

A LOOK AT HOW KNEE PAIN IS KEEPING US ON THE SIDELINES



autologous cultured
chondrocytes
on porcine
collagen membrane



INTRO AND METHODOLOGY

Chronic knee pain is an issue affecting many people across the U.S., causing restricted mobility and even forcing people to give up the activities they love. While knee pain is common, it is often something that goes untreated for long periods of time generally due to wishing it would resolve itself or because people think they can just live with the pain. However, for specific injuries like damage to articular cartilage in the knee, treatment may be necessary, as it does not heal on its own. Left untreated, cartilage damage may worsen over time and may lead to further issues down the line.

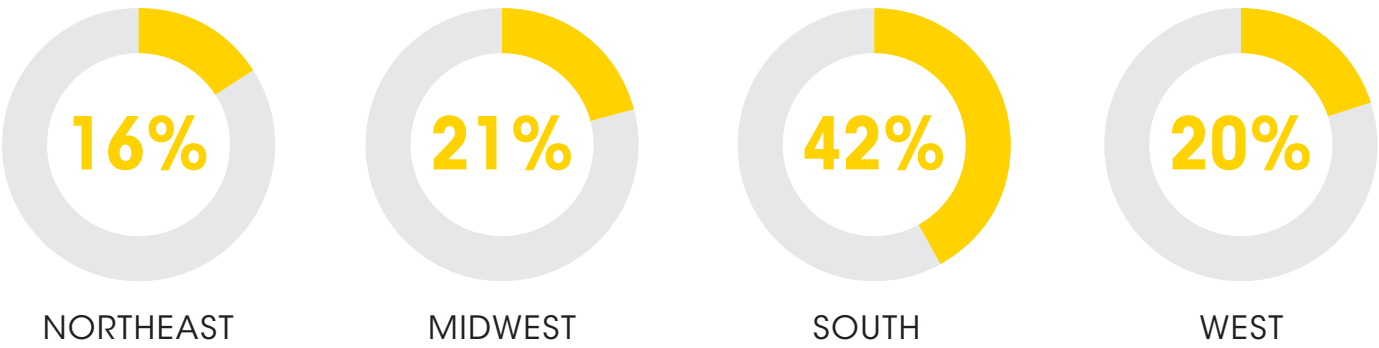
To better understand perceptions around knee pain, Vericel, the manufacturer of MACI (Autologous Cultured Chondrocytes on a Porcine Collagen Membrane) for the repair of symptomatic knee cartilage damage in adults, commissioned a survey with The Harris Poll, which gathered insights on how those with chronic* knee pain in the U.S. approach treatment, how quickly they take action, their activity level, and what they know about their treatment options. With this survey data, Vericel aims to start a conversation about the importance of knowledge around treatment options and pursuing treatment earlier to address chronic knee pain related to cartilage damage.

PLEASE SEE IMPORTANT SAFETY INFORMATION ON PAGE 9 AND [FULL PRESCRIBING INFORMATION](#). FOR MORE INFORMATION — [MACI.COM](https://www.vericel.com)

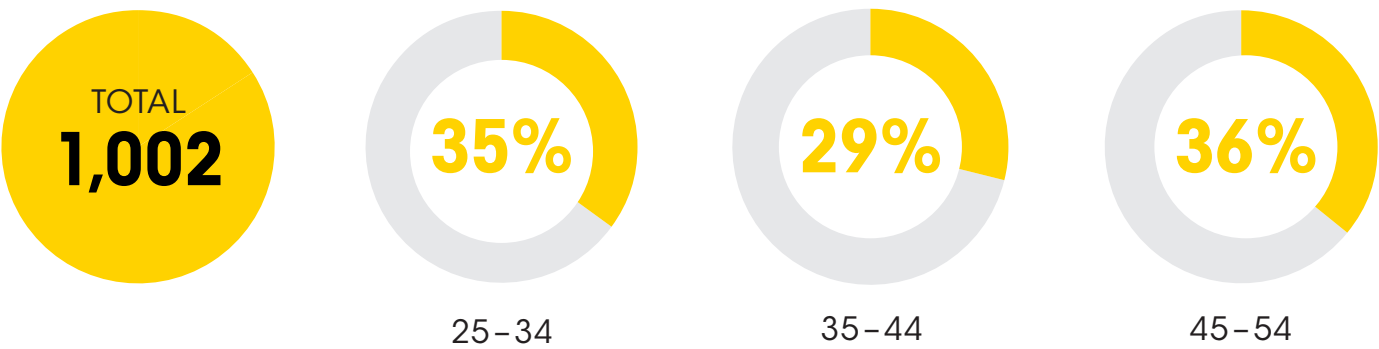
* THOSE WHO SUFFER FROM KNEE PAIN 3 OR MORE DAYS A WEEK AND HAVE BEEN EXPERIENCING KNEE PAIN FOR AT LEAST 2 MONTHS

