INCREDIWEAR

Study Booklet

AVAILABLE STUDIES AND DATA

THE JOURNEY

At Incrediwear, we know first-hand how pain and injury can slow you down, and occasionally, become the inspiration for greatness.

In 2009 a mountain biking accident, three herniated spinal discs, and an unwillingness to give up his active lifestyle left our founder Dr. Jackson Corley, seeking innovative alternatives that led him to prototype the back brace.

His dramatic recovery, return to athletic activity, and avoidance of surgery to this day served as the foundation for what would become Incrediwear: A committed pursuit to help those in pain.

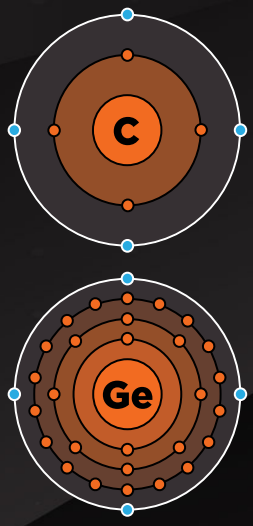
iNCREDIWEAR

MISSION STATEMENT

DEVELOP AND DESIGN INNOVATIVE PRODUCTS THAT PREVENT INJURY, INCREASE PERFORMANCE AND ACCELERATE RECOVERY TIME FROM INJURIES AND SURGICAL INTERVENTION.

HOW IT WORKS

Incrediwear Technology is an innovation of proprietary fabric embedded with semiconductors Germanium and Carbon which release far and mid-level infrared waves that vibrate the body's cells, producing a dramatic increase in blood flow without dilation.



CARBON AND GERMANIUM

+

BODY HEAT

VIBRATION OF CELLS

This improves thermo-regulation, brings more oxygen and nutrients to the affected area, as well as increases interstitial pressure naturally feeding edema into the lymphatic system. This non-compressive physiological response reduces pain and swelling, improves mobility, optimizes the body's natural healing process and accelerates post-operative recovery.

BLOOD FLOW
RECOVERY
PERFORMANCE

INFLAMMATION
TISSUE DAMAGE
STIFFNESS & PAIN

FC COLOGNE

INVESTIGATION INTO THE EFFECTS OF WEARING INCREDIWEAR PRODUCTS FOR IMPROVED RECOVERY AND REDUCTION IN PLAYER DOWNTIME.

INTRODUCTION & PURPOSE

In each Bundesliga season clubs have to contend with downtime of injured players, which does not always result from direct contact with opponents, but rather from a lack of physical regeneration. The number of muscular injuries, especially in the lower extremities, is growing steadily. More than 1500 times Bundesliga players were forced to take a break in the season of 2017/2018, with injuries mainly affecting the thighs / calfs (36.3%), knees (15.1%) and ankles (13.8%). In order to achieve an improved regeneration, the players of the pro team of the 1. FC Cologne wore Incrediwear Recovery clothing in the season of 2018/19. They wore these products both in the rest/sleep phases as well as in the training units.

METHODS

Design: Review of the injury reports of a Bundesliga club in the season of 2018/2019
Equipment: Pro team (25 players) were equipped by Incrediwear Sleeves and Braces:

FOR THE REST, TRAVEL AND SLEEP PHASE:

- Performance Pants (leggy)
- Circulation Shorts (short legs)
- Sport Socks / Circulation Socks

FOR ACUTE INJURIES, CHRONIC COMPLAINTS, REHABILITATION, PRE- / POSTOPERATIVE:

- Leg Sleeve - Ankle Sleeve
- Knee Sleeve - Body Sleeve
- Calf Sleeve - Back Brace

INVESTIGATION ANALYSIS

At the end of the season, a questionnaire was handout to the players by the medical department for subjective evaluation. In addition, the injury statistics were evaluated in comparison to the previous season.

INCREDIWEAR PROTOCOL

IN CASE OF INJURY: Wearing a sleeve (or combination of sleeves) on the affected area.

CHRONIC COMPLAINTS: Wearing a sleeve / brace of the affected area in the resting phase and overnight.

GENERAL: Use during the travel days and before, during and after the training sessions and in the sleep phase.

