs developed by bodybuilders. For legal, health and ethical reasons, HyperStrike stands strongly against steroids, and therefore our focus is on developing exercise programs for people who do it naturally.

Without the use of steroids, we have to control our natural hormonal environment in order to elicit the best muscular development and fat burning effect possible (a very different process as compared to that with steroid use). We do this by selecting the types of exercises that trigger the best responses from our endocrine system, or hormonal system.

Because the typical bodybuilding program (which focuses too much on individual body parts) blunts the hormonal system in the non-steroid user, it is important that we implement an exercise program that naturally triggers a favorable hormonal environment. Fortunately, sport science has given us a lot of information in the area of exercise and hormonal responses.

Maximize the Hormonal System

There are specific exercises that can be used to positively stimulate your endocrine system for favorable hormonal releases. Additionally, there are ways to use those exercises (in the form of repetitions, sets and rest) to trigger the types of hormones, as different types have different jobs in our bodies – i.e. muscular development, fat burning.

These exercises, it just so happens, don't focus on individual body parts too much. They focus on multiple body parts at once. They are called multi-joint exercises.

Multi-joint Exercises

These are exercises that engage and move many muscle groups at once. No focus is placed on just one muscle group (i.e. biceps, back of thighs, etc). Engaging many muscle groups maximizes the hormonal system to bring about muscular development or fat loss all over the body, and it does so more effectively than single-body-part exercises.

You might have heard that there's no such thing as spot reduction – or burning fat at a particular area of the body. So why do a thousand crunches? Also, trying to increase muscle size in a particular body part by exercising it separately is a less-than-optimal method. Save it for the early stage of a physical therapy program. You want the biggest bang for your effort.

Emphasize multi-joint exercises for the best muscular development and fat burning!

Variations

It's not just variation in sets, repetitions, and techniques that are important for continual results, but also in exercises. You have to vary the stimulus through reps and sets as well as the types of exercises. Change the way you do an exercise, but also change the exercise completely. And you should do it often enough to keep the body responding.

Metabolic Systems

Exercises should also target the three primary metabolic systems. The ATP-PC system fuels fast and high-effort activities that last up to about 10 seconds. The anaerobic system fuels high-effort activities that last from 10 seconds up to 3 minutes. The aerobic system fuels activities that last longer than 3 minutes. These systems need to be challenged in order to bring about positive changes to the neuromuscular system, such as muscular development, fat loss, and greater physical capacity for doing things.

Maximizing Fitness

By minimizing the use of a traditional bodybuilding program, you will focus more on an exercise program that prepares you physically for the real world. You will achieve real-world fitness.

Remember that fitness comes before looks. When you achieve fitness (the physical capacity to do a lot of things), you're able to do so much more physically, and as a result you're able to trigger changes much quicker than if you are to primarily focus on the looks but lack the means to change.

The exercise program that focuses on increasing your fitness not only brings you excellent muscular development and fat loss without the use of steroids, but also prepares you for real life. You will be

an all-around athlete competing in the game of life! (And you'll look good doing it!)

If the program design you're using doesn't address all these elements, then is it time you use one that does? It's your fitness.

"Random Thoughts" by Gabe Rinaldi, FIT General Manager

Random thoughts

by Gabe Rinaldi

For the month of September I'm going to do something a little different for my newsletter article. This month I am going to simply let my mind flow with a bunch of random thoughts. These thoughts won't relate to a single topic and will be very random. Without further ado, here we go:

Tonight (8/17/06) is the first episode of a reality television show called "The Ultimate Fighter" on Spike TV. This is the 4th season of this show. It's the real deal and when the men step into the ring, the talk stops, and they must put it all on the line. Check it out!

Speaking of reality TV shows – I'll admit that I've watched a few episodes of the show called "Workout" on Bravo. My excuse is that it's my industry. My thought is that the training sucks, it's all about being Hollywood, it's bad for the industry, and we are much better at FIT. In some weird way though I find it amusing.

I recently bought my first road bike after years of riding other types of bikes. I like the fact that I can cover a long distance in a short amount of time, I can ride right from my house, it's easy to find someone to ride with, and it's pretty fun; however, the egos, strange etiquette, weird games people play on the road (you can't pass me or if you do, then I'll pass you right back), and overall snobby nature of the sport is a turn-off. Oh yeah, the cars that don't pay attention to cyclists also suck.