DEMOGRAPHICS

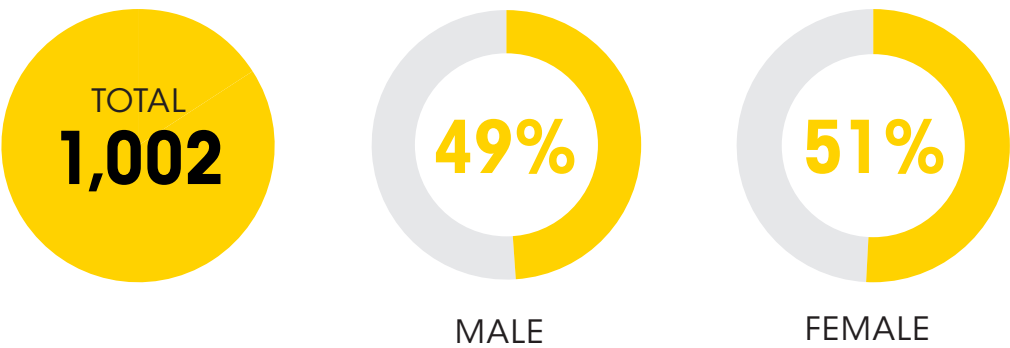
1,002 respondents representing 4 regions of the United States



