



ARTHRITIS
TALKS

Medical cannabis and arthritis:

What the research shows

May **27**, 2026



Presenters



Dr. Sian Bevan

Chief Science Officer
Arthritis Society Canada
(Moderator)

Toronto, Ontario



Dr. Jason McDougall

Researcher
Halifax, Nova Scotia



Special thanks to our exclusive event presenting partner:



MyMedi.ca
MEDICAL CANNABIS CARE



Webinar tips

- Use the Q&A section to ask the presenters your questions. Some of the questions will be chosen for the live question period at the end of the webinar.
- Click on the Chat box to connect with other participants and Arthritis Society Canada's chat moderator.
- If you have further issues, email arthritistalks@arthritis.ca

The image shows a screenshot of a webinar interface for Arthritis Society Canada. The main content area displays the organization's logo, which consists of a stylized yellow bird-like shape above the text "Arthritis SOCIETY CANADA". Below the logo are two dark rectangular buttons: "Q&A" with a speech bubble icon and "Chat" with a speech bubble icon. At the bottom left of the interface is an "Audio Settings" button with a small upward arrow. At the bottom right is a red "Leave" button. A yellow callout box with a downward arrow points to the "Q&A" button, containing the text "Click here to access your audio settings". Another yellow callout box with a downward arrow points to the "Leave" button, containing the text "Click on the red icon to exit out of the Q&A or Chat". A third yellow callout box with an upward arrow points to the "Chat" button, containing the text "Click here to chat or to submit a question". On the right side, a smaller window titled "Q&A" is open, showing a "Welcome to Q&A" message and a text input field labeled "Type your question here...".





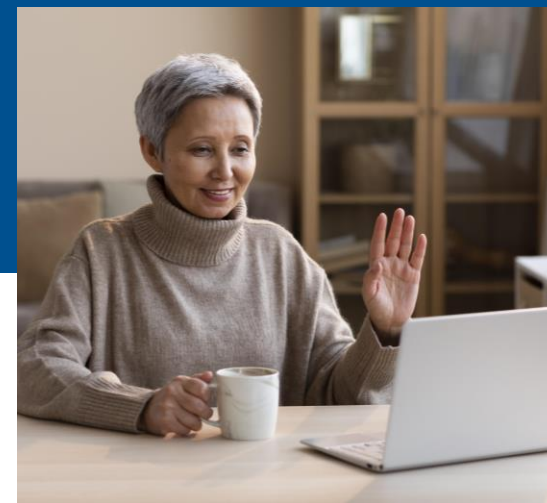
The endocannabinoid system



How medical cannabis works



Medical cannabis research



Q & A





ARTHRITIS:
WHERE THE TREATMENT
OPTIONS ARE MORE
PAINFUL THAN THE PAIN.

★ DART-A-DRUG ★

OK -
THIS TIME!!!

- ROBRTWEEN (BOBES RELIABLE)
- IBUPROFEN (OLD RELIABLE)
- NAPROXEN (STRONGER COUSIN)
- CELECOXIB (FANCY OPTION)
- MELOXICAM (MAYBE TODAY)
- DICLOFENAC (POWER MODE)
- ETODOLAC (DON'T ASK PRONUNCIATION)
- PIROXICAM (VINTAGE CHOICE)

- DMARDs (SLOW & STEADY?)
- METHOTREXATE (WEEKLY ADVENTURE)
- SULFASALAZINE (????)
- LEFLUNOMIDE (WHAT IS THIS?)
- HYDROXY-CHLOROQUINE (RETRO BUT STILL HERE)
- BIOLOGICS (THE BIG GUNS)

- HUMIRA® (HERO?)
- ENBREL® (ENERGY?)
- REMICADE® (IV PARTY)
- ORENCIA® (ONCE A MONTH?)
- RINVOQ® (NEW KID ON BLOCK)
- XELJANZ® (SOUNDS LIKE A DANCE MOVE)

- DICLOFENAC GEL (RUB-A-DUB)
- CAPSAICIN CREAM (SPICY SURPRISE!)
- LIDOCAINE PATCH (NUMB IT!)
- SALICYLATE CREAM (OLD SCHOOL)
- AND MORE! (seriously, we ran out of shelf)

SIDE EFFECTS INCLUDE:

- Nausea
- Dizziness
- Upset Stomach
- Headache
- Confusion
- Reading the Entire Leaflet

...AND POSSIBLY LOSING THE WILL TO CHOOSE!

REMEMBER:
THERE IS NO "ONE SIZE FITS ALL"
JUST
"HOPE SOMETHING WORKS AT ALL!"

WARNING:
MAY CAUSE
DECISION FATIGUE!

MY CART OF CONFUSION!



Why is arthritis so complex?

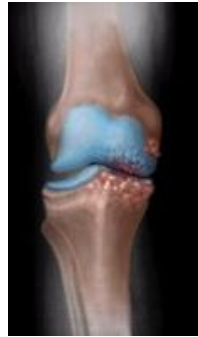




How do we feel arthritis pain?

