

OSTEOARTHRITIS PAIN RELIEF STUDY

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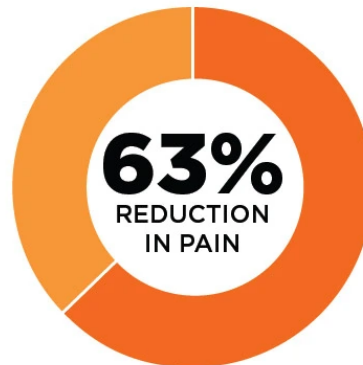
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A total of 46 participants with OA of the knee wore the Incrediwear Knee Sleeve for 6 months. None of them received any type additional physical or injection therapy. Patients were evaluated at baseline, and every month after that until the conclusion of the 6 month study period.

The study findings were statistically significant and indicated the Incrediwear Knee Sleeve was responsible for an improvement in pain and function for grades 1 and 2 osteoarthritis, providing a non-surgical treatment option for patients.



**WEARABLE
ANTI-INFLAMMATORY**



**STATISTICALLY SIGNIFICANT
STUDY FINDINGS**

The average reduction in pain was 63%, and 100% of study participants with grade 1 and 2 osteoarthritis experienced some level of relief after using the Incrediwear Knee Sleeve.

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OSTEOARTHRITIS PAIN RELIEF

USE OF THE INCREDIWEAR KNEE SLEEVE RESULTED IN 63% OKC AND 51% VAS
RESULTS PUBLISHED IN THE OCTOBER 2019 ORTHOPAEDIC JOURNAL OF SPORTS MEDICINE

STUDY 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.

RESULTS: 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. 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, $P = 5.8 \times 10^{-7}$; VAS, $P = 7.7 \times 10^{-12}$; Lysholm, $P = 4.2 \times 10^{-11}$). 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.

CONCLUSION: GE knee sleeves could play an important role in optimizing nonsurgical management of patients with knee OA, especially patients with grades 1 and 2 OA, as demonstrated by the clinically significant improvements. 100% of participants saw a reduction in pain, with VAS score 51%, and 63% OKC.

ABOUT THE SLEEVE: The Incrediwear Cred40 knee sleeve is embedded with carbonized charcoal and germanium. Germanium is a nontoxic semiconductor metalloid located between tin and silicone in the periodic table. Since its discovery in 1886, germanium has been widely used in electronics and optics.²⁸ Semiconductors such as germanium differ from metals in that as the temperature of semiconductors increases, their resistance decreases. This is a result of germanium having more “free” electrons at certain temperatures, allowing for a higher conductivity. It is theorized that embedding germanium into cotton garments is an effective way to use the transdermal effect to create a micro electromagnetic field, leading to increased circulation and affecting the inflammatory process.²⁰ Previous low-level observational studies have suggested that germanium-infused garments may provide improved clinical outcomes in osteoarthritis. Germanium-embedded (GE) knee sleeves embrace this fabric technology.

Incrediwear manufactures wearable anti-inflammatory braces, sleeves, and apparel for reducing pain and accelerating recovery.

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