



CSWU Soccer Club – Technical Manual

## **Sports Science**

Effective Date: 2019 Revision

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Calgary South West United is a proud partner with Strive Fitness and Athletics who have relocated their fitness facility at CSWU office to provide the best Sports Science program for our members. Anton Joseph (Executive Director of Strive Fitness) and his highly educated, motivated staff will lead and carry out their goal of inspiring, empowering teams and the CSWU organization with the tools to pursue their next level of performance, health and fitness.

Our athletes participate in the following activities provided by Strive Fitness.

### **INJURY PREVENTION**

Strive Fitness and Athletics will play a key role in the prevention of injuries in the Calgary South West United Soccer Club (CSWU) athletes during the preparatory phase of the sport science-training program. Educating staff coaches and head coaches on warm-ups, cool-downs, work-to-rest ratios and loading.

Educating U8-U18 staff and coaches on proper physical literacy training based on Soccer Canada's Long Term Athlete Development (LTAD), to avoid coaches conducting exercises that are harmful to the children. Attend occasional games and training sessions for CSWU teams to ensure athletes are progressing and receiving the appropriate amount of recovery.

With the physical training program periodized, this will assist in ensuring the athletes progress appropriately. During the preparatory phase of the program, Strive will play a key role in the prevention of injuries in CSWU athletes. Educating staff coaches and CSWU coaches on protocols for injury prevention and treatment, as well as concussion protocol. Hosting webinars of parents and athletes on injury prevention and treatment, as well as Concussion Protocol.

## INJURY ASSESSMENT, TREATMENT AND RETURN TO PLAY

### Injury Assessment and Treatment

All injuries requiring an athlete to be removed from the game or training session, shall be assessed by the Athletic Therapist on-site and the necessary treatment provided. If the Athletic Therapist is not present at the game or training session, a team personnel certified in First Aid with CPR/AED will secure the athlete, provide any possible first aid, communicate with the parent (if required), and if required suggest they contact the Proactive Health Group for treatment. If it is an emergency, the Emergency Action Plan (EAP) will be followed.

The team personnel will complete the Player Injury Log and if emergency also the Accident and Injury Form, which is found in the first aid kit.

If follow-up treatment of an injury is required, the parent shall contact Proactive Health Group to arrange for a screening assessment of the athlete's injury. (Doctor's referral may not be required).

This screening assessment will be scheduled within 48 hours of notification of the clinic.

Following the screening assessment, the Lead Health Care Provider will contact the coach via e-mail to advise them of the status of the injury. All communication will flow through 1 FCD staff, then to the coach. If treatment is required then the athlete will have appointment(s) booked at the treating location in Calgary.

If no treatment is required, then the Proactive Health Group will provide the coach with advice on re-integration of the athlete into the training/game schedule of the team with any precautions or fazing that may be required.

### RETURN TO PLAY

Following a period of treatment, when the Proactive Health Group has assessed the athlete and they have been deemed fit to resume competition / training, the coach shall be notified of this by e-mail with a copy of the Return to Play Letter and the necessary steps to resume playing will be provided. The Return to Play Letter can be found at the Proactive Health Group.

### ACL INJURY PREVENTION

The ACL injury rate in females is at least twice that of male soccer players. Pre-season training programs and in-season warm up programs focusing on proprioception and neuromuscular conditioning has shown promising decreases in ACL injury rates for both male and female soccer players. Information regarding these programs is readily available online.

## RECOVERY FROM ANKLE SPRAINS

Initial care after sprains should consist of rest, ice, compression and elevation( R.I.C.E). Non –steroidal anti-inflammatories (NSAIDS) may also be beneficial. A functional rehabilitation program incorporating early range of motion exercises has been shown to enhance recovery. Proprioception or balance training is instrumental in recovery as well as prevention of future sprains.

## HEAD INJURY GUIDELINES

When a player or players collide heads whether with each other or with an object, such as a goal post, play should be stopped immediately. The safety of the player or players involved is of prime concern. There is no higher priority.

