



Meeting with Brockton Council – Benefits of the Change Program

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Metabolic Syndrome:

Metabolic Syndrome is a condition that affects 1 in 5 Canadians, increasing the risk of diabetes (5x), and cardiovascular disease (2x), and is linked to chronic kidney disease. Metabolic Syndrome leads to chronic illnesses that affect 43% of all deaths in Canada. (*See Metabolic Syndrome Fact Sheet*).

CHANGE Program :

In 2011, a group of leading health experts from across Canada (including physicians, medical researchers, dietetic specialists, and kinesiologists), formed the not-for-profit organization Metabolic Syndrome Canada, with the goal of improving the health of Canadians through effective diet & exercise programs. The CHANGE Program, is an evidence based nutrition & exercise program developed by Metabolic Syndrome Canada. It is an intensive, multidisciplinary program for people with Metabolic Syndrome, to help reverse Metabolic Syndrome and reduce the risk of progression to more serious diseases such as heart disease and diabetes. After a national feasibility study demonstrated significant health improvements with this intensive diet and exercise program, the Brockton and Area Family Health Team became one of the first Family Health Teams in Ontario to offer this program in our community. (www.metabolicsyndromecanada.ca) (*See participant Information Hand Out*)

The CHANGE program involves a participants primary care provider (NP or MD), Registered Dietitian, and Registered Kinesiologist who provide intensive support for patients to improve their health over a one year period. (*See program timeline*). The program is offered to any patients rostered with the BAFHT who meet the criteria for Metabolic Syndrome.

BAFHT Involvement with the CHANGE program:

The BAFHT has been offering the program since Nov 2017 through partnerships with Brockton Recreation and Sacred Heart High School. With the goal of minimizing barriers to health care, we offer all of our programs free of charge to participants. We offer participants both an



evening program option (SHHS) and a daytime option (Community Centre). Because this program is an intensive program that runs over one full year, we have our program schedules pre booked so that participants are able to determine their ability to commit to the program in advance, and so that the health care providers involved with the program are able to manage their busy schedules effectively.

Currently, we have 29 local residents involved in the CHANGE program. Our first 2 participants are just “graduating” from the program (Dec, 2018). We will have another 15 completing the program in April, 2019, and 12 completing the program in Sept, 2019. Our plan is to continue offering the program, with new participants starting twice per year (spring and fall).

At the beginning of the CHANGE program, patients who are rostered with the BAFHT and interested in the program will see their NP or MD for an initial assessment, and to determine their eligibility, and readiness for the program. Patients are then referred to the dietitian and kinesiologist for initial nutrition and fitness assessments. Participation in the program involves the following:

- Four follow up visits with family doctor or NP
- Group education and exercise sessions with the Kinesiologist & Dietitian:
 - Month 1-3: weekly
 - Months 4-12: monthly

(See Program Overview / Timeline)



2019 Program Timeline:

All dates listed as Wednesday as this would be our preferred option.

Regular group sessions: 10:30-12

Wed Jan 9
Wed Feb 6
Wed Mar 6
Wed Mar 27
Wed April 3
Wed April 10
Wed April 17
Wed April 24
Wed May 1
Wed May 8
Wed May 15
Wed May 22
Wed May 29
Wed June 5
Wed July 10
Wed August 7
Wed Sept 18
Wed Sept 25
Wed Oct 2
Wed Oct 9
Wed Oct 16
Wed Oct 23
Wed Oct 30
Wed Nov 6
Wed Nov 13
Wed Nov 20
Wed Nov 27

Individual appointments 9-4

Utilizing Treadmill and area for patients to meet with Nurse Practitioner and Dietitian (for initial assessments of new participants, or 3 or 12 month follow ups)

Mon Mar 18
 Fri Mar 22
 Mon Mar 25
 Fri Mar 29
 Mon June 10th
 Fri June 14th
 Mon Sept 9th
 Fri Sept 13th
 Mon Sept 30th
 Friday Oct 4th
 Mon Dec 2nd
 Fri Dec 6th

