Case Study: Sarah (Bowman) Brown

Name: Sarah (Bowman) Brown
Gender: Female
Age Range: 20-29
Event Focus: 800m/1500m/5k
Background:

- High School 1000m National Record Holder (2:42)
- Fastest HS female miler in all-HS race (4:36)
- 2009 NCAA Indoor Mile Champion
- 4x800 American Record
- DMR World Record
- 2010 World Championships 1500m Finalist
- 2013 World Championship 1500m Semi-Finalist
- 2014 Outdoor Track World Leader, Mile

Injury/Diagnosis: Athlete began suffering Achilles tendinosis and bursitis in her left foot while at the 2010 World Championships. From 2010-2011, the athlete attempted to return to training unsuccessfully multiple times, during which, injury symptoms worsened and began appearing in her right foot as well. In late 2011, she underwent the first of four surgical procedures to repair the insertion point and relieve pain associated with the injury. The athlete was in training for the 2012 Olympic Trials.

Training Regimen Pre-Injury:
Day 1:
(AM) 4M Threshold + Strength & Core
(PM) Track workout + Drills

Day 2:
(AM) 40-45min run

Day 3:
(AM) Sprint Drills + Strength & Core
(PM) Track Session + Drills

Day 4:
(AM) 30min run

(PM) 20-30min run

Day 5:
(AM) 4M Theshold + Strength & Core
(PM) Track Session + Drills

Day 6: 60min Steady Run

Day 7: Day Off

Phases of Recovery:

Phase I Training: Core work and seated strength training
Phase I (4 Weeks)

The first 72 hours, the athlete was required to be 100% non-weight bearing (crutches). For the next four weeks, the athlete was required to wear a walking boot and refrain from all vertically-positioned activity.

Phase II Training: Gradually Increasing Low-to-No Impact Cross-Training
Phase II (6 Weeks)

Athlete was released from walking-boot and allowed to begin low-to-no impact cross-training such as swimming, biking, elliptical and walking. She could incrementally increase the duration of this activity weekly if pain-free. The athlete also began a strict rehabilitation program centered on regaining stability and strength in the lower half of her lower extremity. This rehabilitation progressed to form-drills after four weeks.

Phase II Training: Beginning of Phase → End of Phase
Day 1:
(AM) 30→60 minute elliptical + core & rehabilitation/drills
(PM) 20→50 minute elliptical

Day 2:
(AM) 50→90 minute elliptical w/ aerobic session (Steady, Tempo, Fartlek, etc.) + strength, core & rehabilitation/drills
(PM) 20→45 elliptical

Day 3: 90→150 minute elliptical

Day 4:
(AM) 50→60 minute elliptical + core & rehabilitation/drills
(PM) 30→40 minute elliptical

Day 5:

(AM) 50→75 minute elliptical w/ AT/Strength/VO2Max session (Intervals, "Hills", etc.) + strength, core & rehabilitation/drills
(PM) 20→45 elliptical

Day 6: 120→150 minute elliptical w/aerobic component (Progression, Steady, Tempo, etc.)

Day 7: 60→90 minute elliptical + core & rehabilitation/drills

Phase III Training: Return to Running
Phase III (5 Weeks)

Ten weeks into recovery, the athlete was cleared to begin on-land running. With her goal race (Olympic Trials) being five weeks away and the qualifying window ending in only two weeks, the athlete focused on race-specific quality training sessions 3 days per week and optimized recovery with cross-training sessions all 7 days per week.

Phase III Training:
Day 1:
(AM) Speed Development + strength, core & rehabilitation/drills
(PM) 45→60 minute elliptical

Day 2:
(AM) 50→60 minute elliptical + core & rehabilitation/drills
(PM) 20→45 elliptical

Day 3:
(AM) VO2Max/Strength Intervals + Hills + strength, core & rehabilitation/drills
(PM) 45→60min elliptical

Day 4:
(AM) 50→60 minute elliptical + core & rehabilitation/drills
(PM) 20→45 elliptical

Day 5:
(AM) Race/Sub-Race Pace Intervals + strength, core & rehabilitation/drills
(PM) 20→45 elliptical

Day 6: 120 minute elliptical w/aerobic component (Progression, Steady, Tempo, etc.)

Day 7: 60 minute elliptical + core & rehabilitation/drills

Results:

Two weeks into this phase, the athlete ran her first race in over a year and a half. She qualified for the Olympic Trials by running the OT 1500m "A" Standard of 4:12. She continued her pattern of three running sessions and 7-10 cross-training sessions per week.
At the Olympic Trials, the athlete excelled, having the fastest and second-fastest final lap in the prelim and semi-finals, respectively. This qualified her for the finals. In the finals, the athlete finished 5th place and ran 4:07, only two seconds off her all-time best.

Discussion:

After two years of injury and inconsistent training patterns, the athlete was able to regain fitness while recovering from a series of procedures to repair damaged tissue around the Achilles tendon. The use of cross-training allowed the athlete to build an aerobic base that translated quickly to track performances after only two weeks of quality race-specific sessions. Three additional weeks of quality sessions allowed this athlete to run close to her all-time best and compete for a spot on the US Olympic Team, all while remain healthy.

Since completion of the Olympic Trials, the athlete and her coach began proactively integrating high levels of cross-training into her schedule in order to optimize recovery, maintain health and maximize performance. The athlete has embraced this new approach to training since learning about and acquiring an ElliptiGO, which allows her to cross-train outdoors in a more mentally-stimulating fashion.

Long-Term Results & Development:

Using the proactively integrated training method, the athlete has remained injury-free for two years and continues to progress. Since the 2012 Olympic Trials, the ability of this athlete to have consistent, healthy training has helped her achieve lifetime bests in every race distance from 800m to 8km (road); this includes qualifying for, and competing on, the 2013 US World Championship Team in Moscow, Russia as well as being the Mile world leader on the track for the 2014 outdoor season.