## ASSESSMENT

Perform a primary survey that the player’s airway, cervical spine, breathing and circulation are secure.

Quickly assess the player’s mental state using AVPU Scale:

- Alert
- V-Responds to Voice
- P- Responds to Pain
- U-Unresponsive

Assess pupil size, equality and reactivity

## PROTOCOL OF IMMEDIATE ASSESSMENT

If player is unresponsive or only responding non-purposefully to pain, then call 911 as player needs to be sent to the hospital. If player has any focal neurological signs, then call 911 as player needs to be sent to hospital. If none, proceed to secondary assessment

## SECONDARY ASSESSMENT

Perform secondary assessment looking specifically at:

Deformity, tenderness, or muscle spasm in neck or cervical spine

Head-scalp bruising, facial fractures, cuts, swelling, tenderness, bruising behind ears, bleeding from ear drum, dental trauma, or soft tissue injuries in mouth, swelling or bleeding from nose, reflexes on motor skills, or any other injuries observed.

Gain as much information as possible regarding incident, specifically determine:

- Time, mechanism and circumstances of injury.... basically what happened
- Loss of consciousness
- Nausea and vomiting (in this case , how many times player vomited )
- Other injuries sustained

#### HEAD INJURY PROTOCOL

All head injuries should be treated as a potential concussion and assessment should take place as soon as possible. Players should be taken off the practice or game field and should not return until assessed by a medical professional. For further information on Concussions and Concussion Policy, please refer to the following:

Soccer Canada Concussion Policy

[https://www.canadasoccer.com/files/2018\\_Concussion\\_Policy\\_Digital\\_2.pdf](https://www.canadasoccer.com/files/2018_Concussion_Policy_Digital_2.pdf)

#### STRIVE FITNESS AND ATHLETICS SPORT SCIENCE TRAINING SERVICES

Our sport science training services include team, small group and one on one session instruction and have proven results.

#### TRAIN LIKE A CHAMPION...

Our Strive expert coaches understand the physiological and movement skills demanded in football. At Strive, we believe the foundation of success comes through our Assess, Coach and Educate approach to athletic development.

#### ASSESS

Prior to starting our academy training program, we test athletes to establish a performance baseline and to set individualized training programs to improve skills and help them achieve specific performance goals. Throughout their training, we test our athletes to measure their performance improvements and track their progression. Our athlete evaluation process allows us to measure performance results, to set new testing standards. Our extensive database of test and performance information allows athletes to compare their scores on our standardized tests against their peers. Athletes are able to conduct search comparisons by geography, gender, age or sport to see where they rank.

## COACH

It's all about coaching. Strive has assembled some of the top, most experienced coaches in the country to develop the best athletes possible. Education and experience are married together at Strive. Our coaching staff members have had a hand in developing some of today's top professional athletes. Many of which were only 8 years of age when starting on their journey.

## EDUCATE

Thousands of athletes have taken advantage of our individualized sport-specific training programs to enhance their speed, power, and agility to gain more than just a step on their competition. Our athletes go through comprehensive programs to enhance their performance, biomechanics, strength, cardio fitness, recovery, and sports nutrition and are taught how their body works and how to maximize their athletic potential.

## STRIVE CRITICAL SPEED

Strive will successfully increase your speed, agility and quickness with our comprehensive Strive Critical Speed program component. Focus on running biomechanics, stride frequency (fast feet), stride length, agility and muscular endurance is the core of the program. Athletes of all ages will benefit from this proven program component.

## STRIVE CRITICAL STRENGTH

Strength and power are the foundation for all competitive athleticism. The Strive Critical Strength program component focuses on getting the athlete strong and powerful specific for their sport. Athletes take part in our age appropriate strength training to enhance their strength and power. Our expert coaches provide instruction and support to maximize results and to ensure that the athlete remains safe while taking part in the sessions.

## STRIVE CRITICAL SKILL

Athletes work with our expert sport specific coaches to improve the skill set necessary to become better in their sport. Train with some of the best in the business to get read for the upcoming season!

