



Fred Hutchinson Cancer Research Center  
CORE Family Studies  
1100 Fairview Ave. N  
M4-B402  
P.O. Box 19024  
Seattle, WA 98109-1024

**Address Service Requested**

## YUM – VEGGIE CHILI

Research has shown that a diet with a heavy emphasis on fresh fruits and vegetables, high fiber, and less red meat, can result in a lower risk of colorectal cancer. This recipe is a delicious way to incorporate those recommendations into your dinner rotation.

This chili can be made vegetarian or vegan, or using the meat of your choice. It's easy to swap out ingredients and make it your own, and you probably have most of the ingredients in your pantry or refrigerator. This recipe can be made in as little as 30 minutes on the stovetop, or using a slow cooker, or pressure cooker. This recipe makes 4-6 servings that will keep in your refrigerator for 3 days or freezer for a few months.

### You're going to need:

Olive oil  
1 diced bell pepper – red, yellow or orange  
1 diced onion  
1 diced seeded jalapeno pepper (*leave in some seeds if you like it spicy*)  
1 diced poblano pepper  
3 or 4 cloves of garlic, minced  
3 cups – vegetable or beef broth  
1 can of fire-roasted diced tomatoes  
1 can of beans – drained and rinsed (*black or kidney work great here*)  
1 cup of dried lentils, rinsed  
1 - 2 tablespoons of chili powder  
1 teaspoon each of paprika and ground cumin  
Salt and pepper to taste

### Optional toppings:

Shredded cheese, avocado, onions, sour cream, cilantro, tortilla strips or chips

### Stovetop:

Add a tablespoon or so of olive oil to your pot and sauté the peppers and onion until softened, add garlic and cook for another minute.  
Add the next 6 ingredients, stir and bring to a simmer. Reduce the heat to medium-low, cover and cook for 20 minutes or until the lentils are cooked. Taste and season with salt and pepper, if desired. Top with whatever toppings you love.

### Slow cooker:

Add all ingredients to the pot and cook on high for 3-4 hours or low to 6-7 hours, until the lentils are cooked. Taste and season with salt and pepper and top with your favorite toppings.

### Pressure cooker:

Use the sauté button if you have one to soften the onion and pepper for a few minutes, add the garlic for an additional minute.  
Add the next 6 ingredients and cook on high pressure for 12 minutes and use a quick release. Taste and season with salt and pepper and top with your favorite toppings.



# CORE news

Colorectal Research in Epidemiology  
Colon Cancer Family Registry Cohort

1100 Fairview Avenue North, M4-B402, Seattle, WA 98109-1024

1-800-276-0127 • [corestudies@fredhutch.org](mailto:corestudies@fredhutch.org) • [FredHutch.org/corestudies](http://FredHutch.org/corestudies)

Hello, and welcome to another edition of the CORE News! We thought March would be a good time to provide you with new information, tips, and of course a recipe for your colorectal health, since this is National Colorectal Cancer Awareness Month. What better time to share valuable information about colorectal cancer prevention, awareness, and treatment than during the 20th anniversary of this awareness month? President Clinton dedicated March as the National Colorectal Cancer Awareness Month in February 2000. Make sure to spread the awareness for better health to your family and friends!

In this edition, we will be discussing a newer treatment for some colorectal cancer patients, called immunotherapy. You may have heard about or even seen commercials for immunotherapy treatments on TV. In our article, we will explain what immunotherapy treatment is and how it may impact colorectal cancer patients. We also include a fun diagram for those who are visual learners! In terms of prevention, we know colonoscopy prep can be, let's just say, a challenge. After 20+ years working on this study, many of the CORE staff have had their own colonoscopies. Those of us who've received colonoscopies, ranging from young- to mid-adulthood, will provide some (hopefully helpful) tips for how to survive colonoscopy preparations. We'll also be showcasing a CORE participant as they openly explain their story about aging with an ostomy appliance and we're featuring an important scientific paper that used CORE data coming out soon in the journal Cancer. And of course, don't forget to read the healthy and tasty recipe included in this newsletter's edition.

The CORE Studies team have been very grateful to continue this work. We appreciate those participants who have already completed a 5th interview and look forward to hearing from many more participants over the next few years. As always, your time and support for this study and colorectal research means the world to us, allowing research advances that benefit both current and future cancer patients. Thank you for your continued participation in the CORE Studies and happy National Colorectal Cancer Awareness Month!