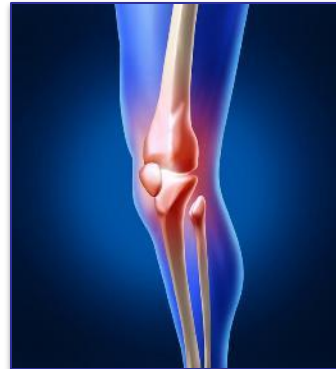


Arthritis pain has many different subtypes



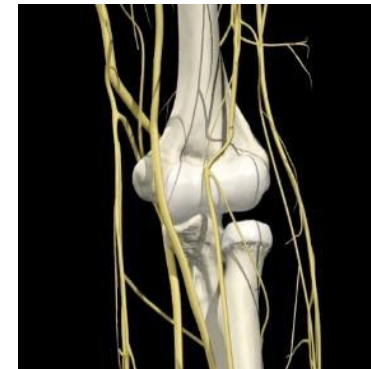
Nociceptive pain

- Tissue damage
- Altered biomechanics
- Grinding pain



Inflammatory pain

- Accumulation of inflammatory chemicals
- Throbbing, burning pain

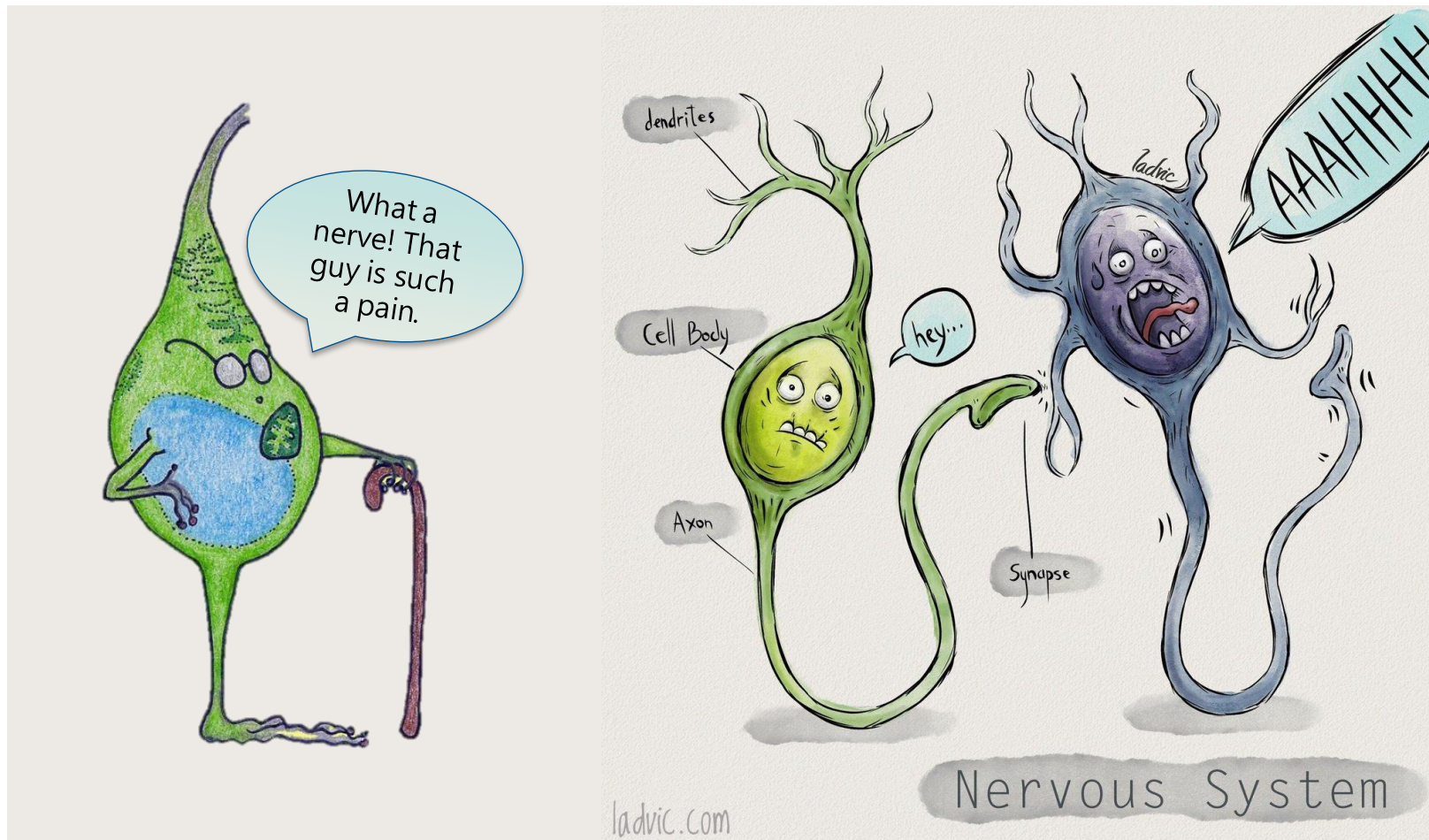


Neuropathic pain

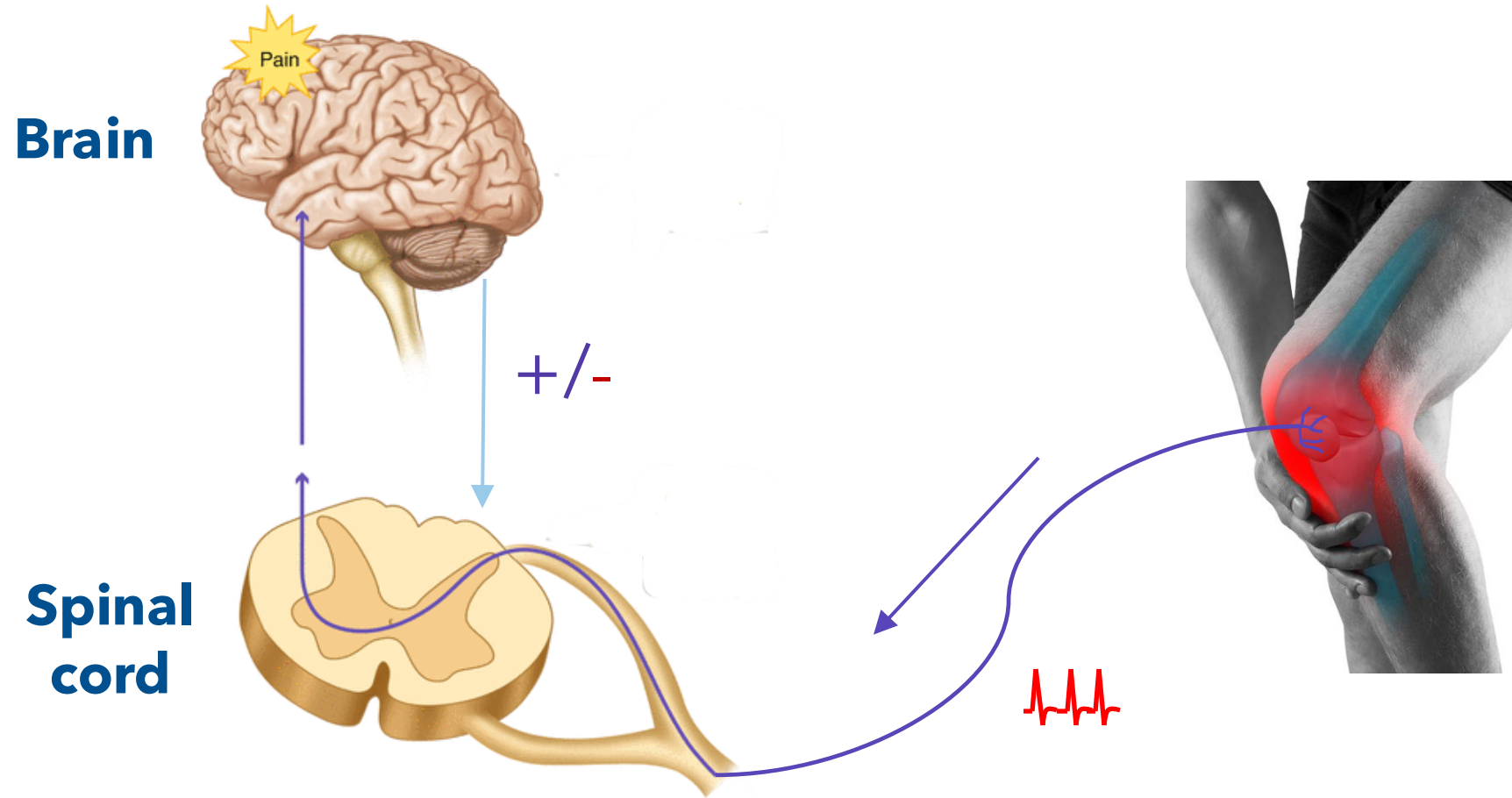
- Nerve damage
- Stabbing, "pins & needles" pain



