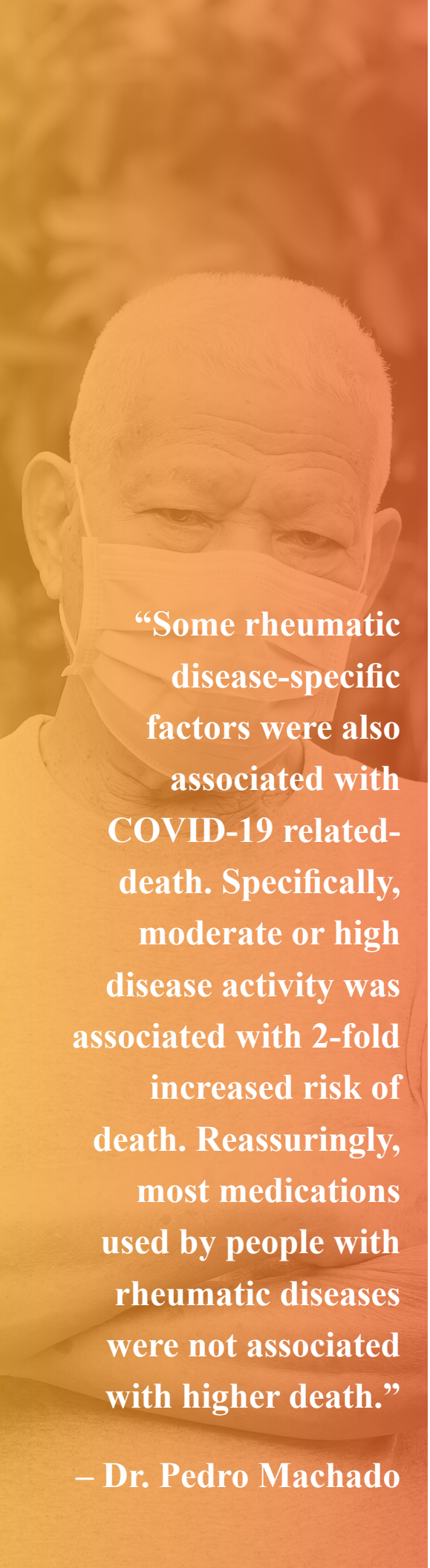
JointHealth™ insight
Arthritis research, education and advocacy news : March 2021

What's new in arthritis research?

In this issue of JointHealth™ insight we share important new information for inflammatory arthritis patients about COVID-19 and provide a helpful review of recently published research on osteoarthritis and inflammatory arthritis.

The COVID-19 pandemic may have forced the cancellation of major arthritis research meetings the past year, but it did not disrupt the publication and sharing of important research that directly impacts people living with arthritis.

Here are some recently released key studies shared by leading international researchers on osteoarthritis and inflammatory arthritis.



“Some rheumatic disease-specific factors were also associated with COVID-19 related-death. Specifically, moderate or high disease activity was associated with 2-fold increased risk of death. Reassuringly, most medications used by people with rheumatic diseases were not associated with higher death.”

– Dr. Pedro Machado

Patients with moderate, high inflammatory arthritis disease at higher risk for COVID-19 complications

Although there is limited data from large population-based studies, it appears that patients with autoimmune and inflammatory conditions are at a higher risk for being hospitalized due to COVID-19 compared to the general population and have worse outcomes associated with infection. Recently published research in the Annals of the Rheumatic Diseases journal has found that inflammatory arthritis (IA) patients taking immunosuppressive medications with moderate and high disease activity were at a higher risk for COVID-related death. Researchers noted that, although the use of most disease-modifying antirheumatic drugs (known as DMARDs and including medications like hydroxychloroquine, leflunomide, sulfasalazine and methotrexate) were not linked to higher risk of death from COVID-19, there were “notable exceptions” with sulfasalazine.

According to Dr. Pedro Machado: “As in the general population, older age, male sex, cardiovascular and chronic lung disease were associated with COVID-19 related death. Some rheumatic disease-specific factors were also associated with COVID-19 related-death. Specifically, moderate or high disease activity was associated with 2-fold increased risk of death. Reassuringly, most medications used by people with rheumatic diseases were not associated with higher death.”