Benefits to the Community:

- Patients with Metabolic Syndrome have double the annual healthcare costs compared to those without Metabolic Syndrome.
- In the CHANGE feasibility study done by Metabolic Syndrome Canada (CMAJ 2017 5(1) E229-E236), the following significant health improvements were noted :
 - High program adherence rates
 - Reversal of Metabolic Syndrome in 19% of participants
 - Reduction in number of criteria for Metabolic Syndrome in 42% of participants
 - Improvements in components of Metabolic Syndrome (BP, TG, WC) @ 12 mo
 - Participants had significant improvements in VO2 max & healthy eating scores
 - 17% relative risk reduction in 10 year risk of acute myocardial infarction at 12 mo (PROCAM risk score)

Early data from BAFHT CHANGE Program results are consistent with above findings

- Making a community healthier improves quality of life and benefits the community economically. Looking at solely the 17% reduction in risk in acute myocardial infarction over a 10 year time frame, with 29 participants already involved in the CHANGE program, means there are 5 less expected incidents of heart attacks in our group. This saves a significant cost through reducing reliance on the healthcare system, but when also considering missed work

time, longer life expectancy and quality of life it shows substantial benefits to the community.

- Brockton and Area Family Health Team healthcare practitioners would be interested in continuing to support the municipality through community education.
- The Family Health Team would be willing to support the Municipality through grant opportunities that are eligible to be applied for through the Family Health Team as well as the Municipality.

Feedback:

"This goes beyond mere weight reduction and helps me to view food choices and appropriate activity as actions which I can do for myself, to benefit my health."

"The unhealthy eating habits that I had developed over many decades... are not easily "un-learned" and a one-shot visit to a medical professional was not going to change that. The re-programming of my attitudes and mis- information I held about eating are some of the benefits of the CHANGE program for me. A one size fits all advice would not have a long term effect on me."

"We are responsible for ourselves but it sure helps with the education of our health care providers"

"Thanks for stretching us by encouraging the trial of new foods, during this program. I have been taught by you both that healthy eating and activity is a lifelong journey, not a one-time decision. I thank you both for your effective leadership and education that has made this program worthwhile for me."

Future Partnerships:

In addition to the above, we have additional programs either currently running or being researched to treat a community need or under utilization including: COPD Activation, Cancer exercise support group, Post natal exercise group.



MetSC
METABOLIC SYNDROME CANADA

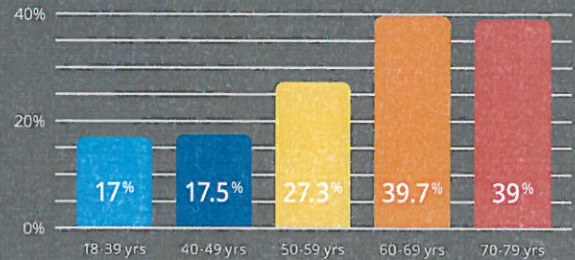
Metabolic Syndrome

is a health crisis hiding in plain sight





1 in 5 Canadians has Metabolic Syndrome (MetS)^{1,2}



Metabolic Syndrome (MetS)

is diagnosed when a patient has **3** of the following **5** conditions⁵:

High blood pressure

(≥ 130/85 mm Hg, or receiving medication)

High blood glucose levels

(≥ 5.6 mmol/L, or receiving medication)

High triglycerides

(≥ 1.7 mmol/L, or receiving medication)

Low HDL-cholesterol

(< 1.0 mmol/L in men or < 1.3 mmol/L in women)

Large waist circumference

(≥ 102 cm in men, 88 cm in women; ranges vary according to ethnicity)



The prevalence of metabolic syndrome steadily rises in older demographics^{3,4}



There is a higher incidence of diabetes, dyslipidemia and chronic kidney disease — both diagnosed and undiagnosed — in patients with MetS¹