Someone asked me the other day if FIT was getting away from the Olympic lifts. The answer is absolutely not. We still love the Olympic lifts for their ability to develop explosiveness, dynamic flexibility, strength, coordination, speed, and the excellent transfer they provide to real life. In fact yesterday we randomly had six trainers all having their clients do clean and jerks at the same time. That's awesome and never would have happened prior to the remodel. Long live Olympic lifting.

Medline is a great starting point for medical journal articles. Check it out:
http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=PubMed

I'm reading the book titled "Freakonomics" right now. It's an interesting book and I highly recommend it despite the fact that I'm still reading it. Here's a website for it:
http://www.freakonomics.com/

Please register to help raise money for prostate cancer by participating in the September 30th Fight Gone Bad workout. If you don't want to participant, but would like to watch others suffer during the workout (including your trainer), then please donate money on their behalf (100% of the money goes to cancer research and in fact the Wade Thompson fund is matching 100% of all donations as well). For more info go to:
http://www.athletesforacure.org

Google Trends is a cool website. It's fun to play around and put in 2 or more search terms to compare search volume. For example, put in "crossfit, equinox gym" and you'll see that crossfit is searched for more than equinox gym in 2006; however in New York a ton more people search for equinox gym. Try it with any other search items you may be interested in.
http://www.google.com/trends

After years of being in the personal training industry I've observed that most clients and their trainers adapt to each other's training expectations over time. In other words, if the trainer constantly demands more all the time, then the client gives more; however, it's a two way relationship so if the client constantly wants to take it easier, then the trainer will tone it down. Eventually some common ground is established. The problem with this is the client who consistently doesn't want to work hard and has trained the trainer to adapt to the clients level of effort. This is a dangerous phenomenon especially if the client wants to see huge results. I believe awareness of this situation, partnered training, and mixing up trainers helps to ameliorate this situation.

I read in the paper this week that the most commonly searched word on the Internet is "free". The second most commonly searched word is "new". Did I mention that this new edition of our newsletter is free?

The longer I've been a personal trainer the more I find myself doing less talking about the specifics of an exercise. I try to say the minimum amount necessary to get the desired result. Now, if someone asks me a training related question, then I tend to let it flow.

I wish more people would subscribe to the FIT forum.
http://www.focusedtrainers.com/forum

If you reach the point where training becomes fun and you get upset if you can't make a workout, then you've crossed the threshold and will hopefully be active for your entire life.

It's more fun to be fit and wear jeans and a t-shirt than it is to be out of shape and wear expensive clothes.

Everyone should own a convertible at least once (I've read this advice somewhere else as well). I've already owned 2 at the ripe old age of 31.

I wonder if anyone reads these newsletter articles – let alone one about my random thoughts. If you made it this far, then drop me an email with a random thought, comment, question, website link, or anything: gabe@focusedtrainers.com

Thanks for reading,
Gabe Rinaldi
F.I.T. – General Manager

"Energy Systems" by John Nguyen, FIT Exercise Director

ENERGY SYSTEMS

Your car requires energy to run, and that energy is the fuel in the gas tank. In order for the human body to move, it needs fuel, too, and this fuel for the body is called adenosine triphosphate, or ATP.

ATP is the basic unit of energy used to move the body, and – unlike your car's single tank of gas – the human body has more than one "tank" from which to deliver ATP. In fact, it has three tanks, called "energy systems." Depending on how you move, your body taps into specific energy systems. Although no one energy system is solely used at the exclusion of the others, one system often contributes primarily while the other two systems chip in secondarily.

These energy systems are called:

1. phosphagen system
2. anaerobic system
3. aerobic system

The Phosphagen System:

The phosphagen system supplies ATP primarily for short-term, high-intensity activities, like jumping, throwing, sprinting or lifting a very heavy weight. These high-intensity activities last for 5 to 10 seconds.

The Anaerobic System:

The anaerobic system provides ATP fuel primarily for intense muscular work that lasts from about ten seconds to 3 minutes. Some activities that utilize the anaerobic system include resistance training (using weight equipment or your own bodyweight) and sprinting distances longer than 100 yards.

The Aerobic System:

The aerobic system is the primary source of ATP fuel during low-intensity activities that are more than three minutes long, such as running, biking, casual swimming, walking or simply resting.

TRAINING THE ENERGY SYSTEMS FOR OPTIMAL FITNESS
I see far too many people out there training only one energy system while neglecting the other two. To gain optimal fitness, all of these energy systems should be equally trained and maximized. Generally, in real life, no one system is favored. You never know when you'll use which energy system. You may need to jump out of the way of harm; you may need to sprint from under the hail storm; you may need to carry a heavy weight for a hundred feet; or you may need to hike to the next town after your car breaks down in the middle of nowhere. By optimizing your fitness for the real world, you'll be ready for anything.