The most common types of IA among the included patients in this research study were rheumatoid arthritis, with 37.4%, connective tissue diseases other than systemic lupus erythematosus (SLE), at 14.3%, SLE, at 10.5%, psoriatic arthritis, with 11.8%, and other spondyloarthritis, at 11.6%.

What does this mean for IA patients? Overall, this research highlights that the risk of dying from COVID-19 varies according to people’s underlying disease activity and what medicine they are taking,” Machado said. “It is important for people with IA to continue to control their disease activity with anti-rheumatic medication, but preferably without increasing the dose of any glucocorticoids, if possible.”

To taper medication or not: that is the question

"Combination therapy" — in which a patient starts taking a conventional disease-modifying drug like methotrexate and then adds a biologic — is common in rheumatoid arthritis (RA) treatment. For patients who achieve remission on these medications, tapering is an option that research shows can benefit some patients and not others. Tapering refers to the process of gradually reducing one or more medications from a person's treatment plan.

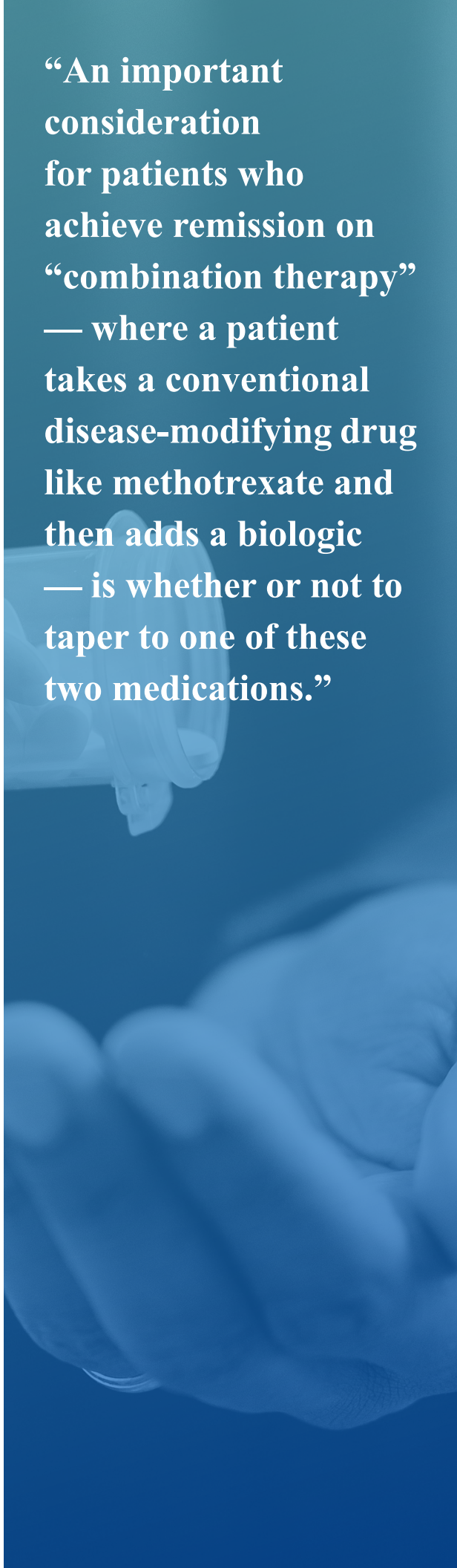
For RA patients who achieve remission on this combination, if their decision with their rheumatologist is to attempt to taper their medications, which drug should they reduce or stop: methotrexate or their biologic?

In a new study, researchers looked at RA patients who were taking methotrexate and etancercept (Enbrel®) who were considered to be in remission. After six months, patients who were still in remission (which accounted for 253 patients) were randomized into three groups: methotrexate only, etanercept only, and a combination of both. After 48 weeks, just 29 percent of people in the methotrexate-only group stayed in remission, compared to about 50 percent of people in the etanercept-only group and 53 percent of people in the combination group.

