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## Smoking Cessation Associated Weight Gain: The Role of Diet and Exercise Counseling in Quitting Smoking

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# SMOKING CESSATION ASSOCIATED WEIGHT GAIN: THE ROLE OF DIET AND EXERCISE COUNSELING IN QUITTING SMOKING

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R7 2021 - MILTON FM

PRECEPTOR: GORDON POWERS, M.D.

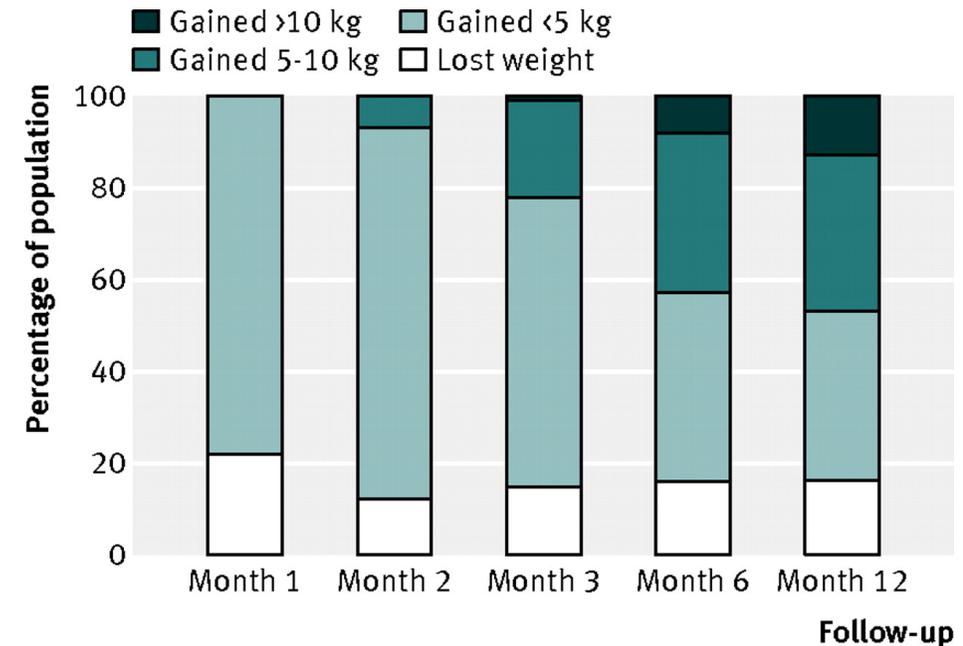


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LARNER COLLEGE OF MEDICINE

# PROBLEM IDENTIFICATION: SMOKING CESSATION ASSOCIATED WEIGHT GAIN

- Majority of patients who quit smoking gain weight
  - Likely due to a combination of physiologic changes leading to reduced basal metabolic rate and increased caloric intake
    - 1-2 kg over first two weeks with an additional 2-3 kg over next 4-5 months
    - Average total weight gain = **4-5 kg**
    - 10% of smokers gain over **13 kg** after quitting
- Successful smoking cessation counseling has contributed to a current all-time low U.S. smoking rate of 13.9%
  - Additional behavioral counseling focused on diet and exercise reduces weight gain associated with smoking cessation
  - Pharmacotherapy with bupropion reduces weight gain with smoking cessation

