TrueNTH Lifestyle Management:
2018 Update

For PROSTAID Calgary
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Overview

- Background of TrueNTH LM
  - Community-based program structure
  - Program design: Professional trainings and class plans

- Program Implementation and Feasibility
  - RE-AIM

- Outcomes
  - PROs
  - Physical Fitness

Move forward with wellness programs for prostate cancer survivors. Gain confidence and improve physical function.
Exercise is both *safe* and *beneficial* at any stage of the cancer experience.

**Cancer Continuum**

**Pre-treatment**
Including surgery, chemotherapy, radiation therapy, and palliative care as needed

**Treatment**

**Post-treatment**
Rehabilitation and/or maintenance therapy as needed

**Survivorship**
Advanced Cancer Care

**Beneficial to Exercise**
Cancer and Exercise Guidelines

Exercise is safe and feasible during treatment
- Improves physical functioning, fatigue and QOL
- Avoid inactivity and return to normal daily activities as soon as possible following diagnosis

After treatment, exercise is essential for recovery and fitness

Individualization and tailoring are necessary
- Fitness levels, gender, age, disease status
- Social support
- Access to resources/programs
Participant Testimonial
A Movember Initiative

Lifestyle Management

Prostate Cancer Canada
What are we doing?

Community Programs  Professional Training  Healthcare Advocacy

Free Home Programs and Online Resources
Community Programs

12-weeks

Physical Activity
- Fitness assessments
- Individualized exercise prescription
- Safe, supervised group PA classes 1-2 times per week

Stress-Reduction
- Weekly yoga class
- Take-home yoga programs
- Educational sessions

Nutrition
- Educational handouts

Optional Online Resources and Progress Trackers
Physical Activity Classes

- CEP support intake (central) and assessment (site)
  - Screening – comorbidities and contraindications
    - Modification of exercises
    - Database of exercise provided
- Trained fitness professionals deliver classes
- Exercises & poses are “foundation” based
  - Basic level, low difficulty
  - Lower and higher difficulty modification levels offered (stoplight)
  - Practical interpretation of previously used, evidence-based protocols
- Exercise classes delivered in group setting
  - Circuit-based
  - Resistance training
- Recommended durations, rests, and exercise/pose order should be followed
  - Exception when participant experiencing fatigue
Stress-Reduction: Yoga Classes

- Pose choice, order, and progression, based on:
  - Successful programs and participant feedback
  - Evidence based needs of prostate cancer survivors
    - i.e. pelvic floor, balance
- 6 and 12-week program options
- Offered weekly based or pilot participant feedback

TrueNTH Yoga: Class 1

1. Reclined Knees | Opening Breath
   - Introduce simple nostril breathing and diaphragmatic breathing
   - Intro connect to body, mind, breath
   - Intro to PF voluntary contraction
   - Inhale to release PF muscles – Exhale to gently engage/lift PF muscles

2. Reclined Arm Pullovers
   - Thumb tips touching, palms face away from face – inhale arms toward ears, exhale back to start
   - Fingertips touching each other on both hands – palms pull away (spider on a mirror)

3. Seated Shoulder Rolls | Sukhasana Variation
   - Repeat 4-6 times
   - Inhale shoulders up
   - Exhale back and down

4. Cat/Cow | Biddalasana - Cakravakasana
   - Repeat 4-6 times
   - Move with breath and awareness
   - Inhale cow – exhale cat

5. Mountain Pose | Tadasana
   - Static, focus on postural alignment & grounding/feel
Educational Handouts

- Topics presented to promote behavior change.
- Facilitators introduced each theme during class time using a provided note sheet.

**Easy Steps for GOAL SETTING**

What are SMART Goals?

- **S**pecific - What, where, why?
- **M**easurable - How much or how many?
- **A**ttainable - Is your goal within reach?
- **R**ealistic - Are you willing and able to work towards it?
- **T**ime-oriented - What is the deadline?