According to the research leader, University of Alabama at Birmingham rheumatologist Dr. Jeffrey Curtis: "Similar proportions of patients maintained remission with etanercept monotherapy as compared to continuing with [combination therapy], so the implication is that probably if you are doing that well on both treatments, you can continue etanercept, stop methotrexate, and the majority of those people are going to do just as well."

However, for other RA patients, based on scientific evidence, tapering may not be a safe option. For example, a study presented at the European League Against Rheumatism's (EULAR) 2020 annual meeting looked at RA patients who had been using TNF inhibitors and were in remission for at least a year and were assigned to either continue their medication or slowly taper off of it until they were no longer using it.

"An important consideration for patients who achieve remission on "combination therapy" — where a patient takes a conventional disease-modifying drug like methotrexate and then adds a biologic — is whether or not to taper to one of these two medications."



“Without any exercise or activity, adults lose strength with aging. Researchers have found high intensity and low-intensity strength training produce similar results for patient with OA.”

Researchers tracked participants for the next 12 months and found that 63 percent of those who had tapered off TNF inhibitors experienced a flare, compared to only 5 percent of those who kept using these drugs.

Fortunately, those who had stopped the medication and then had a flare generally responded well to reinstating the medication.

“The study indicates that in RA patients in sustained remission on TNF inhibitors, continued treatment should be the preferred choice,” said lead author Siri Lilligraven, MD, MPH, PhD, of Diakonhjemmet Hospital in Oslo, Norway, in a presentation at the conference.

What this means for patients

If you are a RA patient wondering whether you need to continue with your medication once your disease is no longer active, it is essential you talk to your rheumatologist about the specifics of your case and whether tapering is a viable option for you. You and your rheumatologist may decide that it is appropriate for you to taper one medication (such as methotrexate) but stay on your other medications (such as your biologic).

To learn more about inflammatory arthritis medications, consider taking our **JointHealth™ education course on “Advanced Therapies for IA”**.

High-intensity vs. low-intensity strength training to reduce osteoarthritis knee pain

For years, there has been a school of thought that high intensity training could reduce knee pain in patients with osteoarthritis (OA). In a recent study published in the Journal of the American Medical Association, research leader Dr. Stephen Messier found: “Both high- and low-intensity strength training significantly increase strength in an older osteoarthritic population. However, the increase in muscle strength did not translate into significantly better thigh muscle volume to help reduce knee OA pain.”

Go Deeper: Self-care tool for Canadians living with osteoarthritis

One of the valuable tools developed by Canadian arthritis leaders to improve OA patients' quality of life, including their physical activity, sleep, mental health (like mood or depression), relationships and work life, is the **"Talk to your doctor about joint pain" guide** published by the Arthritis Alliance of Canada in 2019.

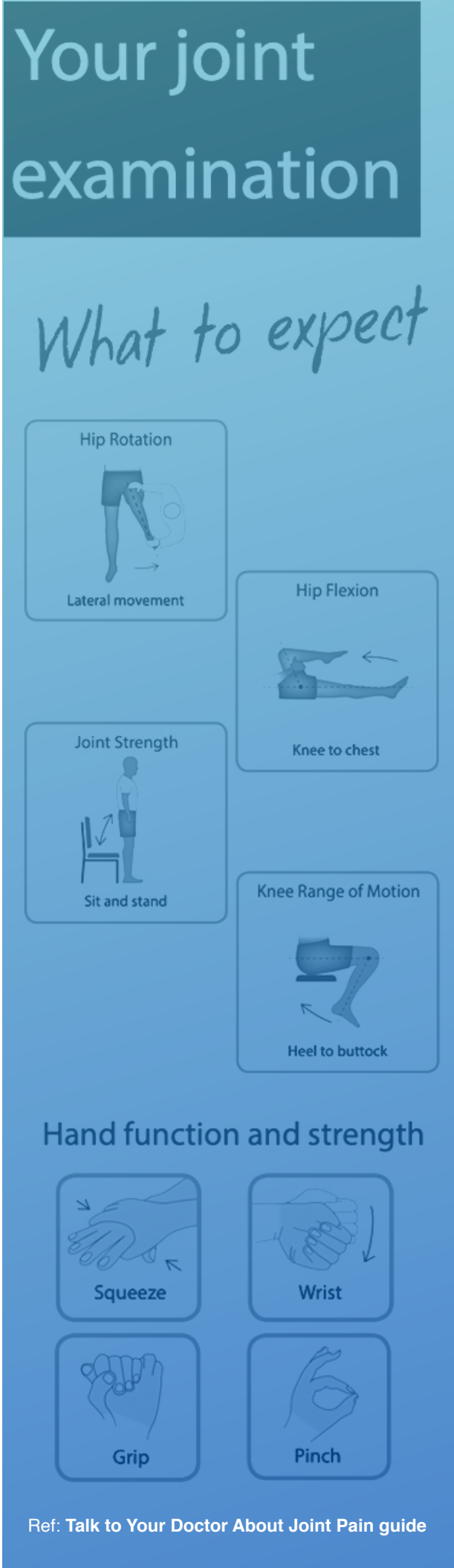
This handout was designed to:

- Assist those with or at risk of OA in having better conversations with their doctors or other health care professionals, by informing them about the care they can expect to receive. Good communication between patients and doctors is very important in reaching an accurate diagnosis and building effective treatment plans.
- Help patients identify the causes of their joint pain and loss of mobility.
- Inform them of the basics of primary prevention strategies and self-care methods.
- Improve patients' quality of life through the successful implementation and adoption of this Handout.

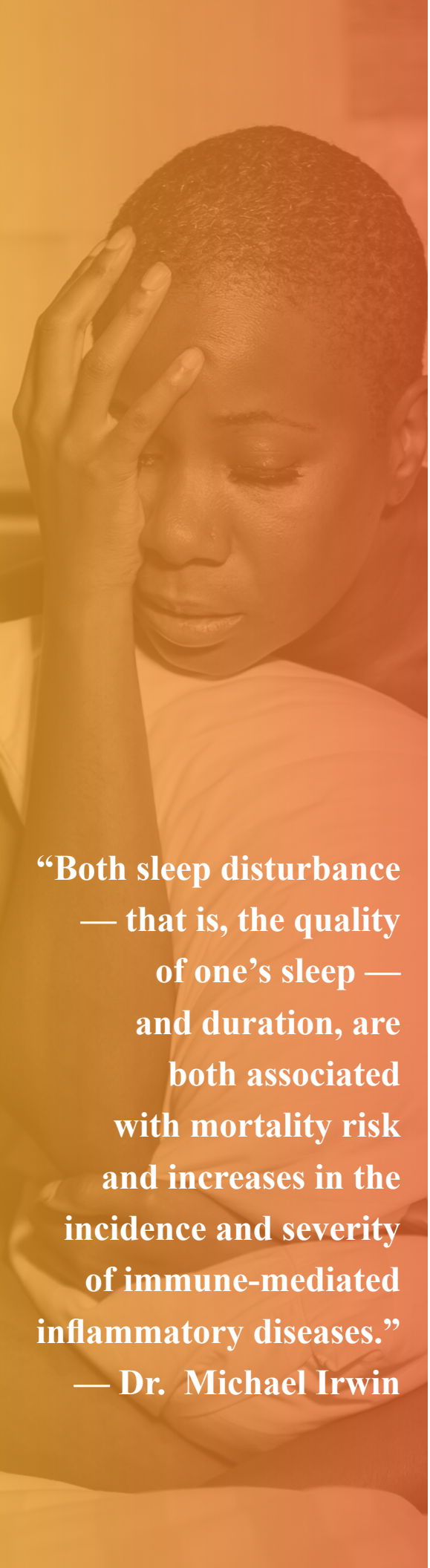
According to Dr. Gillian Hawker, Sir John and Lady Eaton Professor and Chair of Medicine, Faculty of Medicine, University of Toronto: "The Handout arrives at a critical time for Canadians living with osteoarthritis. The highest rates of OA are increasing fastest among young people (20-59 years), due largely to childhood obesity and knee injury. While effective therapies exist, the high prevalence of comorbidity in people with OA makes management challenging (as many of 90% of people with OA have at least one additional chronic condition – most often diabetes, heart disease and high blood pressure)."