## THE STRIVE CRITICAL SPORT ONLINE TRAINING CENTRE

This is your online sport specific strength, speed and agility training program information resource!  
Develop the strength, speed, quickness and power necessary to become the best athlete possible.

#### TEAM TRAINING SESSIONS

The team training sessions to be offered by Strive Fitness and Athletics to Southwest United's elite soccer teams will be comprehensive in nature. Over the course of 10 - 45 minute sessions, each team will train with the focus on the areas of assessment and testing, sprint biomechanical instruction, speed and agility programming, prehab and rehab programming, and strength training instruction. The following is a breakdown of the areas of focus for our team training sessions.

#### TESTING AND ASSESSMENT

- Measurement and evaluation of athletes in the areas of speed, strength, flexibility, and power
- Evaluation of athletes through the year to measure progress and areas of deficiency

#### SPEED, AGILITY AND COORDINATION

- Proper techniques for permanent, positive changes
- Proper basic mechanics to support sport specific movement patterns

#### STRENGTH AND POWER

- Focus on movement and function rather than specific muscle groups
- Maximal strength, power, strength endurance and stability

#### MOBILITY AND FLEXIBILITY

- Dynamic Mobility, Active Isolated and Proprioceptive Neuromuscular Facilitation (PNF)
- Training Specific and functional musculo-skeletal mobility
- Unrestricted range of motion supports proper speed and strength technique and decreases likelihood of injury

## REGENERATION

- Properly designed periodized program to facilitate regeneration
- Focus on recovery to maximize effectiveness of next workout
- Focus on musculo-skeletal and nervous system recovery
- Power and quickness improvements occur as body adapts to stress

## ENERGY SYSTEM DEVELOPMENT

- Sport specific conditioning and fitness requirements
- Energy system adaptation and optimization
- Integrated training approach

## INJURY PREVENTION

- Prehabilitation exercises
- Biomechanical analysis, flexibility development and stability development reduce acute and overuse injuries

## SAMPLE WORKOUT DAY

### DAILY MOVEMENT PREP

#### EXERCISES      SETS / REPS

Stride    2 x 20 yards

A Skip    2 x 20 yards

B Skip    2 x 20 yards

C Skip    2 x 20 yards

Walking Lateral Lunge    2 x 10L,10R

Backwards Skip 2 x 20 yards

Carioca 2 x 20 yards

Tapioca 2 x 20 yards

Bear Crawl 2 x 20 yards

Backward Bear Crawl 2 x 20 yards

5-5-10 sprint 2 x 20 yards

### STRENGTH WORK

#### EXERCISES SETS / REPS

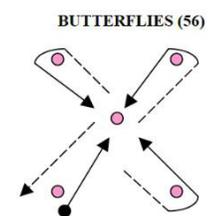
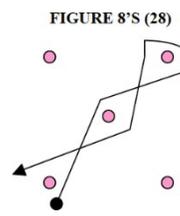
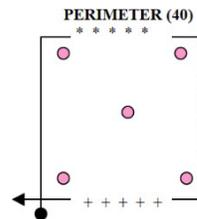
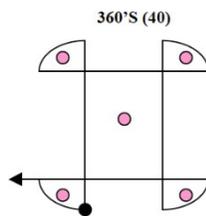
Hammer Push Pull 2 x 8

Single Leg Deadlift 2 x 6

Barbell Bent-Over Row 2 x 8

Glute-Ham Raise 2 x 8

### SPEED AGILITY WORK



Three sets of each pattern for time. Cones are 10 yards apart.