**Strategies for Success**

- Be Consistent
- Visualize Success
- Build Support Network
- Educate Yourself
- Get It On Paper
- Reward Yourself
- Start Small
- Trust Your Plan
- Allow for Setbacks
- Have Fun

**Types of Goals**

**Outcome Goals**

The result you aim to achieve; longer-term goals

Ex. I want to lose 10 pounds in 3 months

**Process Goals**

How will you achieve the outcome; shorter-term goals

Ex. I will go for a 20 minute walk after dinner.
OVERNIGHT OATS WITH RASPBERRIES

INGREDIENTS
- 1/2 cup nonfat milk
- 1/2 cup old-fashioned rolled oats
- 1/3 cup blueberries
- 1 teaspoon packed light brown sugar
- 1/4 teaspoon finely grated lemon zest
- 1/8 teaspoon pure vanilla extract
- 3 drops pure almond extract
- Kosher salt
- 1 tablespoon toasted sliced almonds
- 2 teaspoons honey or agave nectar

INSTRUCTIONS
1. Combine ingredients and stir really well. Place mixture in a large container and cover. Let sit in the refrigerator overnight.
2. Enjoy the next morning cold or warmed up in the microwave. You can portion out the mixture into glass jars or Tupperware and keep it in the fridge for breakfast for 3 to 4 days.

Putting it all together as a healthy diet

The key components of a healthy diet are to include a variety of foods with a focus on plant-based foods. This includes vegetables and fruit, whole grains, legumes (beans, lentils, nuts and seeds). The overall pattern of what you eat is most important rather than focusing on a single food or food group. The key is that most of what you eat is foods that come from plants.

A healthy diet can also include foods that come from animals such as fish, poultry, red meat, eggs, milk, yogurt and cheeses in moderate amounts. Choose foods that are moderate in fat by selecting leaner meats, lower fat dairy products, and using low-fat cooking methods. A healthy diet also limits highly processed foods because they are often low in key nutrients and high in sugar, fat and salt.

You may have heard a healthy diet is based on the concepts of “variety” and “balance”. By choosing a variety of foods it provides a range of nutrients that work together to promote health. There is no such thing as one “superfood” that provides all of the nutrients we need. Balance in the diet is achieved by choosing healthy foods in the right amounts to avoid getting too little or too much of certain nutrients.
Professional Trainings
Professional Trainings

12-15 Hour Online Trainings for Fitness and Yoga Professionals

Background & Prescription
- Treatment
- Side Effects
- Outcomes

Online Portal
- Resources
- Health Care Network
- Prescription and support

Class Design & Management
- Pre-designed classes
- Multidisciplinary integration

Case Studies
- Common restrictions
- Psychosocial impact
- Communication

Screening & Modification
- Medical referral process
- Individualized prescription

Optional In-person training for facilitators of each program

Evidence-based training manual and resource
Free Home Programs and Online Resources
Free, Online Home-based Programs and Resources

TrueNTH Lifestyle Management

Physical activity, stress-reduction, & nutrition for men living with prostate cancer

Learn more at lifestyle.truenth.ca

Email: lifestyle@truenth.ca
Healthcare Advocacy
Taking Action: Direct Referrals

Main recommendations: COSA calls for:

- exercise to be embedded as part of standard practice in cancer care and to be viewed as an adjunct therapy that helps counteract the adverse effects of cancer and its treatment;
- all members of the multidisciplinary cancer team to promote physical activity and recommend that people with cancer adhere to exercise guidelines; and
- best practice cancer care to include referral to an accredited exercise physiologist or physiotherapist with experience in cancer care.

Connecting people with cancer to physical activity and exercise programs: a pathway to create accessibility and engagement

Taking Action: Direct Referrals
Results from 3-year TrueNTH LM Implementation
Feasibility – TrueNTH Implementation

Total Participants: $n = 297$
Total 12-week programs: $n = 42$

**Program Facility Types**
- Civic Recreation Centres
- Hospital/Clinic Settings
- Private Wellness Centres

**Program Design Types**
- YMCAs
- Post-secondary institutions
- 2x weekly fitness
- 1x weekly fitness and 1x weekly yoga
- 2x weekly fitness and biweekly yoga
- 1x weekly yoga