5x

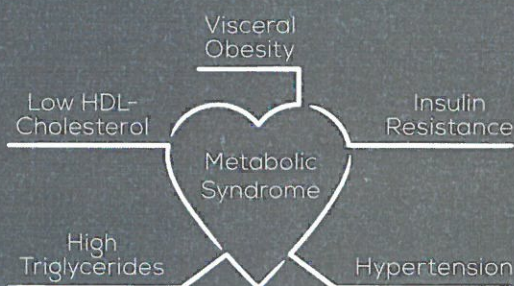
There is a 5 time increase in the risk for developing type 2 diabetes in those with MetS^{5,6}

2x

Those with MetS have twice the risk of cardiovascular disease, cardiovascular disease mortality, stroke and a 1.5 fold increase in the risk of all-cause mortality⁷



Most physicians do not use the term MetS, and most patients are unaware that they have MetS



1) Rao DP et al. Chronic Dis Inj Can 2014; 34 (1):36-45

2) Riediger ND et al. CMAJ 2011; 183(15):E1127-34.

3) Ervin RB. Natl Health Stat Report 2009;(13):1-7

4) Cameron AJ et al. Endocrinol Metab Clin North Am 2004;33(2):351-75

5) Alberti KGMM et al. Circulation 2009;120(16):1640-5

6) Ford ES et al. Diabetes Care 2008; 31(9):1898-904



CHANGE

Canadian Health Advanced by
Nutrition and Graded Exercise

The **CHANGE** Program

The CHANGE Program, created by leading health professionals at Metabolic Syndrome Canada is an innovative, **evidence-based** diet and exercise program that reverses metabolic syndrome and prevents progression to serious conditions such as diabetes, hypertension, and cardiovascular disease.



Simple intervention with a big impact

According to a national feasibility study of the CHANGE program in 3 Primary Care Clinics across Canada:

- Program was feasible with great compliance of scheduled visits
- At baseline, approximately 60% of patients had components of metabolic syndrome that were not adequately managed with medication

At 12 months:

- 25% of patients experienced a reversal of MetS, while 50% of patients demonstrated an improvement in the components of MetS
- Healthy eating index, mediterranean diet scores and VO2 max scores improved greatly
- Most patients successfully reduced their 10-year risk of heart disease

Five reasons why CHANGE works



Family Doctor

The family doctor plays an active role at the entry point of the CHANGE Program by identifying the patients' risks for MetS, assessing their suitability, encouraging them to adopt a credible diet and exercise program and by motivating them to comply with the program. The family doctor will see patients at baseline/screening, followed by visits every 3 months to monitor progress over 12 months of the program.



Developed for Busy Clinics: A Team Approach

The dietitian and kinesiologist will work closely with the family doctor to monitor the patients' progress, address challenges and offer solutions. The dietitian and kinesiologists will assess each patient at baseline and this will be followed by weekly visits for the first 3 months and then monthly visits for the remaining 9 months of the program.



Personalized Plan

The dietitian and kinesiologist will design a diet and exercise plan to fit each patient's current lifestyle, income, physical abilities and preferences, while aiming to improve the components of MetS. Compliance to the plan will be assessed throughout the 12 months and modifications will be made to ensure long term changes.



Gradual Steps

Bad habits die hard. The health care team, i.e. the family doctor, dietitian and kinesiologist, will guide each patient through the incremental steps needed to achieve their goals.



Close Follow Up

Changes take time. The health care team will provide ongoing consistent support over 12 months so that patients may overcome setbacks and achieve the goals for a healthier life.

A diet-exercise intervention is the most effective treatment for so many conditions I see on a daily basis, but it's hard to get patients to change their behaviour. In 15 years of practice, rarely have I been able to stop medication for a patient, but with the CHANGE Program, I did it several times. As a family doctor, seeing such positive outcomes is hugely rewarding.