Helpful tips:

ACE recently produced a special four-part series on Arthritis At Home featuring Dr. Jasmin Ma, Arthritis Research Canada Post-Doctoral Fellow. Dr. Ma provides a series of safe and joint friendly **exercise "snacks"** on Arthritis At Home that you can do at home, including upbeat cardio and strengthening exercises. In an effort to meet the needs of a wide range of abilities, Dr. Ma provides movement and rest options – choose your own exercise adventure!



Ref: **Talk to Your Doctor About Joint Pain guide**



“Both sleep disturbance — that is, the quality of one’s sleep — and duration, are both associated with mortality risk and increases in the incidence and severity of immune-mediated inflammatory diseases.” — Dr. Michael Irwin

The links between sleep disturbance and inflammation and immune response

As many arthritis patients know, sleep and immunity are partners in sickness and health. At a recent presentation, Dr. Michael Irwin, Cousins Distinguished Professor of Psychiatry at the Cousins Center for Psychoneuroimmunology, and director of the Mindful Awareness Research Center at University of California, Los Angeles, stated: “Both sleep disturbance — that is, the quality of one’s sleep — and duration, are both associated with mortality risk and increases in the incidence and severity of immune-mediated inflammatory diseases.”

According to Irwin, inadequate sleep may have impacts on TNF, interleukin (IL)-6 and C-reactive protein levels. It is because of these impacts that sleep disturbance is not only a consequence of inflammation, but a driver of inflammation.

Irwin concluded by stressing that sleep disturbance can have as significant impacts on inflammation and antiviral immunity as poor diet, sedentary activity and obesity. “Treatments that target sleep behaviors reduce inflammation and improve antiviral immunity could possibly mitigate risk of inflammatory disorders and infectious disease risk,” he said.

Tips for better sleep

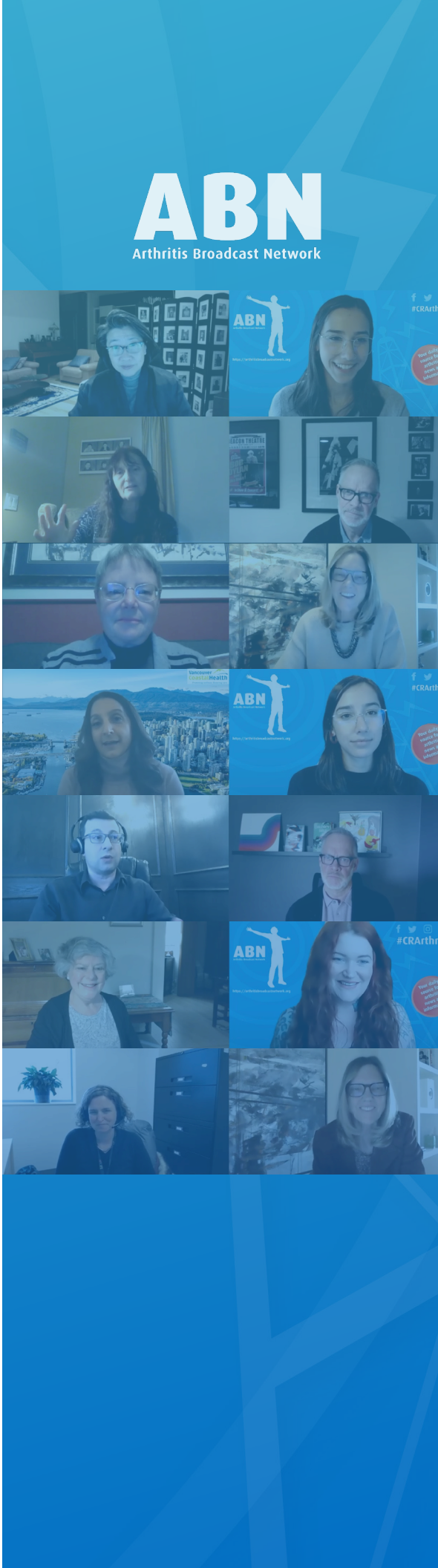
Getting to sleep, and staying that way, can be very difficult, especially for people who live with arthritis and experience chronic pain. Here is a list of some of the things you can do to help you sleep better.