Best regards,

*Polly A. Newcomb*

Polly A. Newcomb, PhD, MPH  
Principal Investigator



Photo Credit:  
Robert Hood/Fred Hutch News Service

**fredhutch.org**  
**CURES START HERE**



**FRED HUTCH**  
CURES START HERE



AGING WITH AN OSTOMY BAG

Many of our participants were diagnosed with cancer over a decade ago and are living cancer free! However, that doesn't mean they don't have to deal with some long-term consequences of their cancer. For example, a common solution to a cancer resection surgery is an ostomy appliance or colostomy bag. It has been shown that ostomies can impact long-term quality of life for some colorectal cancer survivors (Vonk-Klaassen SM, 2016, Quality of Life Research). While these can sometimes be reversed with additional surgery, many people continue to live with their ostomy bags as they age. Problems that can affect ostomy maintenance are physical and cognitive impairments, decreased immune response, and hernia or prolapse (a condition when organs slip out of place). A CORE Studies participant named Scott Simmons replied to last year's newsletter describing his experiences about aging with an ostomy bag and had an innovative solution that we'd like to share!

Scott was diagnosed with colorectal cancer at the young age of 47 and has been living with an ostomy bag for the past 17 years. At first, he used the 'old fashioned way' of emptying his ostomy pouch by sitting on the toilet and draining the pouch between his legs. However, this became cumbersome, especially in tight spaces, like airplanes! One day, he decided to empty the pouch on his knees. This approach was useful from the comforts of home, but not so successful in a public place... Who would want to be on their knees in a public restroom all the time? Then, it became more and more challenging to stand up after kneeling. Scott finally discovered a creative solution for emptying his ostomy bag. Inspired by his wife, who is an occupational therapist, he decided to hire a contractor who does plumbing and electrician work and remodel his home bathroom! Look at the pictures below to see the finished product.

Remodeling a bathroom may not be the most appropriate or economically feasible solution for everyone who is aging with an ostomy bag, but there are likely other creative things people can do to make their lives easier. If you are aging with an ostomy bag, it may be good to start thinking about ways to continue your ostomy maintenance without hindering your quality of life. Here are a few general tips that may be helpful when using an ostomy bag.

- Have a visit with your stoma nurse at least once a year. Your local hospital and city will have contact information for this professional. Your area may also have specific stoma care clinics.
- The United Ostomy Associations of America (UOAA) offers an online support group finder for your region at <https://www.ostomy.org/support-group-finder/>
- Note any body changes. Usually stomas change in shape and size throughout life and with weight fluctuations. Measure your stoma occasionally to watch for any changes.
- Be aware of other stoma care resources such as local, national, and international ostomy contacts. For international traveling, obtain a UOAA Travel Communication Card to help with TSA screening and customs logistics. Other go-to sources include the International Ostomy Association (IOA), Crohn's and Colitis Foundation of America, and American Cancer Society.



(Yervoy). Most CRC cases have microsatellite stable (MSS) tumors, and current immunotherapy treatments have not been shown to benefit these cases. Clinical trials are currently being done to learn more about immunotherapy treatment in MSS patients, so this may become a more widely indicated treatment.

Immunotherapy is being extensively studied right now, as it seems promising for many types of cancer. Often immunotherapies are used in conjunction with more established chemotherapies. There are more than 170 studies investigating the combination of immunotherapy and chemotherapy in different cancers. A logical next step for clinical research is to consider using immunotherapies alone as the first line of treatment, especially for cancers such as MSI-H CRC. One study showed that seven out of seven patients with MSI-H CRC responded to immunotherapy treatment before chemotherapy, and impressively 4 out of 7 patients observed a complete remission. It is still unclear why some people and certain types of cancer respond to immunotherapy and others don't. Could response to treatment depend on lifestyle factors, tumor factors, genetics, or a combination of all of these? One of the CORE Investigators (Dr. Amanda Phipps) has started exploring this important area of work here at Fred Hutchinson Cancer Research Center. Immunotherapy is a growing and rapidly evolving area of cancer research and we have high hopes this can translate into treatments for more cancers in the future!

TIPS FOR SURVIVING COLONOSCOPY PREP

Colonoscopy preparation is notorious for being the most unpleasant part of getting a colonoscopy and can often deter people from getting screened on time. However, good colonoscopy prep is necessary for a high-quality colonoscopy and will ensure that you are ready and able to complete the procedure and receive the most accurate result.

There are several types of colonoscopy preps your doctor may prescribe for you. The most common is a high or low volume (2 or 4 liters) liquid prep, which you take the day before, and sometimes the day of, your procedure. There is a lower volume option as well, that is followed with 64 ounces of a clear liquid of your choice. There is also a non-prescription option using a laxative followed by an electrolyte drink.