Age

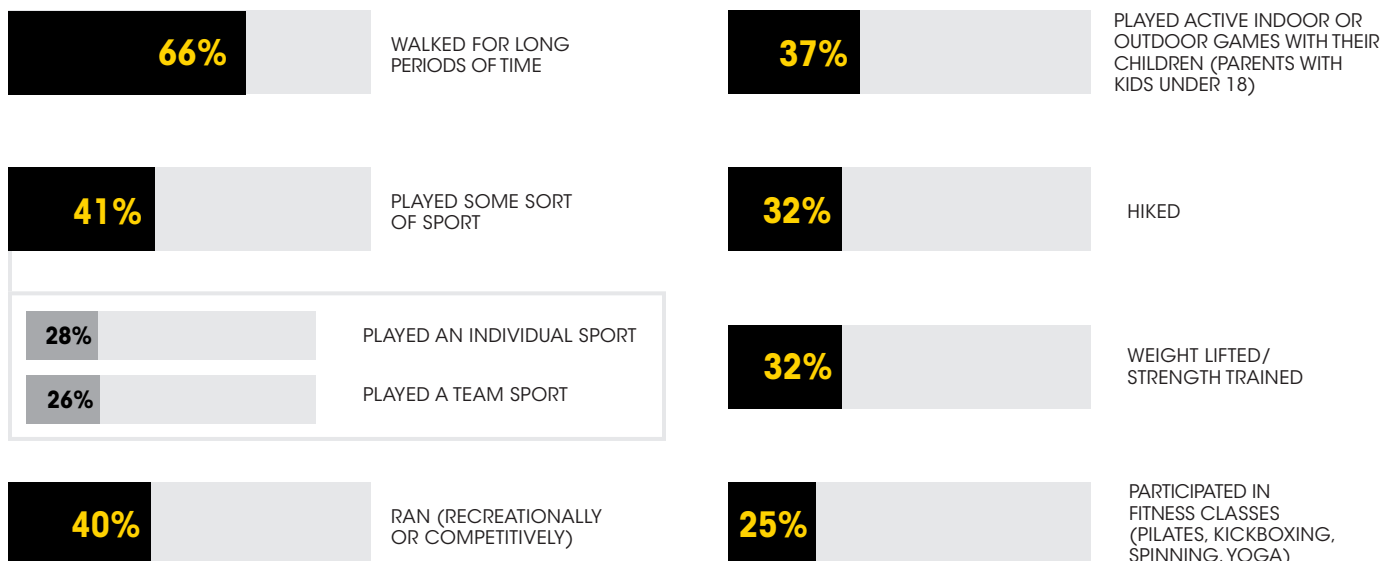


Gender

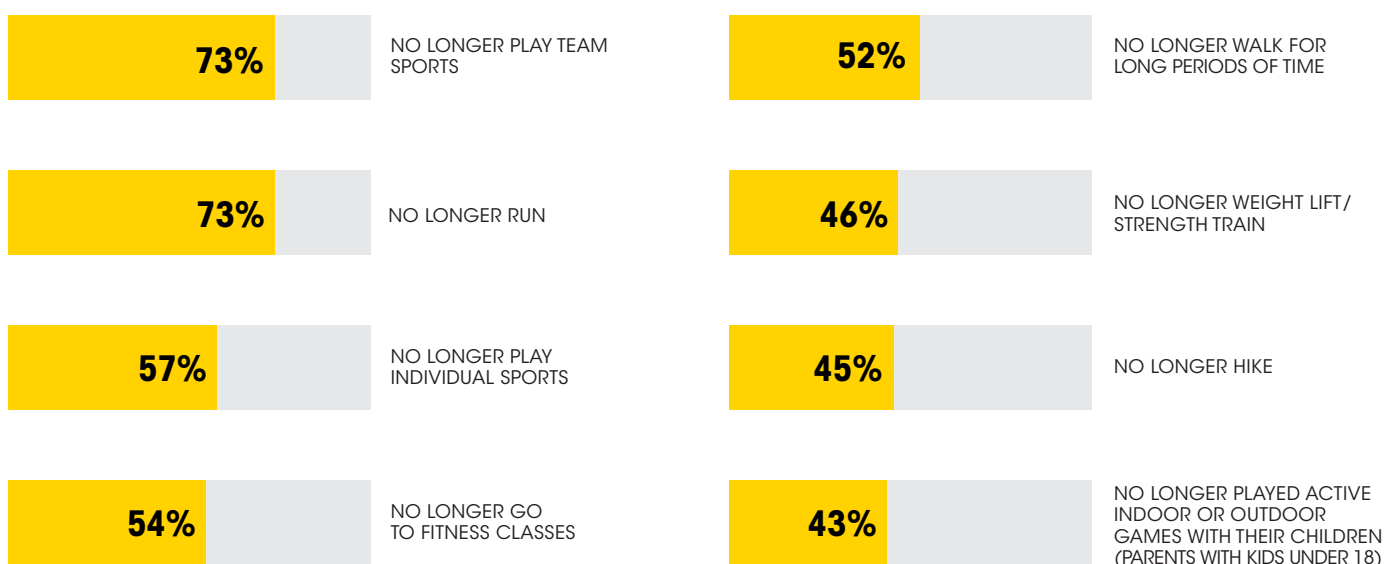


BEFORE & AFTER KNEE PAIN

Prior to experiencing knee pain, these adults were very active, with **92%** saying they participated in various solitary or team sports/physical activities.



After experiencing chronic knee pain, activity severely decreased. Of knee pain sufferers that said they used to participate in these activities, **77%** say they can no longer participate in at least one activity they previously enjoyed because of their pain.



55% of chronic knee pain sufferers say their mobility is currently worse than it was prior to experiencing knee pain.

KNEE PAIN’S IMPACT ON PHYSICAL WELLNESS

Knee pain has negatively impacted sufferers with the most common impacts felt on:

(% SAY THEY HAVE BEEN NEGATIVELY IMPACTED A LOT/A LITTLE)



ABILITY TO PARTICIPATE IN SPORTS OR PHYSICAL ACTIVITY



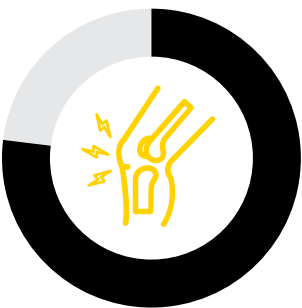
ABILITY TO PARTICIPATE IN EVERYDAY ACTIVITIES



ABILITY TO ENGAGE IN RECREATIONAL HOBBIES PREVIOUSLY ENJOYED



ABILITY TO TAKE CARE OF HOUSEHOLD ACTIVITIES



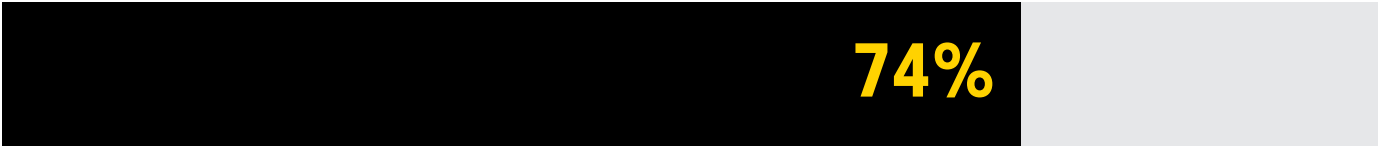
77%
FORGET WHAT IT IS
LIKE TO BE PAIN FREE.