For general fitness goals, your exercise routine should be designed to maximize all three energy systems. With these three systems trained optimally, you'll be amazed at how many different things you can do physically!

"Cruciferous Vegetables" by Scott Kolasinski, FIT Metabolic Director

Cruciferous Vegetables: Nutritional Powerhouses

As society is learning more and more of what causes various cancers, autoimmune diseases, and decreases longevity, scientists continue to learn what causes and what will prevent these. With the growing baby boomer population reaching retirement age at increasing numbers, there is a greater interest in "preventative medicine."

The evidence is steadily growing that, not too surprising, a majority of diseases can be attributed to what we eat. In fact, the American Cancer Society puts a number on it. It estimates that more than two-thirds of cancer may be prevented through lifestyle modification, and nearly one-third of these cancer occurrences can be attributed to diet alone.

Scientists have recently drawn their attention more and more to a group of vegetables called the cruciferous vegetables that have appeared to show some impressive cancer-preventative, cancer-inhibiting and anti-inflammatory results. They get their name because their four-petal flowers resemble crosses.

Cruciferous vegetables include arugula, broccoli, cauliflower, brussel sprouts, cabbage, watercress, bok choy, turnip greens, mustard greens, collard greens, rutabaga, napa or Chinese cabbage, daikon, wasabi, radishes, turnips, horse radish, kohlrabi, and kale.

Cruciferous vegetables differ from other classes of vegetables in that they are rich sources of sulfur-containing phytonutrients known as glucosinolates (GLS). The science is getting deep investigating these and their abilities.

In order for the beneficial effects of GLS to be unleashed, the cell walls must be disrupted by chewing or cooking, activating an enzyme called myrosinase. The GLS are quickly broken down into the reactive compounds. Various forms of GLS break down into various forms of such chemicals called isothiocyanates, flavones, phenols and indoles.

These products, could help prevent cancer by enhancing the elimination of carcinogens before they can damage DNA, or by altering cell signaling pathways in ways that help prevent normal cells from being transformed into cancerous cells. Some GLS products, such as indoles, may alter the metabolism or activity of hormones like estrogen in ways that inhibit the development of hormone-sensitive cancers, such as breast cancer.

Each of these breakdown products of GLS has its own protective ability. Therefore, we should certainly not eat a single kind of cruciferous vegetable and believe that we are getting the true benefits of them. Variety is very important. The National Cancer Institute has linked the cruciferous vegetables to a reduced risk of colon cancer and protective effects against cancer of the lung, esophagus, larynx, rectum, colon, lung, stomach, prostate, and bladder.

However, there is another side to this. Unfortunately, this protective benefit against cancer has been determined to be largely dependent on an individual's genetic makeup. Individuals that lack the gene that metabolizes GSL products, such as isothiocyanates, will result in a greater concentration of isothiocyanates in their blood, resulting in longer exposure after cruciferous vegetable consumption. There are several studies that show this is why some individuals had greater protection from lung cancer and colon cancer. Therefore, some of us may benefit more from cruciferous vegetable ingestion than others. But no matter what, we all will benefit from them at some level.

GLS Content in Cruciferous Vegetables
Unlike some other phytochemicals, GLS are present in relatively high concentrations in commonly consumed portions of cruciferous vegetables. For example, ½ cup of raw broccoli might provide approximately 27 mg of total GLS. On the other hand, ½ cup of raw brussel sprouts contains 104 mg of total GLS. Table 1 shows a select list of cruciferous vegetables and their GLS content.

Table 1. Glucosinolate Content of Several Cruciferous Vegetables
Food (raw) Serving Total GLS (mg)
Brussels sprouts ½ cup (44 g) 104
Garden cress ½ cup (25 g) 98
Mustard greens ½ cup, chopped (28 g) 79
Turnip ½ cup, cubes (65 g) 60
Cabbage, savoy ½ cup, chopped (45 g) 35
Kale 1 cup, chopped (67 g) 67
Watercress 1 cup, chopped (34 g) 32
Kohlrabi ½ cup, chopped (67 g) 31
Cabbage, red ½ cup, chopped (45 g) 29
Broccoli ½ cup, chopped (44 g) 27
Horseradish 1 tablespoon (15 g) 24
Cauliflower ½ cup, chopped (50 g) 22
Bok choi (pak choi) ½ cup, chopped (35 g) 19

Cooking
Amounts of isothiocyanates formed from GLS in foods are variable and depend partly on the processing, age and preparation of those foods. Consumption of 5 or more weekly servings of cruciferous vegetables has been associated with significant reductions in cancer risk in some prospective cohort studies.