EVALUATION OF THE QUESTIONNAIRES

The questionnaire survey generally gave the following results:

1.) HIGH QUALITY AND COMFORT

The Incrediwear products are given a very high quality and very good wearing comfort by the players. The products can be used without restrictions in active or passive phase by the players and show a high acceptance among the players.

2.) SUBJECTIVELY IMPROVED REGENERATION

After a longer sleep phase (overnight), the players experience a subjectively improved regeneration of the stressed muscles. Especially after intense training sessions is reported by “lighter legs” and “less muscle pain”.
In case of acute injuries (ligament distension, stowage) a rapid, optically clearly visible swelling of the affected area is observed. Generally, the Incrediwear products help to optimize the effects after therapeutic treatments and to increase the range of motion.

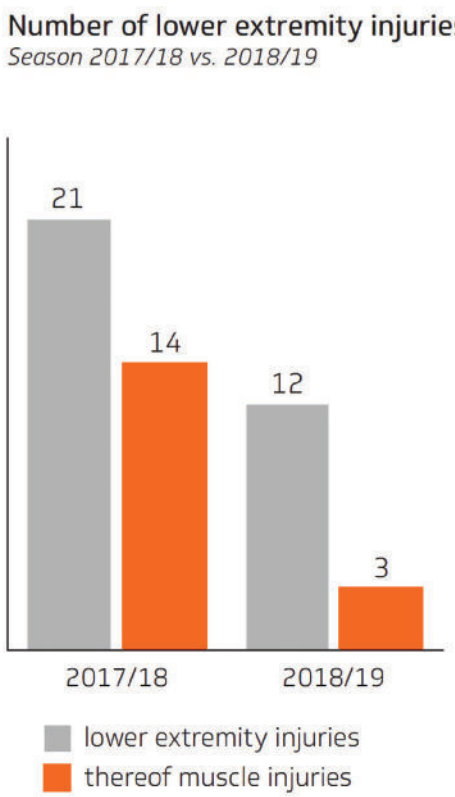
3.) SUBJECTIVELY BETTER BURDEN

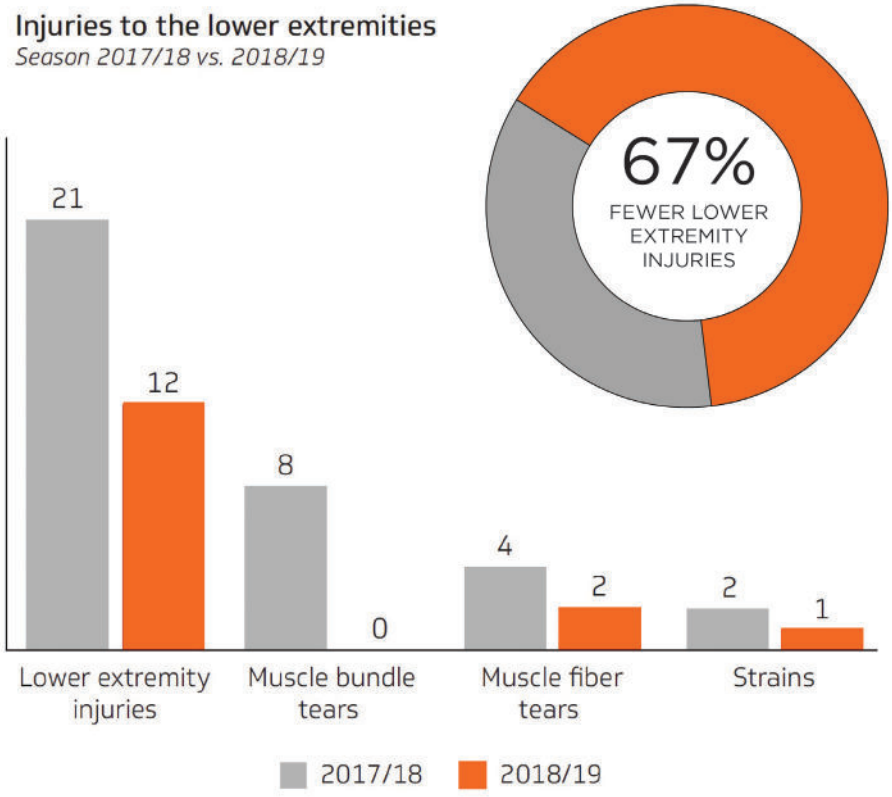
By wearing the Incrediwear products while traveling by bus, train or plane, the players are more ready to perform faster. Higher burdens can be dealt with faster and more effectively and players report “lighter legs” just after a day’s travel.