**Community Programs**

Locations with TrueNTH LM Resources for future programming

Map showing program locations with TrueNTH LM Resources.
### Outcome measures

#### Baseline and 12-weeks

**Generalized Linear Mixed Model**

<table>
<thead>
<tr>
<th>Physical Outcomes</th>
<th>Patient-Reported Outcomes</th>
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</thead>
<tbody>
<tr>
<td><strong>Body Composition</strong></td>
<td><strong>Quality of Life</strong></td>
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<tr>
<td><em>BMI, Waist Circumference (cm), Hip to Waist Ratio</em></td>
<td><em>FACT-P, EQ-5D-3L</em></td>
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<tr>
<td><strong>Functional Aerobic Capacity</strong></td>
<td><strong>Physical Activity Levels</strong></td>
</tr>
<tr>
<td><em>6 Minute Walk Test (m)</em></td>
<td><em>Godin Leisure Time Exercise Questionnaire</em></td>
</tr>
<tr>
<td><strong>Flexibility</strong></td>
<td><strong>Demographics</strong></td>
</tr>
<tr>
<td><em>Sit and Reach (cm)</em></td>
<td>*Age, treatment profile, basic background</td>
</tr>
<tr>
<td><strong>Musculoskeletal Fitness</strong></td>
<td><em>information (i.e. socioeconomic, education)</em></td>
</tr>
<tr>
<td>*30 sec Sit to Stand (reps), Push up (reps), Grip</td>
<td></td>
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<tr>
<td>Strength (kg)*</td>
<td></td>
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<tr>
<td><strong>Balance</strong></td>
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<tr>
<td><em>Unipedal Stance, 8ft Timed Up and Go</em></td>
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</tbody>
</table>
Program Participants

- **Demographics**
  - Age: **67.6**
  - Time Since Treatment
    - Active Surveillance: **11.6%**
    - Active Treatment: **26.9%**
    - Treatment Completed: **61.6%**
  - Treatment Received
    - Surgery: **49.2%**
    - Radiation: **26.9%**
    - Hormone Therapy: **26.6%**
    - Chemotherapy: **5.4%**
Feasibility – Adherence Pre to Post

- **Data Adherence**
  - Physical Assessment
    - Baseline: 246
    - 12-week: 182
  - Patient Reported Outcomes
    - Baseline: 159
    - 12-week: 136

- **Completion Status**
  - Continued with Maintenance: 122 (41.1%)
  - Dropouts
    - Lost to follow-up: 37 (12.5%)
    - No longer interested: 7 (2.4%)
    - Change in medical status necessitating dropout: 7 (2.4%)

- No adverse events reported
Quality of Life and Body Composition Outcomes

**Quality of Life**

\[ p = .008 \]

**Body Composition**

\[ p = .013 \]

**Physical Activity Levels**

\[ p = .018 \]

**Body Composition**

\[ p = .016 \]
Physical Fitness Outcomes

Muscular Strength
- Grip Strength (kg)
  - Baseline: 75 kg
  - 12-weeks: 78 kg
  - p = .044

Muscular Endurance
- 30 second Sit to Stand (reps)
  - Baseline: 10 reps
  - 12-weeks: 18 reps
  - p = .000

Aerobic Capacity
- 6-minute Walk: Total Distance (m)
  - Baseline: 520 m
  - 12-weeks: 640 m
  - p = .000

Muscular Endurance
- Push ups (reps)
  - Baseline: 4 reps
  - 12-weeks: 11 reps
  - p = .000

Muscular Endurance
- Sit & Reach (cm)
  - Baseline: 10 cm
  - 12-weeks: 5 cm
  - p = .000

Dynamic Balance
- 8ft Timed Up and Go (sec)
  - Baseline: 5.6 sec
  - 12-weeks: 4.4 sec
  - p = .000

Bar charts show the improvements in physical fitness outcomes from baseline to 12-weeks, with statistical significance indicated by p-values.
Focus Groups and Feedback From You

How the Program Facilitates Activity

- Community-based location
- Engaging & knowledgeable instructors
- Free, tailored, educational, and varied classes
- Group dynamic with peers

