Ontario Kinesiology Association

EXERCISE FIRST

KINESIOLOGISTS IN ONTARIO'S HEALTH SYSTEM

2019 SUBMISSION

Premier's Council on Improving Healthcare
and Ending Hallway Medicine

Ontario Kinesiology Association

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ABOUT THE OKA

The Ontario Kinesiology Association is a non-profit organization representing approximately 1,400 members across Ontario. Currently, there are approximately 2,500 Kinesiologists registered with the College of Kinesiologists of Ontario.

As authorities on movement and exercise, Registered Kinesiologists are committed to enhancing the quality of life of Ontarians through: physical activity, and workplace health and safety; the prevention and management of injury, disability and chronic disease; and the improvement of health and overall performance.

Now, with regulated exercise professionals, the Government of Ontario has at its disposal the opportunity to significantly increase the role of exercise, exercise prescription and active therapies in the prevention and management of chronic disease, as well as disability, injury and chronic pain, in order to prolong independence in seniors, reduce dependence on pharmacological treatments and improve mental health outcomes and quality of life for all populations.

INCORPORATING EXERCISE INTO PRIMARY CARE

Approximately 63% of Ontarians are affected by one or more chronic conditions. The cost of supporting individuals with chronic disease is estimated to be 55% of total direct and indirect health costs. In Ontario alone, physical activity creates an economic burden of approximately $3.4 billion, while obesity generates a burden of $4.5 billion. Chronic conditions like cancers, cardiovascular diseases, diabetes and chronic respiratory disease are the leading cause of death in Ontario, and all can be helped with exercise.

Exercise and physical activity are recognized as among the most effective means to both prevent and manage chronic disease. In fact, exercise is known to have benefits in treating a broad range of conditions:

Depression	Metabolic syndrome	COPD
Anxiety	Polycystic ovarian syndrome	Asthma
Stress	Type 2 diabetes	Cystic fibrosis
Schizophrenia	Type 1 diabetes	Osteoarthritis
Smoking	Hypertension	Osteoporosis
Dementia	Coronary heart disease	Back pain
Parkinson’s disease	Heart failure	Rheumatoid arthritis
Multiple sclerosis	Stroke	Breast cancer
Hyperlipidemia	Peripheral arterial disease	Colon cancer
Obesity/BMI		Prostate cancer

However, despite these benefits, exercise’s role in Ontario’s health care system is unclear.

Incorporating physical activity counseling into clinical settings is a lost opportunity to make Ontarians healthier, at little cost. Yet in a 2015 study, as few as 34% of adults reported being counseled about physical activity at their last physician visit.[1]

The Province of Ontario currently faces a crisis of hallway medicine. More can be done to help these Ontarians manage their own conditions in ways which reduce the cost burden on the health care system and promote independence.

OKA recommends integrating Kinesiologists into the primary care system to take advantage of exercise. A key means of this implementation is to encourage doctors and nurses to make referrals to Kinesiologists for exercise-based care. Exercise should be viewed by physicians as a first line of treatment for many chronic conditions and treated as a means of not just preventing chronic conditions but managing existing conditions.

EXERCISE, OPIOIDS AND CHRONIC PAIN

Ontario is in the grip of an opioid crisis. It is vital that the Province seek means of avoiding situations in which patients become addicted to painkillers like opioids. Alternatives must be found in order to stem the crisis and help Ontarians remain addiction-free.

Opioids are often prescribed for chronic pain. Recent guidelines recommend preferring non-opioid therapy for this condition. However, access to and reimbursement for certain non-pharmacological therapies remains limited.[2]

Exercise can help Ontarians with chronic pain achieve relief. Physical activity and exercise can improve the severity of pain, while improving physical functioning and quality of life. Evidence also suggests it can also have a positive effect on the psychological health of those suffering with chronic pain.[3]

Canada is already beginning to recognize that exercise can take the place of opioids. As noted in *The 2017 Canadian Guideline for Opioids for Chronic Non-Cancer Pain*:

> *As first-line treatment for patients with chronic non-cancer pain, several non-opioid therapies may achieve a similar magnitude of improvement in pain and function (e.g. nonsteroidal anti-inflammatory drugs (NSAIDS), graduated exercise, cognitive behavioural therapy) but without the harms of dependence, addiction, and non-fatal overdose.*