4.) IMPROVEMENT OF SYMPTOMS

For players with chronic discomfort they report a noticeable reduction in pain, coupled with a gain in more freedom of movement in the affected area.
Players with groin discomfort report significantly less local pain after getting up and improved gait after wearing an Incrediwear Hip Brace overnight.

INJURY STATISTICS FOR THE SEASONS 2017/2018 AND 2018/2019





There are significant differences in the comparison of lower extremity injuries (2017/2018 season without Incrediwear products, 2018/2019 season with Incrediwear products).

In the season of 2017/18, there were 14 muscle injuries in the lower limb:

- 8 Muscle bundle tears in the area of the hamstrings
- 4 Muscle fiber tears in the area of the hamstrings
- 2 Strains in the area of the quadriceps femoris

All mentioned injuries resulted in longer downtime of the players. In the season of 2018/19 there was a significant improvement in the lower extremity injuries:

- 2 Muscle bundle tears in the area of the quadriceps femoris
- 1 Strains in the area of the Hamstrings.

Striking was the significantly lower downtime of the players involved. This is attributed to the continued use of the Incrediwear Recovery products, which were served to provide better overnight regeneration noticeably and better supply of nutrients to the muscles.

CONCLUSION

After applying the Incrediwear products in the season of 2018/2019, the medical department of 1. FC Cologne draws a very positive conclusion.
The Incrediwear Recovery products are very popular by players, who generally received positive feedback after using the products and are convinced of the products, not least because of their high wearing comfort and ease of use.

The Incrediwear products help to improve players' recovery, provide effective regenerative supplementation on travel days and generally reduce muscular issues. When using the Incrediwear Sleeves (Ankle, Knee, Calf or Elbow Sleeve), it can be said that they contribute to faster edema absorption and pain improvement in the case of acute injuries. As a complementary product after therapeutic treatments, the Incrediwear products proved to be useful.

In chronic symptoms, especially after wearing at night, it also comes in the morning after getting up to a pain improvement, and after some time to significantly improve the range of motion.

1. FC Cologne will continue to use Incrediwear products for the supportive regeneration of its professional players over the season of 2018/2019.

OSTEOARTHRITIS PAIN RELIEF

PEER REVIEWED AND PUBLISHED IN THE OCTOBER 2019 ORTHOPAEDIC JOURNAL OF SPORTS MEDICINE

STUDY PARTNERS

Katherine Marino. Rachel Lee. Paul Lee.
Grantham & District Hospital, United Lincolnshire Hospitals NHS Trust, Grantham, UK. School of Sport and Exercise Science, University of Lincoln, Lincoln, UK.

PURPOSE

To assess the outcomes of GE knee sleeves for patients with knee OA.

STUDY DESIGN AND METHODS

This study was undertaken at a hospital in the United Kingdom. Patients who had radiographic features of OA, experienced knee pain for at least 6 months, and opted for nonsurgical intervention were included. Patients were recruited over 3 months.

The University of California, Los Angeles activity score, Lysholm score, visual analog scale (VAS) score, and Oxford Knee Score (OKS) were collected at monthly intervals for 6 months. Patients were followed to determine their compliance with wearing the knee sleeves at all times, as advised, and whether any adverse effects had occurred.

This was a cohort study, and the level of evidence was 2.

A total of 50 participants were recruited for the study; 4 participants were excluded due to pain and were converted to surgical management. Therefore, 46 patients were analyzed and placed into 2 groups according to severity of OA, as classified by the Kellgren-Lawrence system: group A had grade 1 or 2 OA, and group B had grade 3 or 4 OA.

There were 25 patients in group A and 21 in group B.