70%
HAVE MISSED OUT ON
DOING THINGS THEY
LOVE BECAUSE OF THEIR
KNEE PAIN.

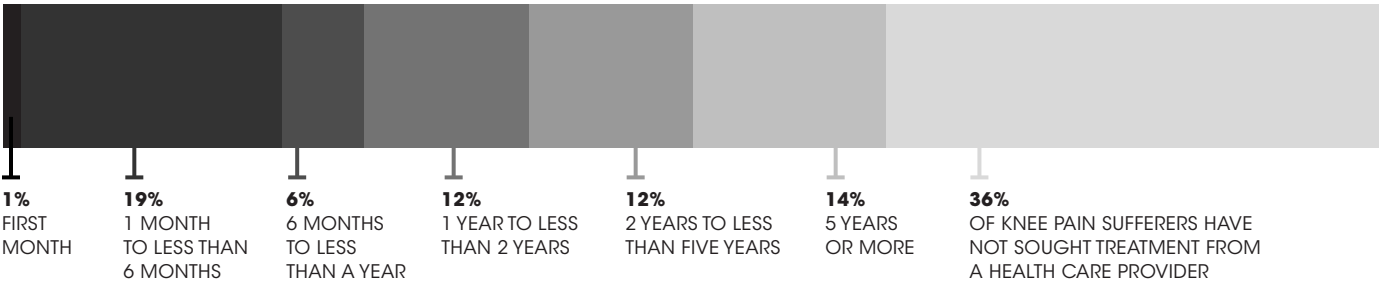
WE'RE PLAYING A WAITING GAME INSTEAD OF TREATING THE PAIN

81% of knee pain sufferers said they are somewhat or very concerned about their knee pain, with **90%** who have considered surgery saying the same. However, many are waiting to treat their pain – or not treating it at all.



OF KNEE PAIN SUFFERERS KEEP HOPING THEIR KNEE PAIN WILL RESOLVE ITSELF.

However, **64%** say they have never sought treatment from a healthcare provider about their knee pain.



Despite being aware of various treatments/remedies, chronic knee pain sufferers:

	HAVE HEARD OF BUT <u>NOT</u> TRIED PARTIAL KNEE REPLACEMENT SURGERY (REPLACEMENTS OF ONLY THE MOST DAMAGED PORTION OF YOUR KNEE WITH METAL AND PLASTIC PARTS)	(71%)
	HAVE HEARD OF BUT <u>NOT</u> TRIED TOTAL KNEE REPLACEMENT (CUTS AWAY DAMAGED BONE AND CARTILAGE FROM THIGHBONE, SHINBONE, KNEECAP, AND REPLACES IT WITH AN ARTIFICIAL JOINT MADE OF METAL ALLOYS, PLASTICS, POLYMERS)	(69%)
	HAVE HEARD OF BUT <u>NOT</u> TRIED CHIROPRACTIC CARE	(58%)
	HAVE HEARD OF BUT <u>NOT</u> TRIED ARTHROSCOPIC SURGERY (REPAIR JOINT DAMAGE USING A FIBER-OPTIC CAMERA AND LONG, NARROW TOOLS INSERTED THROUGH SMALL INCISIONS AROUND YOUR KNEE)	(57%)
	HAVE HEARD OF BUT <u>NOT</u> TRIED INJECTIONS (CORTICOSTEROIDS, HYALURONIC ACID, PLATELET-RICH PLASMA (PRP))	(53%)
	HAVE HEARD OF BUT <u>NOT</u> TRIED KNEE CARTILAGE REPAIR USING YOUR OWN CELLS	(50%)

Of those that have considered surgery – either an additional one or their first one – and asked why they haven’t pursued surgery, the top reasons cited include:



32%
LONG RECOVERY TIME



31%
COST OF SURGERY



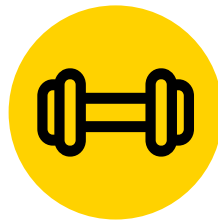
29%
FEAR THE SURGERY WON'T WORK



28%
FEAR OF SURGERY/HOSPITALS



24%
HAVING TO TAKE
TIME OFF WORK



24%
FEAR THAT THE SURGERY WON'T
GET THEM BACK TO PARTICIPATING
IN THE ACTIVITIES THEY ENJOYED
PRE-KNEE PAIN

Of those that have not considered surgery (either an additional one or their first one), the top reasons cited include:



31%
THEIR PAIN ISN'T
THAT BAD



31%
FEAR OF SURGERY
/HOSPITALS



31%
COST OF
SURGERY



25%
LONG RECOVERY
TIME AFTER SURGERY



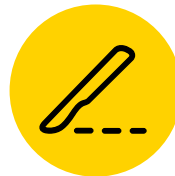
24%
THEY FEEL THEY CAN CONTINUE
TO LIVE WITH THE PAIN



19%
HAVING TO TAKE
TIME OFF WORK



14%
NOT WANTING TO HAVE TO
RELY ON OTHERS FOR CARE



14%
THE IDEA OF HAVING UNNATURAL
PARTS PLACED IN THEIR BODY



INSIGHTS ON TREATMENT OPTIONS

By not treating your knee pain — especially if it is related to cartilage damage — you can end up with more serious concerns down the line, ultimately limiting the types of treatment options available. If you've been diagnosed with articular cartilage damage in the knee, visit www.maci.com to see if MACI (Autologous Cultured Chondrocytes on a Porcine Collagen Membrane) may be an option for you.

89% of knee pain sufferers wish they could find a long-term solution to their knee pain. Don't wait — talk to your doctor today about your options.

ABOUT THE SURVEY

The custom survey was conducted online within the United States by The Harris Poll on behalf of Vericel between April 25 – May 8, 2019 among 1,002 adults ages 25-54 who experience pain in their knee 3 or more days a week and have been experiencing knee pain for at least 2 months.

Survey respondents were recruited from a panel of people who have agreed to participate in survey research. Potential respondents were targeted by age (25-54) and country (US) and asked to complete a qualification screener. Only those who qualified completed the survey.

For complete survey methodology, including weighting variables, please contact FleishmanHillard Boston at fh.maci@fleishman.com.

ABOUT THE HARRIS POLL

The Harris Poll is one of the longest running surveys in the U.S. tracking public opinion, motivations and social sentiment since 1963 that is now part of Harris Insights & Analytics, a global consulting and market research firm that strives to reveal the authentic values of modern society to inspire leaders to create a better tomorrow. We work with clients in three primary areas: building twenty-first-century corporate reputation, crafting brand strategy and performance tracking, and earning organic media through public relations research. Our mission is to provide insights and advisory to help leaders make the best decisions possible.

INDICATION

MACI® (autologous cultured chondrocytes on porcine collagen membrane) is made up of your own (autologous) cells that are expanded and placed onto a film that is implanted into the area of the cartilage damage and absorbed back into your own tissue.

MACI is used for the repair of symptomatic cartilage damage of the adult knee.

The amount of MACI applied depends on the size of the cartilage damage. The MACI film is trimmed by your surgeon to match the size and shape of the damage, to ensure the damaged area is completely covered.

Limitations of Use

- It is not known whether MACI is effective in joints other than the knee.
- It is not known whether MACI is safe or effective in patients over the age of 55 years.

IMPORTANT SAFETY INFORMATION

MACI should not be used if you:

- are allergic to antibiotics such as gentamicin, or materials that come from cow, pig, or ox;
- have severe osteoarthritis of the knee, other severe inflammatory conditions, infections or inflammation in the bone joint and other surrounding tissue, or blood clotting conditions;
- have had knee surgery in the past 6 months, not including surgery for obtaining a cartilage biopsy or a surgical procedure to prepare your knee for a MACI implant;
- or cannot follow a doctor-prescribed rehabilitation program after your surgery

Consult your doctor if you have cancer in the area of the cartilage biopsy or implant as the safety of MACI is not known in those cases.

Conditions that existed before your surgery, including meniscus tears, joint or ligament instability, or alignment problems should be evaluated and treated before or at the same time as the MACI implant.

MACI is not recommended if you are pregnant.

MACI has not been studied in patients younger than 18 or over 55 years of age.

Common side effects include joint pain, tendonitis, back pain, joint swelling, and joint effusion.

More serious side effects include joint pain, cartilage or meniscus injury, treatment failure, and osteoarthritis.

FOR MORE INFORMATION, PLEASE SEE FULL PRESCRIBING INFORMATION AT [MACI.COM](https://www.vericel.com)