Glucosinolates are water-soluble compounds that may be leached into cooking water. Boiling cruciferous vegetables from 9-15 minutes will result in a loss of GSL content, up to 58% loss. Cooking methods that use less water, such as steaming or microwaving may reduce GSL losses. So for the sake of retaining GSL content, eating these vegetables raw is best.

However, some cooking practices, including boiling, steaming and microwaving at high power (850-900 watts) may inactivate myrosinase, the enzyme that breaks down GLS. Never fear. Without myrosinase, the bacteria in our gut will still break down some of the GSL into a beneficial product. However, inactivation of myrosinase in cruciferous vegetables substantially decreases the concentration of isothiocyanates. Once again, raw is best.

Unfortunately, for many, cruciferous vegetables are not as tasty as other vegetables, so people may have a difficult time wanting to eat them, especially in their ideal, raw state. This can be treated with mild amounts of fat-free dressings, dips, cottage cheese or flaxseed oil. Be creative and try to have these regularly in your refrigerator. Healthy eating should not be synonymous with "difficult eating."

Can I take a Supplement Instead?
Below is a list of other compounds and chemicals not previously mentioned that are naturally found in cruciferous vegetables with a brief description:
Vitamin A – a fat-soluble antioxidant that helps protect skin and proper cell reproduction.
Vitamin C – a water-soluble antioxidant that has a role in connective tissue repair
Vitamin E – a fat-soluble antioxidant that protects cells from damage
Folate – a B-complex vitamin that is involved in proper DNA metabolism
Selenium – a trace mineral involved in selenium-dependent enzyme functions.
Potassium – an electrolyte
Carotenoids – pigments synthesized by plants that may help form vitamin A and act as antioxidants alone. Research is not sure on all of their roles as being anti-carcinogenic.
Chlorophyll – a photosynthetic pigment that may have anti-cancer effects
Fiber – compounds that regulate blood sugar, slow digestion, decrease cardiovascular disease and aids in fat loss.
Flavonoids – plant compounds that are anti-aging and reduce the risk of chronic disease.
Indole-3-Carbinol – may inhibit cancer development in humans, especially reproductive cancers. This still needs further study in humans.
Lignans – may have a role in the prevention of hormone-associated cancers, osteoporosis, and cardiovascular diseases, but it is still not understood.
Phytosterols – inhibit cholesterol absorption and may help urinary functions with a benign, enlarged prostate.

As you can see, these vegetables are quite the powerhouses full of nutrients. No matter what your fitness goals are or if you just want to live a healthy lifestyle, these should be on your plate every day.

Because there are so many nutrients in cruciferous vegetables, scientists do not necessarily believe it is only the broken down GSL-products that benefit us, but it may be an interactive effect among several vitamins, minerals and phytonutrients that create the cancer-protective environment within us. Further research is still needed to better understand this.

Therefore, taking a supplement of just one of these GSL-products may not be recommended, especially an extract that utilized heat to create its supplement. This may have deactivated myrosinase, or the ingredient itself, leaving the responsibility of the conversion of GSL-products to our gut bacteria. In the end, if your diet is poor, something is better than nothing. Ideally, a wide variety of raw or lightly cooked cruciferous vegetables is just what you should eat.

Summary and Recommendations
Unlike other vegetables, cruciferous vegetables contain a class of a sulfur-compound called glucosinolate. After chewing these and breaking the cell walls, these are broken down by myrosinase into a number of anti-cancer, anti-tumor, and anti-inflammatory phytonutrients. Some of these phytochemicals stop carcinogens before they have a chance to alter DNA structure. Others slow the development or spread of cancerous cells or stimulate the release of anticancer enzymes. Indoles increase the detoxification of estrogen, reducing that hormone's chance of enhancing cancer growth in hormone-sensitive cells. This is believed to be only the tip of the iceberg for the number of benefits associated with cruciferous vegetables.

Although many organizations, including the National Cancer Institute recommend the consumption of 5-9 servings of fruits and vegetables daily, separate recommendations for cruciferous vegetables have not been established. For now, some scientists recommend 5 weekly servings of just cruciferous vegetables alone. Happy eating!

If you have any questions, please email me at scott@focusedtrainers.com.