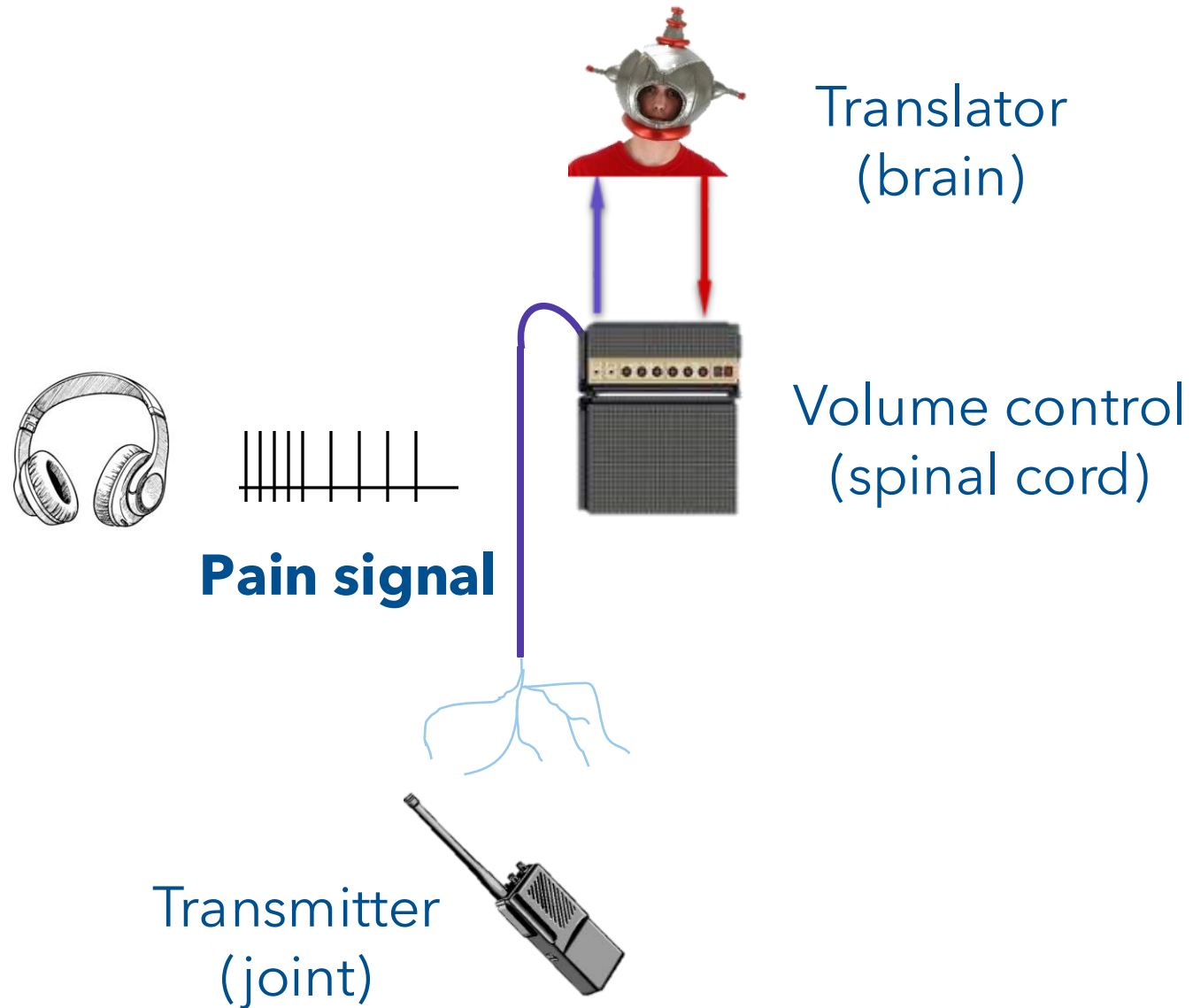
How is pain communicated in osteoarthritis?



Pain pathway



Pain pathway



What is cannabis?



- ✦ Flowering plant, 3 species
- ✦ Over 500 chemical entities (cannabinoids, terpenoids, flavonoids)
- ✦ Over 120 different cannabinoids (e.g. Δ^9 -THC, CBD)
- ✦ Found in oils secreted by flowers of female plants
- ✦ Chemicals become active when heated



Smoked/Vaporization



Smoked cannabis - advantages

- Rapid onset of effect
- Easy to dose (number of puffs)



Smoked cannabis - disadvantages

- Smoking not safest mode of administration
- Not appropriate for all patients
- Solvent in vaporizers
- Dexterity required



Ingestion

Oil



Butter



Brownies



Ingested cannabis - advantages

- Convenient
- Odourless
- Discrete

Ingested cannabis - disadvantages

- Difficult to dose
- Slow absorption
- Requires a lot of preparation



Topical



Topical cannabis - advantages

- Easy to use
- Less systemic side-effects
- Applied directly to affected area



Topical cannabis - disadvantages

- Variable onset
- Variable duration
- Difficult to penetrate tissues
- Not ideal for whole body pain



Oral sprays



Oral spray cannabis - advantages

- Rapid onset
- Convenient
- Odourless
- Discrete



Oral spray cannabis - disadvantages

- Dry mouth
- Unpleasant taste





Can medical cannabis prevent pain and joint damage?