Alternatives should include expanding access to physical exercise therapy. *Exercise should be viewed by medical professionals as a first line of treatment for chronic non-cancer pain and treated as a means of managing and preventing the pain and loss of functioning pain can bring with it.*

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[1] Berra, Kathy, James Rippe and JoAnn E. Manson. *Making Physical Activity Counseling a Priority in Clinical Practice.* Journal of the American Medical Association 314.24 (2015).
[2] Chou, Roger et al. Nonpharmacologic therapies for low back pain: A systematic review for an American College of Physicians clinical practice guideline. Ann Intern Med. 2017;166(7):493-505.
[3] Geneen, Louise J et al. "Physical Activity and Exercise for Chronic Pain in Adults: An Overview of Cochrane Reviews." The Cochrane Database of Systematic Reviews 4 (2017): CD011279. PMC. Web. 17 Jan. 2018.

EXERCISE AND MENTAL HEALTH

Exercise is known to stimulate the body to produce endorphins and enkephalins, hormones which promote good feelings and make problems feel manageable. Exercise increases the volume of certain brain regions, in part through better blood supply and in part through factors which support neuron signaling, growth and connections; specifically, studies show that exercise promotes the creation of new neurons in the hippocampus, an area of the brain involved in memory, emotional regulation and learning.[4]

Exercise can decrease depression as effectively as pharmacological or behavioural therapy.[5]

Exercise is also effective in the treatment of anxiety. Normal and elevated levels anxiety can be significantly reduced following exercise. Anxiety is reduced by a statistically significant degree within 5 to 15 minutes of the end of exercise and remains decreased for 2 to 4 hours afterward.[6]

Physical activity can also reduce the likelihood of Alzheimer's by almost 40% compared to those who are inactive. Approximately 1 in 7 cases of Alzheimer's disease could be prevented if everyone who is currently inactive were to become physically active at a level consistent with current activity recommendations of 30 minutes per day. This reduction could lead to cost savings of $88 million to $970 million per year in health care for community-dwelling older adults with Alzheimer's disease.[7]

As well, mental illness is implicated in the majority of disabilities, and according to the World Health Organization, depression drives up the likelihood of comorbidities and premature death. Those with major depression are roughly 40% to 60% more likely to die prematurely than the general population, owing to physical health problems that are left unattended. Depression predisposes individuals to conditions such as myocardial infarction (heart attack) and diabetes; conversely, these conditions also increase the likelihood of depression.[8] In fact, the WHO estimates that depression is present in…

- Up to 29% of people with hypertension
- Up to 30% of people with epilepsy
- 27% of people with diabetes
- 44% of people with HIV/AIDS
- Up to 22% of people with myocardial infarctions
- Up to 31% of people who have suffered strokes
- 33% of people with cancer
- 46% of people with tuberculosis

This compares to a rate of 10% incidence of depression in the general population.[9]

Kinesiologists are best positioned to develop and deliver clinical exercise therapies that can serve as treatment for both the mental health and comorbid chronic disease.

Kinesiologists can deliver these services effectively as parts of interdisciplinary care teams, in which the regulatory standing of Kinesiologists ensures they can not only deliver guided exercise therapy, but work with other allied providers to gain an understanding of the patient's mental health needs and other comorbid conditions, while communicating information back to the primary care physician in a fully confidential manner.

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[4] Gingell, Sarah. *Why Exercise Is So Essential for Mental Health.* Psychology Today. March 22, 2018.
[5] Exercise treatment for depression: Efficacy and dose response. Dunn, A et al. American Journal of Preventive Medicine. 2005.
[6] Physical activity in the prevention and treatment of anxiety and depression. Martensen, Egil. Nordic Journal of Psychiatry. 2009.
[7] The Role of Physical Activity in the Prevention and Management of Alzheimer's Disease – Implications for Ontario. Ontario Brain Institute. 2013.
[8] World Health Organization. Mental Health Action Plan 2013-2020. 2013.
[9] World Health Organization Department of Mental Health and Substance Dependence, Noncommunicable Diseases and Mental Health. Investing in Mental Health. 2003.