Until next time…

FIT Client of the Month! Vicky Hambly

Client Name: Vicky Hambly

Age: 62

FIT member since: 09/05/03

Goals:

-Increase overall strength and endurance
-Decrease and eliminate low back pain

Results:
-Has no back pain or discomfort
-Has had substantial strength gains in all exercises

Likes:

-Working hard
-Squats
-Snatch
-Pullups(although she intially hated these)

Dislikes:

-Sit ups

PR chin-ups: Level 10 for sets of 8

Keys to success: Vicky has a great attitude everytime she comes to workout. She is dedicated to working hard and enjoys trying new and differnt exercises. Her desire to improve not only her daily activities but her recreational activities is a true testement to vicky's improvements.

Summary paragraph:
Vicky has been coming in for 3 years and has made great improvements. When she first came in her main concern was for her back. She had constant back discomfort and was very hesitate to do anything that she thought might aggreviate her back. Vicky comes in 1 time a week but has made the most of that time. She now is performing the snatch and doing box jumps on the medium box. She has gone from level 20 on the assisted pull up machine to doing jump pulls on the rings. She horseback rides twice a week and plays golf once a week with no concerns with her back. She even has climbed the roof of her house to paint the trim. Besides these activities Vicky can be seen in here doing the rower or on the treadmill, along with running at foothill and doing some lifting at her home. Vicky continues to improve in all exercises and is now up for new challenges without the worry of her back.

In her own words:

I thoroughly enjoy my appointments at FIT and working with Kevin English, who is always encouraging and supportive. My back has improved so much that I can do many things I thought I had to give up, including pulling weeds in the garden.

"Chronic Iliotibial Band Syndrome" by Chris Reed, PT, ATC Agile Physical Therapy

Chronic Iliotibial Band Syndrome: A Common Injury in Runners

Over the years more and more people are participating in exercise on a regular basis. Running has become one of the more popular forms of exercise with 10.5 million Americans reportedly running at least 100 days in 2003.1 Running injuries have also become more frequent with Illiotibial Band Syndrome (ITBS) being a common running injury in the knee.2,3
The iliotibial band (ITB) has been described as a thickening of the fascia lata in the lateral thigh. It runs from the iliac crest proximally to Gerdy's tubercle of the tibia distally. Proximally, it serves as a shared attachment of the "pelvic deltoid" muscles, comprised the tensor fascia lata (TFL) and the gluteus maximus.4
Two theories have been proposed as to the mechanism of injury for ITBS. Orchard et al5 have proposed that the

ITB is impinged as it slides from anterior to posterior over the lateral femoral condyle when the knee is flexed to 20o-30o resulting in increased friction at the lateral femoral condyle. Fairclough et al6 have proposed that the ITB compresses the adipose tissue located deep to the ITB against the lateral femoral condyle as it is tensioned when the knee flexes from 0o-30o.

Several potential anatomic risk factors have been described in the literature including ITB tightness, a prominent lateral femoral condyle, a varus deformity at the knee, a leg length discrepancy, foot pronation, and hip abductor weakness.7 The literature is sparse showing a link between the above risk factors and ITBFS. Hip abductor weakness has been shown to be related to ITBS.8,9 This muscle imbalance leads to decreased pelvic stability and uncontrolled adduction and internal rotation of the hip. This may lead to increased tension in the ITB leading to impingement against the lateral femoral condyle.

In the more acute phases, addressing this muscle imbalance can help the athlete to overcome this injury. However, in the chronic cases, the hip joint often becomes restricted into a position of relative flexion, internal rotation, and adduction. This position leads to a shortening of the anterior hip capsule. Unless the clinician addresses the impairment of restricted capsular mobility, it is unlikely that the chronic patient will completely overcome the injury.

Chronic cases commonly present with an insidious onset of ITB pain that has persisted over a period of months to years. Previous attempts at conservative management did not result in complete resolution and the patient's symptoms returned with a return to activity. The patient displays a consistent pattern of decreased dynamic frontal plane control of the hip and pelvis in a single leg stance position. Passive hip external rotation is limited and there is decreased mobility of the anterior hip capsule. Also present is a weakness in the gluteal muscles and an over-activity of the TFL with tightness of the ITB.

In conclusion, ITBS is a common injury seen in the running population. Common treatment of this condition, focusing on anti-inflammatory medication, activity modification, and soft tissue mobilization of the ITB, does not always completely resolve the symptoms. Strengthening of the hip musculature has been shown to improve the patient's condition. Mobility of the hip joint capsule may be an important piece to the patient obtaining complete resolution of their injury.

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