Dr. Doug Klein, Family Physician,
Edmonton Oliver Primary Care Network

The CHANGE Program has helped physicians in our clinic successfully manage patients with deteriorating cardio-metabolic profiles. Some participants no longer have hypertension and metabolic syndrome, others have reduced diabetes or dyslipidemia medication. Patients that for 20 years hadn't reduced their waist circumference saw improvement and found the health benefits of lifestyle intervention. The team approach provides patients with the motivation to do regular physical activity and eat well with pleasure, and physicians are more confident to recommend a non-pharmacological treatment. I think that all family medicine clinics should manage chronic disease with the CHANGE Program model.

Dr. Caroline Rhéaume and Dr. Marie-Josée Filion,
Family Physicians, GMF-UMF Laval-Québec



Introduce CHANGE to your family clinic

Metabolic Syndrome Canada can help you implement the CHANGE Program in your clinic by providing you the following:

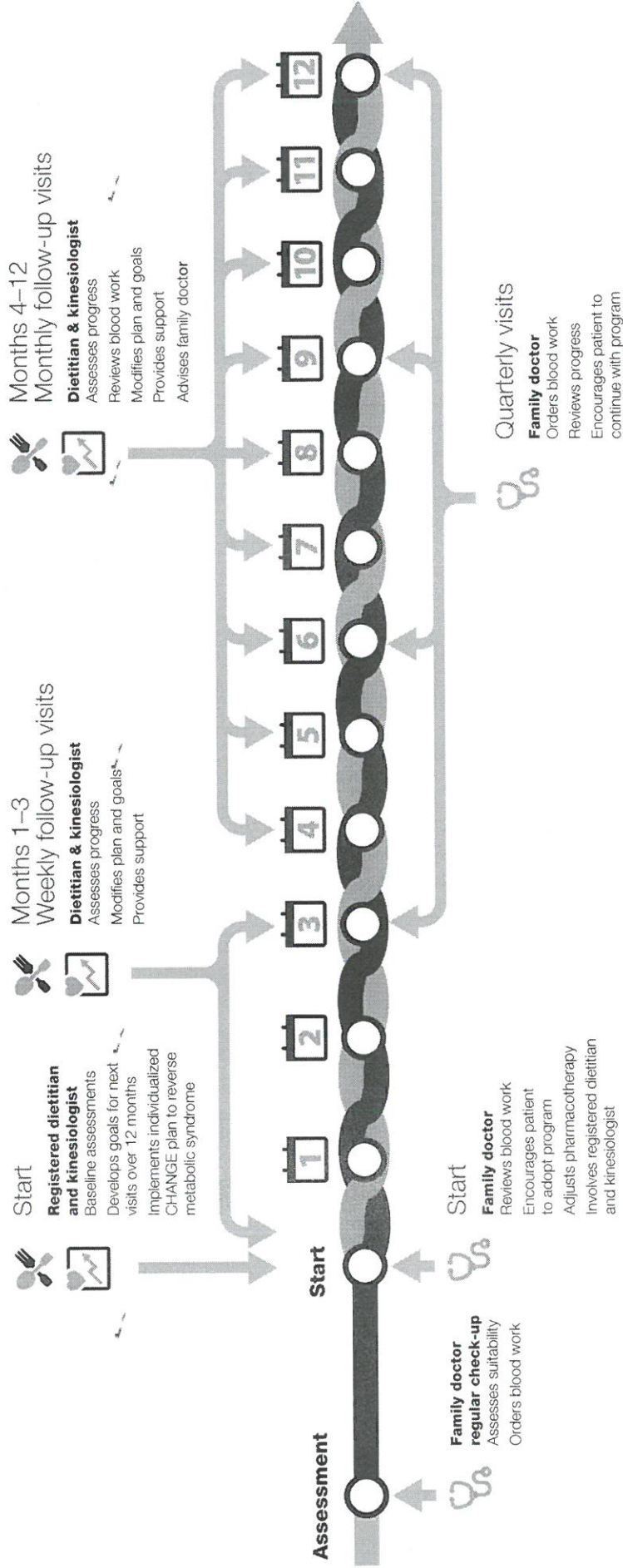
- Family doctor, dietitian and kinesiologist toolkits
- Protocol to integrate the roles of clinic team members
- Ongoing training/assistance related to the program for your staff
- Connect you with other family clinics that have implemented the program
- Options to maximize your existing funding to enable long-term lifestyle changes for your patients
- Methods of evaluating the reversal of MetS in your clinic's patients