Cannabinoids

- Phytocannabinoids – derived from *Cannabis* plant
- Synthetic cannabinoids – human-made
- Endocannabinoids – present naturally in the body
- 2 cannabinoid receptors:



CB₁



Located on nerves

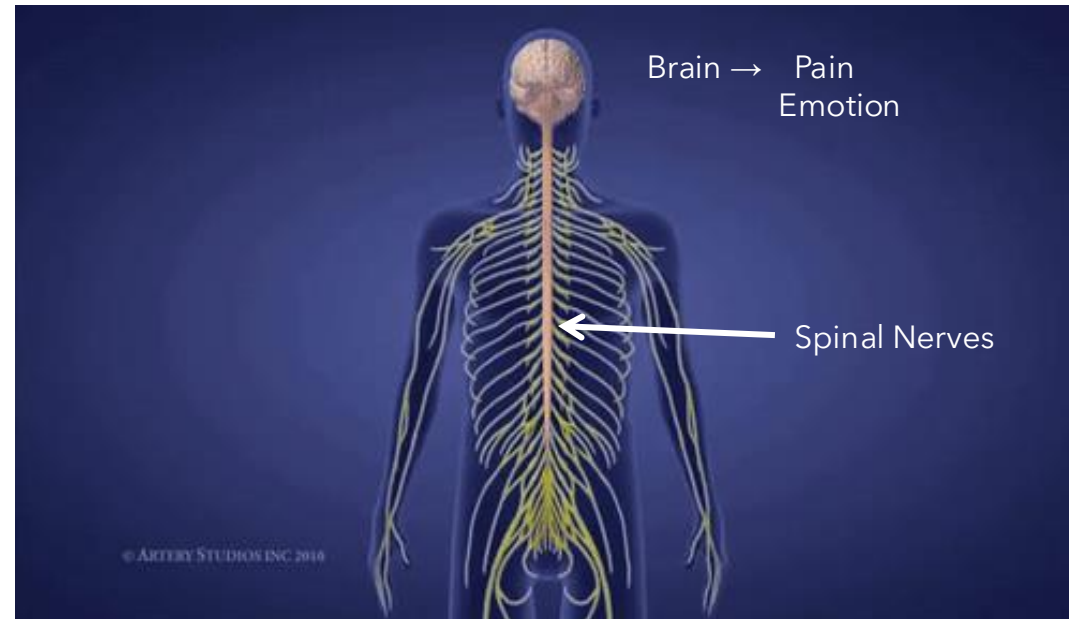
CB₂



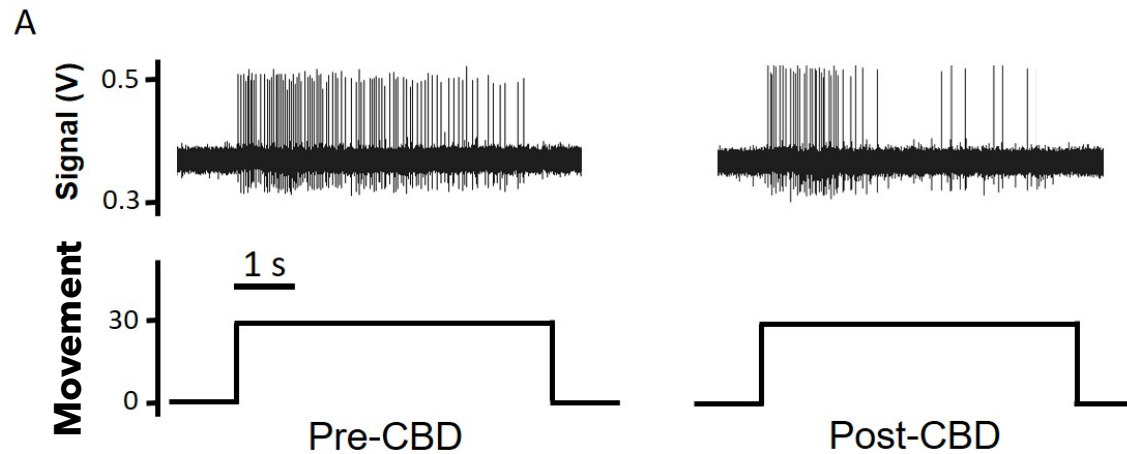
**Associated with
immune cells**



Pain sensation



Cannabidiol reduces pain impulses

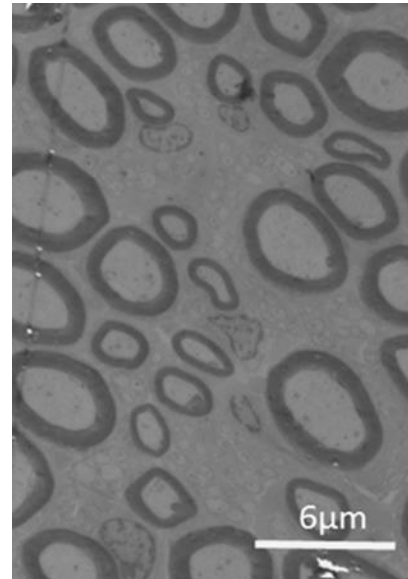


CBD → Reduced joint nerve activity

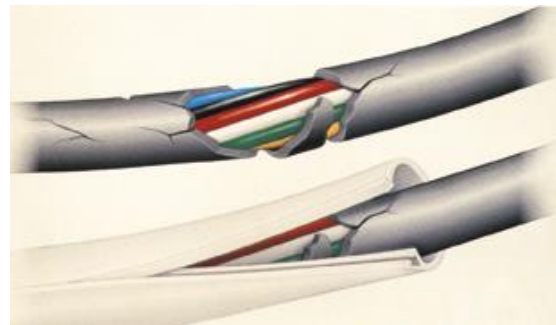
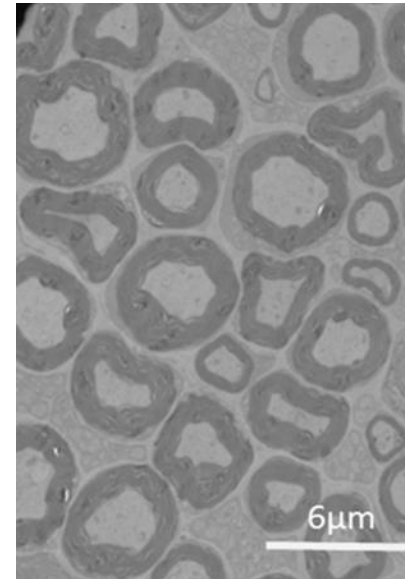


Cannabidiol repairs joint nerve damage

OA



OA + CBD



Cannabidiol reduces joint inflammation

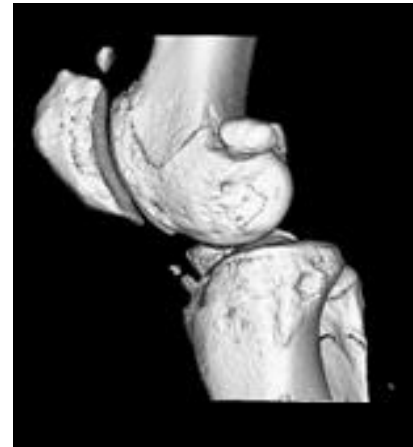
Cannabidiol reduces joint damage



- Mice with rheumatoid arthritis
- Oral cannabidiol daily for 10 days
- Joint damage scores reduced



Untreated



Cannabidiol





What do we know about medical cannabis and what key areas of research are still needed?



Clinical cannabis confusion

- ✦ **Dose (CBD):** 20mg – 600mg/day
- ✦ **Mode of administration:** inhalation, ingestion, oral, topical
- ✦ **Mixture with THC:** 1:1, 1:2, etc.
- ✦ **Pain:** Small effect
No effect
Big effect
- ✦ **Function:** Some improvement
- ✦ **Sleep:** Improvement
- ✦ **Quality of Life:** Some improvement



Limitations to clinical studies

- ✦ Limited number of studies
- ✦ Small sample size
- ✦ No positive comparator (e.g. NSAIDs)
- ✦ All types of pain included
- ✦ Difficult to blind patient
- ✦ No standardization of all cannabis compounds (e.g. terpenes, flavonoids, non-THC/CBD)





What other promising treatment options are on the horizon for people affected by arthritis?



Can we boost endocannabinoids without using drugs?



Ambient green light for the treatment of pain



- Visual exposure to green light reduces pain:
 - Migraine
 - Fibromyalgia
 - Low back pain
 - Post-surgical pain
 - Arthritis?



Green light therapy in animal model



Current experiments:

Effect of green light on pain pathway

- Rats with OA
- Room lit with green light
- 8hours/day for 5 days
- Increased production of endocannabinoids
- Reduced pain