RESULTS

STATISTICAL IMPROVEMENTS

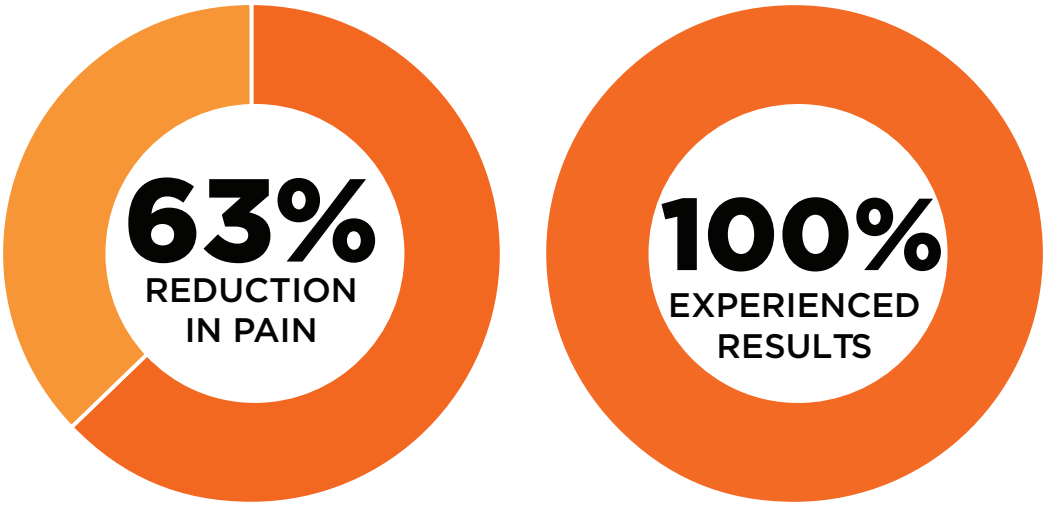
Improvements were seen in OKS, VAS, and Lysholm scores in both groups. Clinically significant improvements were seen in group A only for OKS (mean increase, 14), VAS (mean decrease, 4.1), and Lysholm (mean increase, 17.2) scores. These results were also statistically significant (OKS, P = 5.8 × 10-7; VAS, P = 7.7 × 10-12; Lysholm, P = 4.2 × 10-11). The data from this study demonstrated that GE knee sleeves gave better outcomes for patients with grades 1 and 2 OA compared with patients with more advanced disease, which is consistent with previous studies. A total of 3 patients reported skin irritation, which resolved with simple skin ointment application. No patients reported infection, deep vein thrombosis, or circulation problems.

HIGH COMPLIANCE RATE

The dropout rate of this study was very low (8%) compared with other studies involving knee braces. This dropout rate suggests that the GE knee sleeve is a treatment option to which most patients will adhere, and the low number of complications highlights that the GE knee sleeve is a safe treatment method.

CONCLUSION

In the United Kingdom, knee OA continues to be a leading cause of morbidity and cost to the health service, and the clinical and economic burden of OA is predicted to increase. Optimization of current nonoperative management is important in improving quality of life and delaying the need for surgical intervention. This is the first study to assess the outcomes of GE knee sleeves in patients with knee OA. The results of this study confirm that GE knee sleeves could play an important role in managing patients with knee OA, as demonstrated by the clinically significant improvements in OKS, VAS, and Lysholm scores.



Read this study online at PubMed or the OJSM website

DOMS RECOVERY

EFFECTS OF INCREDIWEAR LEG SLEEVES ON DELAYED ONSET MUSCLE SORENESS FOR ELITE TRIATHLETES

STUDY PARTNERS

E. Todd Schroeder, PhD, MS, CSCS, FACSM
Mark Allen Associate Professor Director, USC Clinical Exercise
K2 Science Institution