MetSC
METABOLIC SYNDROME CANADA

For more information about
The CHANGE Program or Metabolic Syndrome Canada
**call 1-855-442-4264, email info@metsc.ca
or visit MetSC.ca/learn**

Program Overview



You have been invited to participate in The **CHANGE** Program

The CHANGE program is a 1 year individualized diet and exercise program that is being offered at your Family Doctor's clinic.

The program is aimed at adults with Metabolic Syndrome.



Metabolic Syndrome is diagnosed if you have any three of the following:

- high fasting blood sugars
- high blood pressure
- high fats in your blood
- being on medication for high blood sugars, high blood pressure or high blood fats
- having a large waistline

Studies have shown that a diet rich in fruits, vegetables, nuts, whole grains and legumes can significantly reverse metabolic syndrome and can even reduce the risk of heart disease¹.

Regular exercise that increase your heart rate has also been shown to prevent diabetes as well as reduce the need for insulin in diabetic patients².

1 Estruch et al NEJM 2013; 368: 1279-90. 2 Gillies et al BMJ 2007; 334 (7588): 299



What are the benefits?

By the end of the 12-month program we hope to see an improvement in your health. You may have better control of your blood sugars, blood fats and blood pressure. You may experience positive benefits such as improved energy, sleep and flexibility. There is also a chance that you may not see these benefits.

The focus of the CHANGE Program is to reduce your risk of developing diseases and it may result in improvements in your blood and waist size with or without weight loss.

What does The CHANGE Program involve?

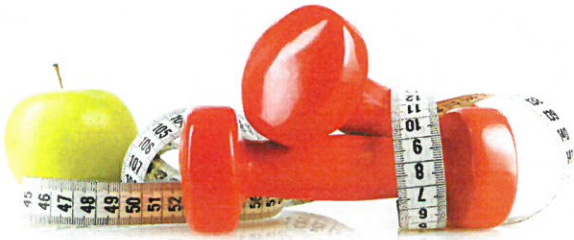
At the beginning of the program:

- | | | |
|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| 1 Your doctor will do a check-up and look at your blood work and history to see if the program will help you. | 2 Your doctor will ask you about your readiness to start a diet and exercise program. | 3 You will be referred to a dietitian and exercise specialist who will work with you to develop your own program. |
|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|

If you agree to participate in the program, over the 12 months:

- | | | | |
|------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| 1 You will be expected to follow the diet and exercise program. | 2 You will be expected to attend four follow up visits with your family doctor | 3 You will be expected to see the dietitian and exercise specialist regularly as follows:
Month 1-3: weekly
Months 4-12: monthly | 4 Your doctor will do blood tests to monitor your health and response to the program. |
|------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|

The diet and exercise program



Your dietitian will create a nutrition program for you based on your risk factors for Metabolic Syndrome, your goals and any barriers.



Your exercise specialist will also create a fitness program for you based on your fitness levels and health.



You will have include face-to-face meetings with the dietitian and exercise specialist and some may include group sessions

What happens when The CHANGE program is done?

With the help of your CHANGE Team in your clinic, we hope that you will learn how to continue making the changes in your lifestyle. Metabolic Syndrome Canada will be working with your Family Doctor to explore ways to keep the program going in the long term.

Name of Clinic

Contact us if you have any questions:



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The CHANGE program is an initiative of Metabolic Syndrome Canada.



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Canadian Health Advanced by
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