Green light therapy in OA patients

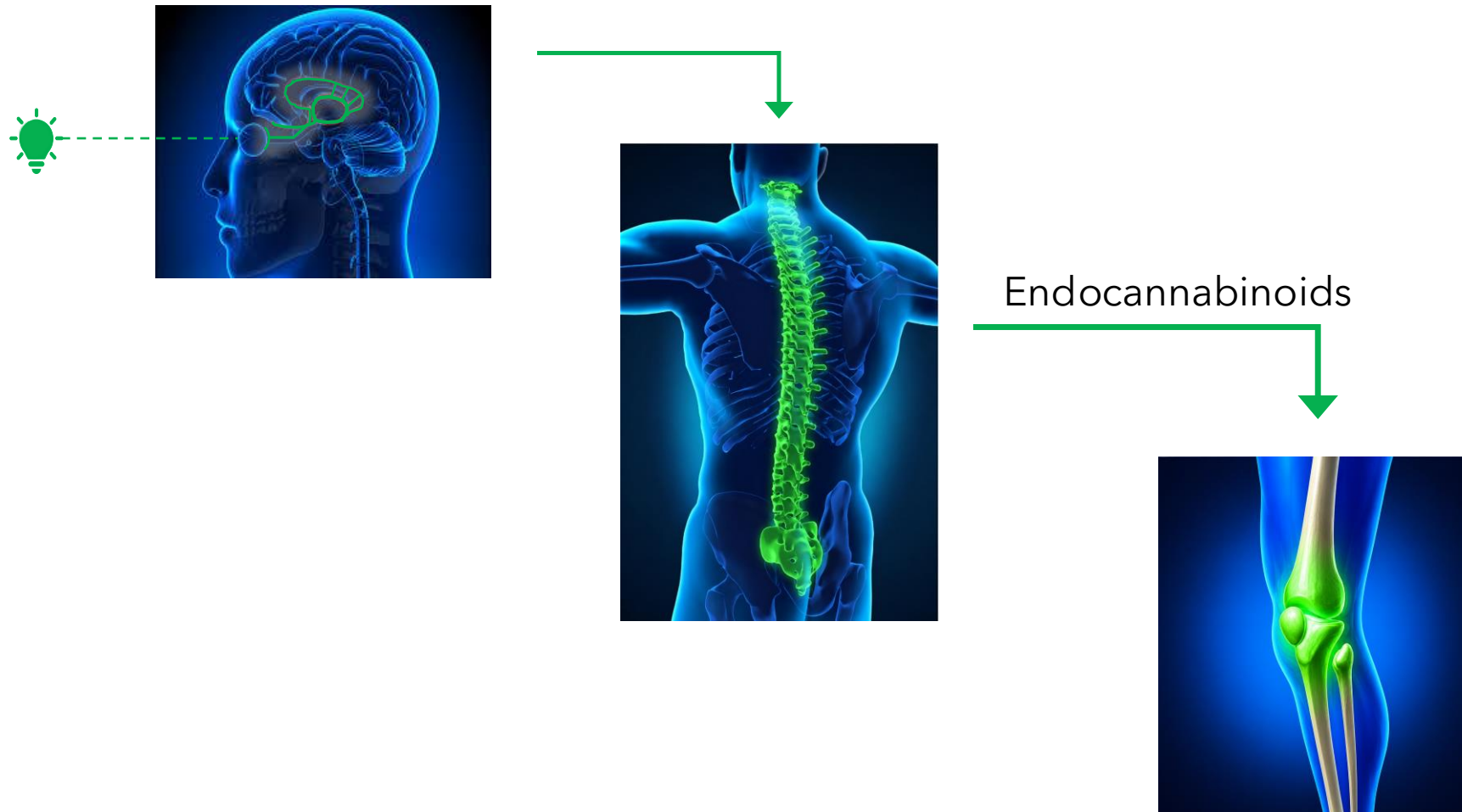


Current study:
fMRI to study brain changes

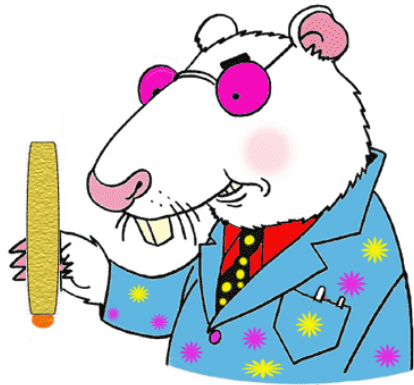
- 18 participants (52-77 yrs)
- ~ 1hr/day for 10 weeks
- Within 1-2m of light but not looking directly at light
- Decreased pain, improved mood, reduced pain medication



Green light therapy – how it works



Preclinical versus clinical versus patients for cannabis use in arthritis



The patient perspective

April 2026

Medical Cannabis and Arthritis

Insights from the CAPA Project

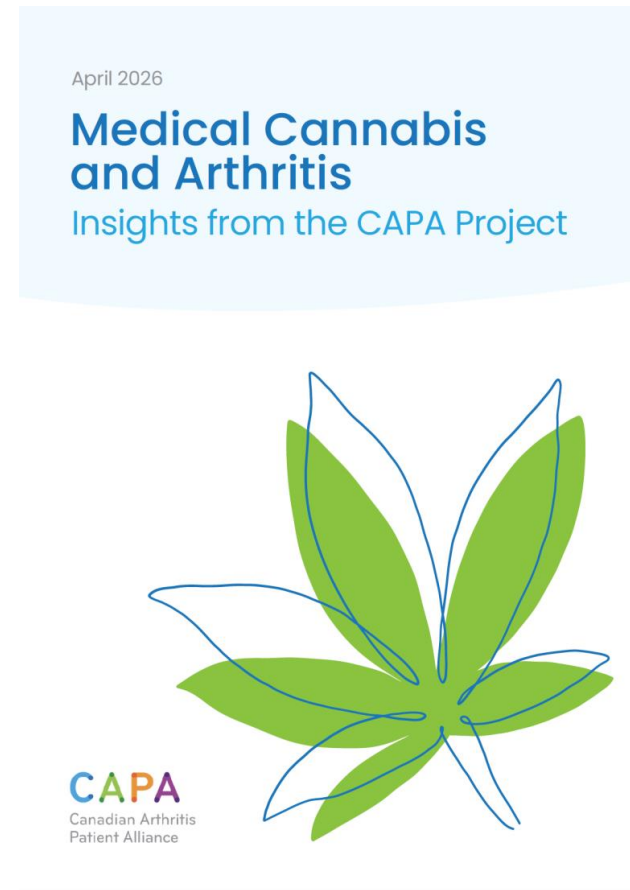


CAPA
Canadian Arthritis
Patient Alliance



The patient perspective

- In depth interviews with 7 people living with arthritis
- Individuals from across Canada with experience using cannabis for medical reasons
- Explored benefits/challenges of cannabis use
- Perspectives on how cannabis affected daily lives and well-being



The patient perspective

- ✦ A consistent theme emerged: Medical cannabis provides meaningful relief from the symptoms of chronic pain.