PURPOSE

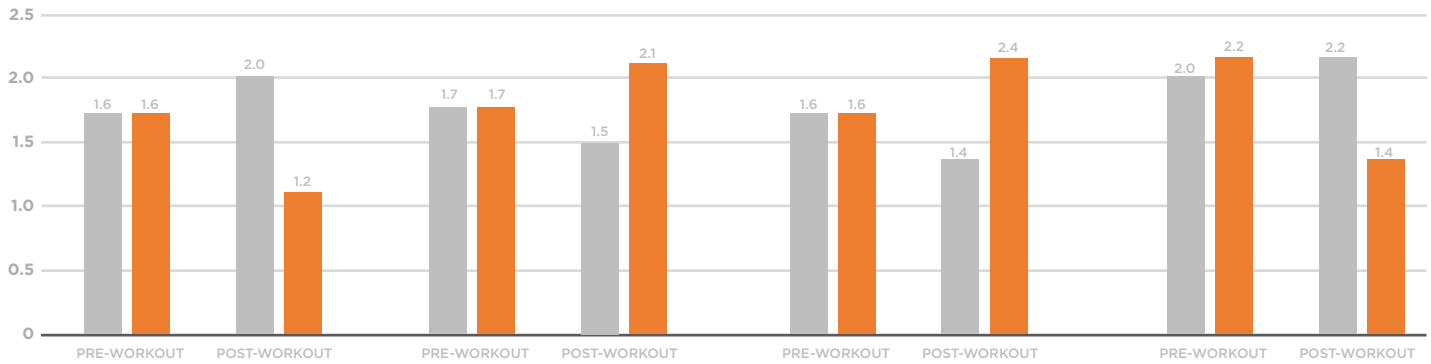
To investigate the effects of wearing Incrediwear leg sleeves on delayed onset muscle soreness (DOMS) for elite triathletes.

STUDY DESIGN AND METHODS

The study was structured around a retrospective review of surveys from elite triathletes following training sessions. After outlier removal, t-tests compared the surveys regarding symptoms of Delayed Onset Muscle Soreness at three time-points following training sessions.

Triathletes wore the Increidwear leg sleeve for a minimum of 9 hours per day following training sessions. Their training included swimming, biking, and running over a 5 day period.

STUDY FINDINGS



SORENESS
25% LESS SORENESS

LOOSENESS
23.5% MORE LOOSE

SUPPLENESS
25% MORE SUPPLENESS

TENDERNESS
23.5% LESS TENDER

DISTANCE RUNNERS

EFFECTS OF INCREDIWEAR CALF SLEEVES ON ELITE LEVEL DISTANCE RUNNERS

STUDY PARTNERS

Team Prep USA Distance Running Camp

PURPOSE

To measure the effect of calf sleeves on distance runners.

STUDY DESIGN AND METHODS

At a training camp, a total of 94 high school elite level distance runners completed surveys measuring soreness, looseness, suppleness, and tenderness of their shins prior to using Incrediwear or working out. Incrediwear calf sleeves were randomly given to 46 of these athletes and were worn for two hours following workouts. The final survey was conducted after seven days of workouts and changes were measured for each category.

STUDY FINDINGS

Athletes without calf sleeves showed a 35.8% increase in soreness, a 17.6% decrease in suppleness, and a 12.1% decrease in looseness. This compares to only 23.8% increase in soreness, a 5.9% decrease in looseness, and a 1.0% decrease in looseness on athletes with the sleeves.

MAJOR LEAGUE SOCCER

EFFECTS OF INCREDIWEAR LEG SLEEVES ON RECOVERY AND TIME LOSS FOR MAJOR LEAGUE SOCCER PLAYERS

STUDY PARTNERS

Brian Stirling (SPT, CSCS), Jonathan Sum (PT, DPT, OCS, SCS), Tyler Knight (MS, ATC, CSCS), USC Division of Biokinesiology & Physical Therapy, Real Salt Lake Soccer Club

PURPOSE

Every season Major League Soccer players are injured, resulting in time-loss. Strains and sprains accounted for 37% and 19%, respectively, of all injuries during two competitive seasons. 92% of muscle injuries in MLS players occurred in the lower extremities. To aid recovery, many professional athletes have begun wearing Incrediwear products. This study was specifically to investigate the effects of wearing Incrediwear leg sleeves on time-loss for professional soccer players.

STUDY DESIGN AND METHODS

The study was structured around of injury reports from one MLS team in 2015 and 2016. In 2015 there were no Incrediwear products being used, in 2016 players started using Incrediwear.