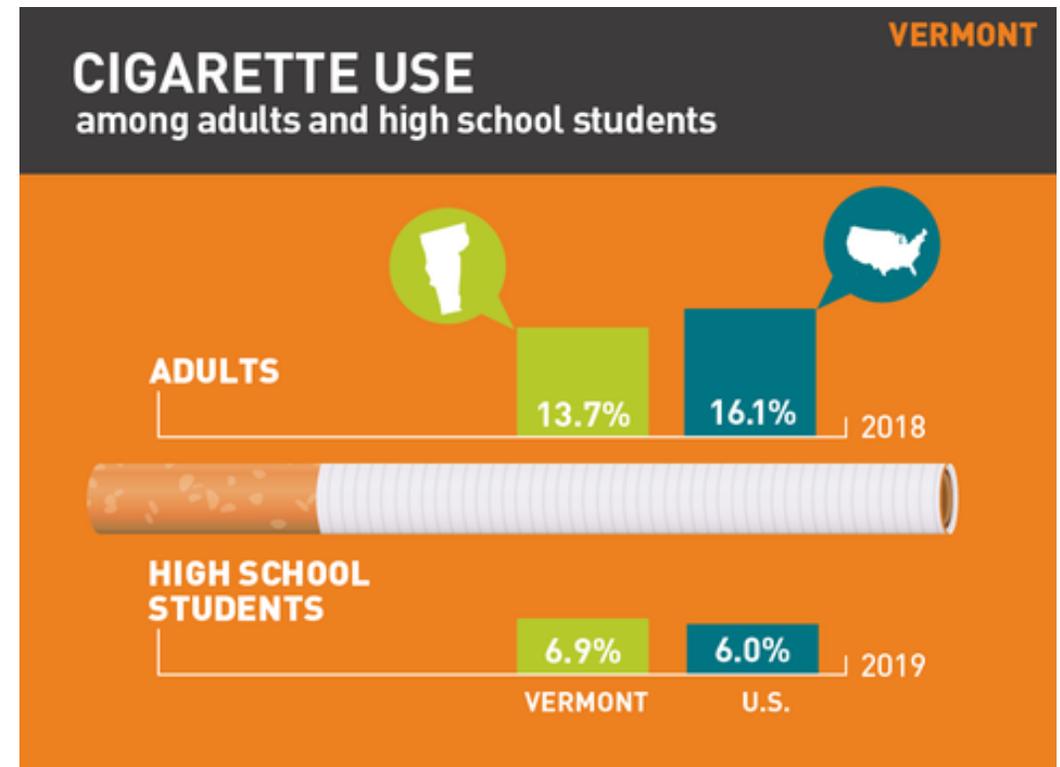


Percentage of untreated quitting population who would be expected to lose weight, gain <5 kg, gain 5-10 kg, or gain >10 kg over 12 months

# PUBLIC HEALTH IMPACT

- Smoking is the leading preventable cause of death worldwide
  - Atherosclerotic cardiovascular disease, lung cancer, COPD
- Smoking cessation reduces risk of dying from smoking-related disease
  - Greatest benefits in patients < 40 years of age
    - 6.9% of VT high school students use cigarettes versus 6.0% in U.S. overall
- Weight gain after quitting smoking occurs in 80-90% of patients
  - Weight gain after quitting smoking associated with increased risk of type 2 diabetes
  - Minimization of weight gain associated with smoking cessation maximizes health benefits of smoking cessation

CDC, Youth Risk Behavioral Surveillance System, 2019



# COMMUNITY PERSPECTIVE

Kimberly Hageman, M.D.

- “About half of my patients looking to quit smoking mention the possibility of weight gain”
- Counsels that “benefits of quitting smoking far outweigh the negative health impact of some weight gain”
- Discusses strategies for positive oral-to-hand habits to replace cigarettes (ex. carrot, celery, water bottle, toothpick)

Kimberly Sikule, M.D.

- “Weight gain is often a patient concern during motivational interviewing for smoking cessation”
- Focuses on exploring “why” weight gain is a concern to the patient
- Discusses diet and lifestyle strategies for minimization of weight gain and reassures that quitting smoking is the best thing a patient can do for their health

# INTERVENTION AND METHODOLOGY

Creation of a **patient education handout** focused on diet and exercise recommendations for minimization of smoking cessation related weight gain

- Informs patients that weight gain after quitting tobacco is caused by a combination of physiologic and behavioral factors
- Focused on dietary and physical activity modifications
- Accessible as Epic dotphrase (.SMOKINGCESSATIONWEIGHTGAIN)
  - Insert into **after visit summary** for patients receiving smoking cessation counseling
    - Also printable for in-office visits
    - Easily accessible in MyChart portal

# RESULTS

- Excerpts from patient handout dotphrase:

Some people experience weight gain after they quit smoking. For people who do gain weight, the average is 5-10 pounds over the first few months. Weight gain after quitting smoking is caused by a combination of **reduced activity level** and **increased appetite**. Fortunately, weight gain after quitting smoking can be minimized by being mindful about what you eat and how you stay active!

## Ways to eat better:

1. Eat six smaller meals and snacks throughout the day
2. Watch portion sizes – use smaller plates, bowls, and cups
3. Eat slowly – take 30 minutes for a meal
4. Eat protein foods first to help you feel full sooner
5. Replace processed foods with fresh fruits, vegetables, and whole grains

## Ways to be active:

1. Everyday tasks - take the stairs, sweep the floor, play with the kids
2. Walk - take a 15-30 minute walk every day (right before or after work, lunch hour)
3. Get back to a sport you used to enjoy
4. Try a yoga or dance class
5. Exercise at home with a DVD or online videos
6. Get a friend to go on an adventure with – walk in the woods, hiking, fishing and hunting
7. Volunteer – gardening, building and repairing homes

## Other tips:

### Do you need to keep your hands or mouth busy?

- Hold a straw in your hand and breathe through it
- Play with a coin or paperclip to keep your hands busy

### Do you use tobacco for a boost of energy?

- For a stable energy level, get regular exercise and have healthy snacks throughout the day
- Get plenty of sleep at night

### Do you use tobacco to relieve stress or improve your mood?

- Practice deep breathing to calm down or do some pushups to blow off steam
- Turn to family and friends when you need someone to talk to

# INTERVENTION EFFECTIVENESS AND LIMITATIONS

## Effectiveness

- Physicians expressed interest in providing patients with more formal healthy eating and exercise recommendations during smoking cessation counseling to ease patient concerns about weight gain

## Limitations

- An educational handout requires that physicians provide and patients read the material

# FUTURE RECOMMENDATIONS

## **General Questions:**

At Milton FM, does counseling on healthy eating and exercise habits affect smoking cessation-related weight gain?

Does minimization of smoking cessation-related weight gain improve overall success rates in quitting tobacco?

## **For greater physician perspective on the problem:**

- Formally assess if and how physicians counsel on diet and exercise when discussing smoking cessation with patients

## **For greater patient perspective on the problem:**

- Do patient attitudes toward smoking cessation change when they are provided counseling on how to minimize the associated weight gain?

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