- Keep a regular sleep-wake pattern. Try to go to bed at the same time each night and wake up around the same time each morning.
- Avoid alcohol and caffeine in the late afternoon and evening. Though alcohol can make you sleepy, it can disrupt sleep as well.
- If you need to nap during the day, keep it short; under an hour is best.
- Keep your bedroom only for sleeping – avoid activities like watching television, eating, and working on your computer in your bedroom.

- Exercise regularly but avoid doing so for at least three hours before bed, as exercise can be stimulating, as opposed to relaxing.
- Learn mindfulness and meditation techniques.
- Keep your bedroom cool and dark.
- Fresh air is important; if possible, sleep with a window slightly open.
- Take time to relax before bed – take a warm bath, listen to soothing music, drink chamomile tea, or read a relaxing book.
- Make sure your mattress and pillows are of a firmness which is comfortable to you. Experiment with pillow type and positioning to find a set-up which works for you. Look into the many different types of pillows on the market, including wedge-shaped pillows and body pillows.
- Control your pain at nighttime; talk to your doctor about adjusting your pain medication schedule so that your pain is relieved at night.

Want to learn more about new, exciting arthritis research?

Check out Arthritis Broadcast Network's **#CRArthritis event**! CRArthritis features interviews with presenters and attendees from the 2021 Canadian Rheumatology Association and Arthritis Health Professions Associations Annual Scientific Meeting. The event aims to bring the latest information on arthritis research, treatment and care to the patient community in an accessible way.



Arthritis Consumer Experts (ACE)

Who we are

Arthritis Consumer Experts (ACE) operates as a non-profit and provides free research based education and information to Canadians with arthritis. We help (em)power people living with all forms of arthritis to take control of their disease and to take action in healthcare and research decision making. ACE activities are guided by its members and led by people with arthritis, scientific and medical experts on the ACE Advisory Board. To learn more about ACE, visit www.jointhealth.org

Guiding Principles

Healthcare is a human right. Those in healthcare, especially those who stand to gain from the ill health of others, have a moral responsibility to examine what they do, its long-term consequences and to ensure that all may benefit. The support of this should be shared by government, citizens, and non-profit and for-profit organizations. This is not only equitable, but is the best means to balance the influence of any specific constituency and a practical necessity. Any amount remaining from our annual budget at year end remains with ACE and is used to support the following year's core programs to continue helping Canadians living with arthritis.

For its past 20 years, ACE has consistently honored a commitment to its members and subscribers, academic and healthcare professional colleagues, collaborators, government and the public that its work is free from the influence of its funders.

To inform ACE employees and our stakeholders, members, subscribers that we will operate our organization with integrity and abide by the highest standards of lawful and ethical behaviour, ACE has adopted this strict set of guiding principles:

- ACE requests grants from private and public organizations to support its core program and plans and allocates those funds free from influence;
- ACE discloses all funding sources in all its activities;
- ACE does not promote any "brand", product or program on any of its materials or its website, or during any of its educational programs or activities.
- ACE employees do not receive equity interest or personal "in-kind" support of any kind from any health-related organization;
- ACE identifies the source of all materials or documents used;
- ACE develops positions on health policy, products or services in collaboration with people living with arthritis, academic research community, health care providers and governments free from concern or constraint of its funders or other organizations;ACE employees do not engage in personal activities with its funders;
- Cheryl Koehn does not own stock or any financial interest in any of its private or public funders.

Thanks

ACE thanks Arthritis Research Canada (ARC) for its scientific review of all ACE and JointHealth™ materials.

Disclosures

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Disclaimer

The material contained in this publication should not be relied on to suggest a course of treatment for a particular individual or as a substitute for consultation with qualified health professionals who are familiar with your individual medical needs. Please contact your physician for your own health care related questions.

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