### CORE WORK

#### EXERCISES SETS / REPS

Front Bridge 2 x 60 seconds

Physio Ball Lying Trunk Rotation 2 x 10

Med-Ball Sit-Up 2 x 20

Med-Ball Rotation to Press 5 x 20

SAMPLE TESTING DATA SHEET



Distance Group Athletic Testing

Test Date:	Sept 11/19	Sept 11/19	Sept 11/19	Sept 11/19	Sept 11/19	Sept 11/19	Sept 11/19	Sept 11/19	Sept 11/19	Sept 11/19										
Athlete Name	Max Push Up		Reach (inches)		Jump Height (inches)		Vertical Jump (inches)		EXERCISES		Broad Jump		Max Pull Up		Max Sit Up		40 Yard Dash		Sit and Reach (inches)	
Tyson Shannon	40		88		104		16		82		9		50		5.01		-10			
Thomas Gyorgy	35		86		106		20		94		13		37		4.9		1			
Charlotte Sinlee	23		81		94		13		64		0		31		5.6		0			
Sihaam Khalid	15		84		96		12		67		0		37		5.3		1			
Ibrahim Khalid	13		88		100		12		65		0		31		5.3		3			
Amaia Ervin Arambarri	40		77		90		13		60		6		38		6.2		0			
Ayva Sylven	22		84		95		11		61		0		37		6		6			
Amy Miller	48		81		97		16		73		1		49		5.48		5			
Kyle Edwards	44		96		122		26		91		14		40		4.78		2			
Kaden Kingsmith	30		89		109		20		95		5		37		4.68		-5			
Deon Flynn	40		89		110		21		69		7		38		5.6		0			
Nazret Kobodom	18		77		90		13		42		0		28		5.7		2			

PROACTIVE HEALTH GROUP AND THE ATHLETE INJURY CENTRE

Our team of sports specialized health professionals cater to both World-Class High-Performance

Athletes and Calgary’s active population. We have provided health care at over 300 International sports events. Our practitioners have treated over 300 Olympic, Paralympic and Professional athletes and been part of the Canadian medical care team for 5 Olympic games

We have treated over 70 Olympic Medalists. Our team provides excellence in sports specialized chiropractic care, IV therapies, prolotherapy, platelet rich plasma (PRP), massage therapy, kinesiology, naturopathic medicine and more. At the Proactive Health Group, we pride ourselves in giving the best care possible to everyone who walks through our doors.

SERVICES

- Chiropractic Care
- Massage Therapy
- Naturopathic Medicine
- Intravenous Therapy
- Prolotherapy
- Kinesiologist/Exercise Specialist
- Executive Medical
- Custom Orthotics
- Physiotherapy

ATHLETE INJURY CENTRE PARTNER

Athletes invest countless hours to be their best, stay active and keep moving. Our Athlete Injury Centre helps ensure they do so.

Injuries happen and when they do, the role of the AIC partnership is to get you and your members seen, treated, moving and back to activity as soon as possible.

Many undiagnosed or untreated injuries create chronic and often long-lasting problems in the future. The mandate of the Athlete Injury Centre is to keep you and your members injury free.

#### HOW DOES THE ATHLETE INJURY CENTRE (AIC) PARTNERSHIP WORK?

The AIC provides partnered sports organizations immediate and priority access for professional examination by a sports healthcare specialist.

Members are seen by one of our sports specialists and provided the following:

A complete injury examination

- Appointment within 48 hours
- Injury rehabilitation support: detailed full diagnosis and return to sport recommendations
- Referral for advanced imaging or additional services if needed (X-Ray, ultrasound, bone scan, etc.)
- We quarterback care with your chosen health care professionals if desired

There are many benefits to being an AIC partner that include:

- Reduce member attrition
- Increase your organizations bottom line
- Reduce time away due to athlete/member injury, discomfort or pain
- Increase the effectiveness of game play
- Incentivize member attraction, promotion
- Cultivate long-term member participation and loyalty
- Access to free informative member talks on a host of relevant subject matter (injury prevention, effective warm ups, hydration strategies and more)
- Receive ongoing knowledge support and website content (blogs, private AIC landing page etc.)
- Get "Ask the Expert" access

SPORT SCIENCE PROVIDER CONTACTS

Strive Fitness and Athletics Unit 116, 10450 50 Street SE Calgary, AB T2C 5P8

Phone: (587) 333-6448

Proactive Health Group

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