During the 2016 season, injured players wore Incrediwear leg sleeves for a minimum of one hour before and one hour after all practices and games. All players wore the sleeves during travel days and for a minimum of one hour post-training if they had trained at least 10% over their norm in distance, high speed running, and/or accelerations/decelerations.

STUDY FINDINGS

With Incrediwear, players in 2016 missed significantly less games and events for lower extremity injuries and lower extremity soft tissue injuries than the 2015 players who had not used any Incrediwear products.

Incrediwear recovery leg sleeves may help reduce time-loss in professional soccer players after lower extremity injuries and lower extremity soft tissue injuries. The reduction in time-loss could be due to increased blood flow, which could accelerate recovery.

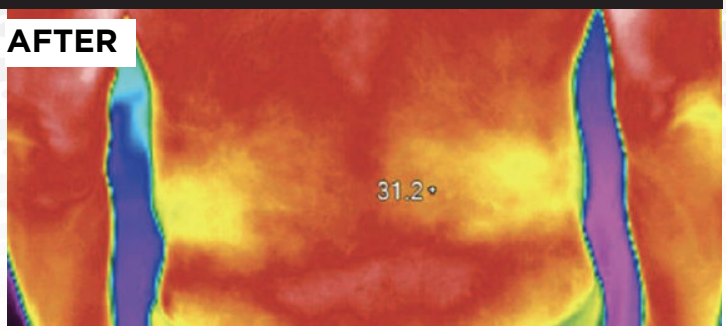
USC University of Southern California

USC PT
Biokinesiology and Physical Therapy

INCREASED BLOOD FLOW

LASER DOPPLER AND THERMOGRAPHIC IMAGING STUDIES MEASURING INCREASES TO BLOOD FLOW

BACK BRACE

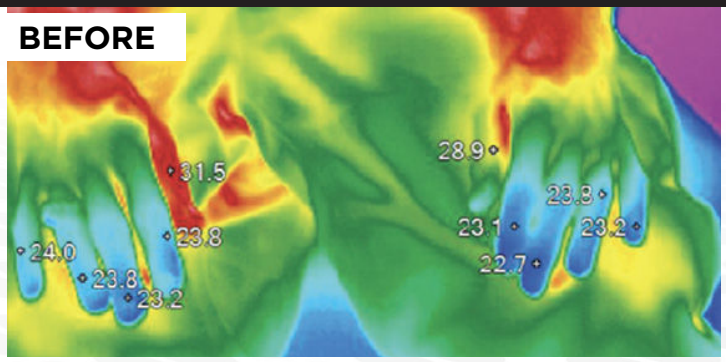


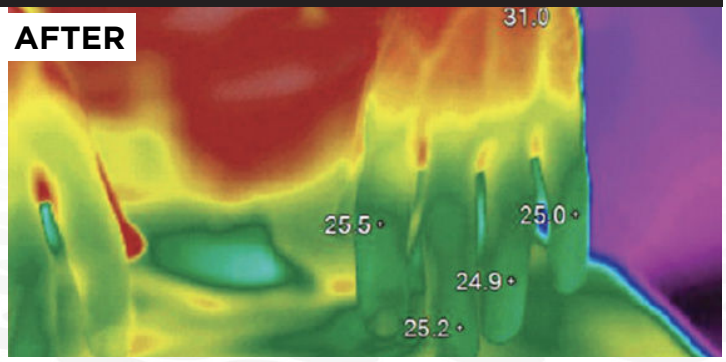
BLOOD FLOW BEFORE TEST: 28.9 AFTER TESTING: 33.3 *DIFFERENCE (%): +15.2%*

BLOOD SPEED BEFORE TEST: 24.4 AFTER TESTING: 28.5 *DIFFERENCE (%): +16.8%*

Thermographic imaging shows reduced back inflammation just after 22 minutes of use. This is an example of how increasing circulation cools down a targeted area when needed.