"Cannabis has been more effective than Tylenol 3 or antidepressants for my arthritis pain."

"Starting with low doses and adjusting gradually is key to managing symptoms safely."

"It helps me sleep and manage pain throughout the next day."



The patient perspective

- ✦ Barriers & social stigma:
 - ✦ Cost and coverage of expenses
 - ✦ Rural patients concerned with travel to dispensaries
 - ✦ Social stigma
 - ✦ Need for education, advocacy, and scientific research

"I initially felt shy visiting a dispensary because of negative stereotypes, but now I prioritize my well-being."

"I rely on clinic educators to navigate different strains and dosing..."

"Patients need data-driven guidance; trial-and-error can be risky without proper education."



The patient perspective – the final word

"Acceptance of cannabis varies, but it should be recognized as a legitimate treatment option, not just a recreational drug."



Thank You



Melissa O'Brien



Chris DeBow



Karim Mukhida



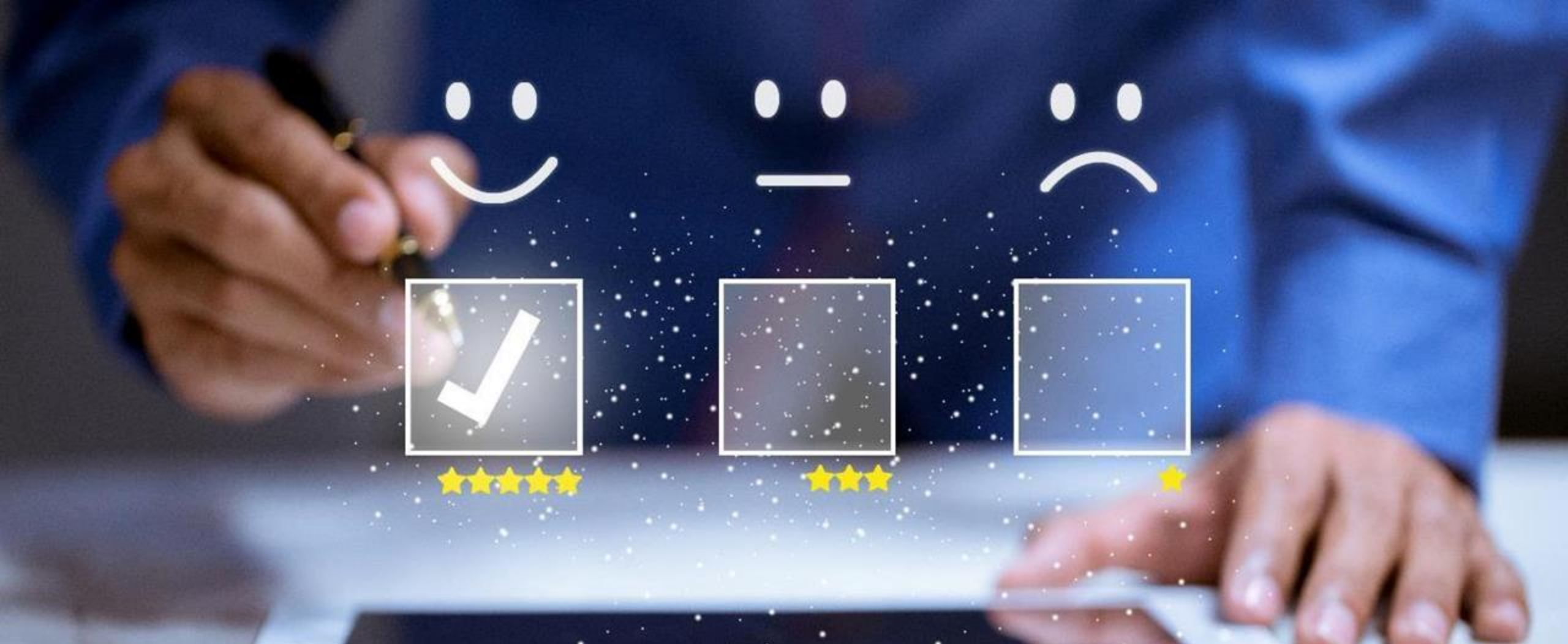
Department of Anesthesia,
Pain Management and
Perioperative Medicine





Questions





Tell us what you think...



**Your gift powers life-changing
arthritis research in Canada!**

**2X GIFT
MATCH**

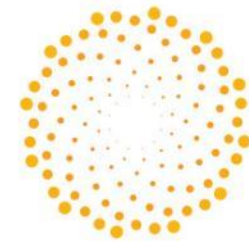
Dr. Nikolas Knowles

Donate today at arthritis.ca/donate



Virtual Information Booth

- ▼ Join pharmacist Michelle Tran and Dr. Hernan Acosta at a virtual information booth immediately following the live webinar
- ▼ Michelle and Dr. Acosta will be available to answer your questions about medical cannabis and how it may be a suitable option for you.



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MEDICAL CANNABIS CARE

arthritis.ca/booth