Individual Benefits of the Program

- Improved physical fitness, energy levels, & weight loss
- Better handling & coping of diagnosis & treatment
- Helped overcome sedentary lifestyle
- Camaraderie and understanding

Program Improvements and Sustainability

- Logistical Improvements
- Adding more nutrition and home-based options
- MAKE PROGRAMS A PART OF STANDARD CARE
Conclusions/Future Directions

- **Conclusions**
  - Community-based programs are feasible – recruitment, attendance, adverse events (none), adherence
  - Effective based on physical fitness, PA level improvements and quality of life outcomes.

- **Future Directions**
  - Health economics of program
  - Long-term effects of intervention on quality of life and physical activity levels (24-weeks, 1-year)
  - Ongoing online resources – lifestyle.truenyth.ca
What does it look like now?
Website simplified

lifestyle.truenth.ca helps direct you to a community program or easily sign up for home-based programs and resources

Registration is easier, an optional tutorial is now included automatically, and navigation is simpler
Welcome to TrueNTH Lifestyle Management
Exercise and Wellness Prescription for Prostate Cancer Lifestyle Management

I recommend including physical activity, nutrition, and stress-reduction programs for your prostate cancer care.

To get started, ____________ will contact TrueNTH Lifestyle Management for information on available wellness program options.

- lifestyle.truenth.ca
- lifestyle@truenth.ca

Healthcare Professional: _______________
Further Evaluation
# Continued Evaluation: RE-AIM Framework

<table>
<thead>
<tr>
<th>What are we evaluating?</th>
<th>REACH</th>
<th>EFFECTIVENESS</th>
<th>ADOPTION</th>
<th>IMPLEMENTATION</th>
<th>MAINTENANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Demographics; Treatment Profiles; Referral Sources</td>
<td>Physical Fitness; Quality of Life; Program Attrition; Program Adherence; Participant Satisfaction</td>
<td>Programs Created; Resources Used; Professionals Trained</td>
<td>Fidelity of Facilitation; Referral Materials Used; Facility Satisfaction; Participant Satisfaction</td>
<td>Effect of intervention on participants over time; Program continuation over time; Referral Source Engagement over time</td>
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Other Projects for Men with Prostate Cancer
Community Group Programs

Alberta Cancer Exercise (ACE) Program

ACE is for all cancer survivors
  - Up to 3 years post-treatment

12-week programs

2 classes weekly

Multiple community locations

Exercise as standard cancer care
Community Program Options

ACE Locations
• City of Calgary - Killarney
• City of Calgary - Sir Winston Churchill
• City of Calgary - Southland Leisure Centre
• City of Calgary - Village Square
• YMCA – South Health Campus
• Holy Cross Campus REACH Centre
• Wellspring Carma House NW
• Wellspring Fountain Court SE

Drop-In Programs (*Free Classes*)
• Prostate Cancer Centre Strength & Stretch
  • *Prostate cancer survivor only group class*
    • *Thursdays @ 5:00pm*
• Wellspring Exercise and Educate
  • *Group classes open to all cancer survivors*
    • *Various dates/times*

UofC Thrive Centre (*Free Open Gym*)
• Contact for hours
• Free fitness facility for survivors at the University of Calgary
Purpose

— Determine whether home-based exercise is as effective as group-based exercise

Program Includes

— You will randomly be assigned to a 6-month group or home-based exercise program

<table>
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<th>Group</th>
<th>Home</th>
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<tr>
<td>Complimentary fitness assessments</td>
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<tr>
<td>Tailored &amp; supervised classes 3x/week</td>
<td>Tailored home-based program</td>
</tr>
<tr>
<td>Trained group exercise leaders</td>
<td>Phone support from exercise physiologist</td>
</tr>
</tbody>
</table>

Eligibility

— On ADT, not regularly active, experiencing fatigue
Thank you to all past and present staff of the Health and Wellness Lab at the University of Calgary Faculty of Kinesiology as well as to all professionals who reviewed and provided feedback on resource content.

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