WRIST SLEEVE AND GLOVES



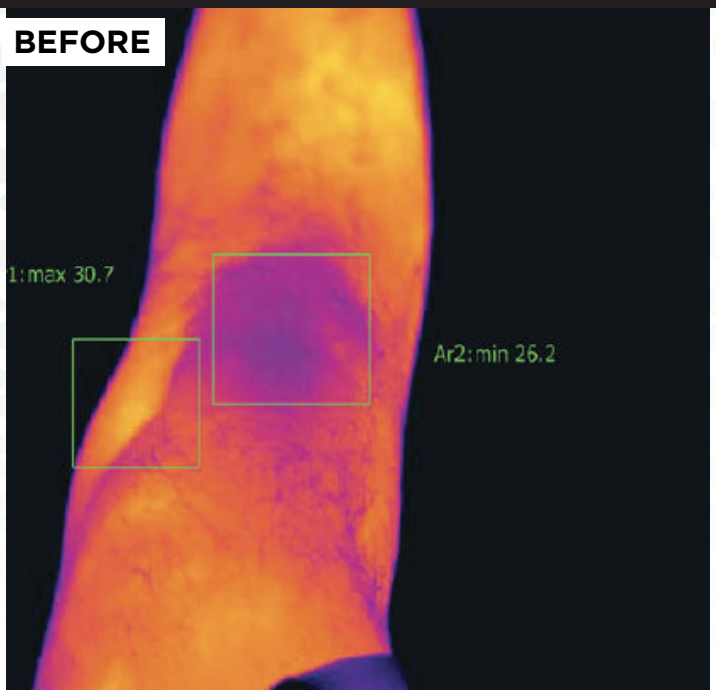


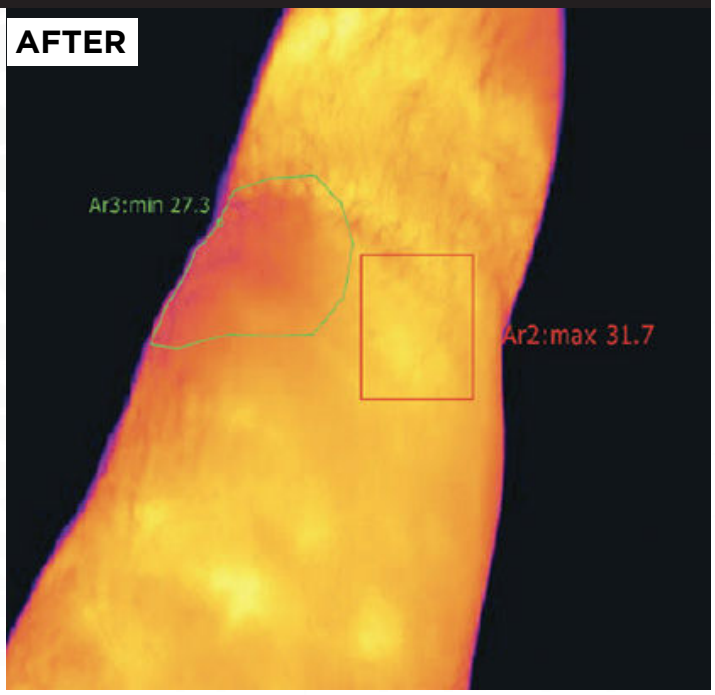
BLOOD FLOW BEFORE TEST: 14.6 AFTER TESTING: 16.4 *DIFFERENCE (%): +12.3%*

BLOOD SPEED BEFORE TEST: 14.0 AFTER TESTING: 15.9 *DIFFERENCE (%): +13.6%*

Thermographic imaging shows a decrease in inflammation just after 22 minutes, with increased temperature in the wrist for Carpal Tunnel & Raynaud's Syndrome. Freezing cold fingers to warm fingers in approximately 5 minutes.

KNEE SLEEVE





BLOOD FLOW BEFORE TEST: 16.5

AFTER TESTING: 18.5 *DIFFERENCE (%): +12.1%*

BLOOD SPEED BEFORE TEST: 14.8

AFTER TESTING: 16.7 *DIFFERENCE (%): +12.8%*

Thermographic imaging shows a 6.0° F (3.2° C) increase in temperature after just five minutes. 98% of temperature increase is due to increased blood circulation.

SOCKS

CIRCULATION SOCKS

BLOOD FLOW BEFORE TEST: 18.8

AFTER TESTING: 21.2 *DIFFERENCE (%): +12.8%*

BLOOD SPEED BEFORE TEST: 18.2

AFTER TESTING: 20.7 *DIFFERENCE (%): +14.3%*

TREK SOCKS

BLOOD FLOW BEFORE TEST: 18.9

AFTER TESTING: 20.9 *DIFFERENCE (%): +14.7%*

BLOOD SPEED BEFORE TEST: 17.9

AFTER TESTING: 19.9 *DIFFERENCE (%): +14.9%*

PROTOCOLS

ACUTE INJURY

Utilize sleeve as soon as possible to reduce pain and swelling. Sleeve should be worn 24 hours to promote blood flow and reduced edema (up to 4-6 weeks).* Sleeve may be worn as needed post recovery.

CHRONIC CONDITION

Utilize product A during the day to alleviate pain and swelling associated with any activity. Utilize product B at rest and while sleeping.

PRE-OPERATIVE

Utilize appropriate sleeve one week prior to surgery day and night to manage any localized swelling and pain.

POST-OPERATIVE

Day 1-10: Product A

Chosen product can be worn over a surgical dressing and applied immediately post-operatively. Patients should wear the product until the swelling has resolved (up to 4-6 weeks).

Day 11-30: Alternate products A / B

Utilize product A during the day to alleviate pain and swelling associated with any activity. Utilize product B at rest and while sleeping.

BANDAGE WRAP

Utilize if sizing or extreme swelling is an issue. May be used in conjunction with or separate from sleeves if preferred

**Sleeves may be worn in conjunction with physical therapy sessions to promote full range of motion*

INCREDIWEAR

FULL PRODUCT LIST

PDAC Billable


LCODE: L0625
(HARD SUPPORT)
BACK BRACE


BODY SLEEVE


KNEE SLEEVE


LCODE: L2397
LEG SLEEVE(S)


ANKLE SLEEVE


LCODE: L2840
WALKING BOOT UNDERSLEEVE


CALF SLEEVE


ELBOW SLEEVE


ARM SLEEVE


WRIST SLEEVE


CIRCULATION GLOVES


HIP SLEEVE


SHOULDER SLEEVE


BANDAGE WRAPS


CIRCULATION SHORTS


MEN'S PERFORMANCE PANTS


WOMEN'S PERFORMANCE CAPRI


WOMEN'S PERFORMANCE PANTS


BEANIE


CIRCULATION SOCKS


ACTIVE SOCKS

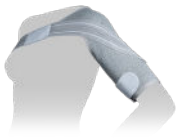

SPORT SOCKS THIN


SPORT SOCKS


RUN SOCKS


TREK SOCKS

iNCREDIWEAR INDICATIONS

	DAY PRODUCT A	NIGHT PRODUCT B
• *Herniated Disc* • *Sciatica*	 **BACK BRACE**	+  **BODY SLEEVE**
• *Total Knee Replacement* • *ACL Reconstruction* • *Meniscal Repair (post arthroscopic)*	 **KNEE SLEEVE**	+  **LEG SLEEVE**
• *"Tommy John" Surgery* • *Carpal Tunnel Syndrome* • *Tennis/Golfers Elbow*	 **ARM SLEEVE**	+  **ELBOW SLEEVE**
• *Total ankle replacement* • *Achilles tendon repair* • *Neuropathy* • *Poor Circulation (Cold Feet)* • *Plantar Fasciitis*	 **ANKLE OR BOOT SLEEVE**	+ **CIRCULATION SOCKS** 
• *Carpal Tunnel* • *CMC* • *Raynaud's Syndrome*	 **WRIST SLEEVE**	+ **CIRCULATION GLOVES** 
• *Total Hip Replacement* • *Sciatica* • *Groin injury* • *Hamstring Injury*	 **HIP SLEEVE**	+  **LEG SLEEVE**
• *Total shoulder replacement* • *Bursitis* • *Ligament Repair*	 **SHOULDER SLEEVE**	+  **ARM SLEEVE**

INCREDIWEAR

Distribution in Switzerland:

MTR
EQUIPMENTS

MTR - Health & Spa AG
Fällmisstrasse 64
8832 Wilen b. Wollerau
044 787 70 80 | info@mtr-ag.ch
www.incrediwear.ch