Whichever type of prep you use, there are ways to make the experience more tolerable. See below for our tips!

1. Eat light and low fiber meals for 2 or 3 days before your prep day. Avoid seeds, nuts, fatty foods, high fiber foods, cruciferous vegetables, and meat.
2. The day before and right up to your procedure you can't eat any solid foods. Stock up on clear juices and broths – bone broth is a favorite choice of ours. You can have plain coffee or tea (no cream or milk), soda, popsicles and gelatin. Just avoid anything colored red, blue, or purple. Avoid any beverage you can't see

through, like orange juice. Try some gummy candies to help with the taste, just don't eat the red, blue, or purple ones!

3. If you are prescribed the high or low volume liquid prep, try chilling the prep in the refrigerator until it's very cold. Some people like to mix in a clear flavored powdered drink mix to make it more palatable. The prep liquids often come in citrus flavors already, so you may not need to add anything.
4. Use a straw. Drinking through a straw helps to bypass your tongue and reduces the amount of prep you can taste.
5. Use a Mason jar or small measuring cup. It helps to set a timer for every 15 minutes and quickly drink one cup through the straw and continue until the prep is gone.
6. Prepare your bathroom for high volume use. Stock up on soft toilet paper and/or wipes. You'll probably be in there for a while so make sure you have some entertainment available...books, laptops or tablets, and your phone will help to pass the time.
7. The final prep should be over in a couple of hours, and then you will be ready to head to the clinic. Plan a treat for when you are done – you deserve it!

Of course, above all, it's important to completely follow your doctor's instructions to ensure an accurate and successful procedure. We wish you good luck!

Even though immunotherapy is designed to have your own immune system fight your own cancer cells, there are still potential side effects.

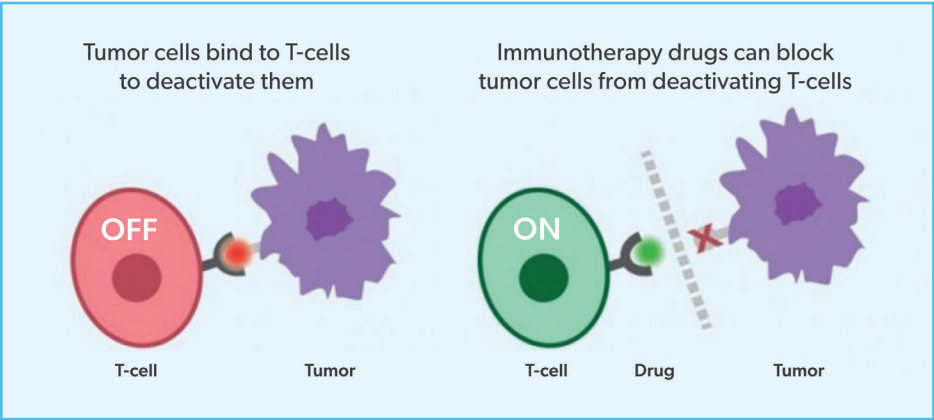
THESE CAN INCLUDE

- Fatigue
- Joint pain
- Coughing
- Nausea
- Itching or skin rash
- Decreased appetite
- Constipation or diarrhea

IMMUNOTHERAPY TREATMENT FOR COLON CANCER

You may have started hearing about a new type of cancer treatment called immunotherapy, maybe even seeing commercials for it. But what exactly is immunotherapy and is it used to also treat colorectal cancer? Immunotherapy is a biologic therapy designed to boost the body's immune system to fight cancer cells. It uses natural materials made by the body or in a laboratory to improve, target, or restore the functions of the immune system that can be silenced by cancer (see picture).

One form of immunotherapy treatment is known as checkpoint inhibitors, which depends on "checkpoint" proteins to turn on to signal an immune system response. In colorectal cancers (CRC), checkpoint inhibitors are an important kind of immunotherapy treatment used to treat specific CRC subtypes with the molecular feature called microsatellite instability (MSI-H) or mismatch repair deficiency (dMMR). MSI-H means that there is a high likelihood of genetic mutation (instability) in a tumor caused by mutations in genes that regulate DNA. These genes are called DNA Mismatch Repair (MMR) genes. About 15% of CRC tumors are MSI-H and are often associated with the hereditary syndrome known as Lynch Syndrome. Immunotherapy is an FDA-approved treatment for MSI-H metastatic colorectal cancer patients, and those therapies include Pembrolizumab (Keytruda®), Nivolumab (Opdivo®) and Ipilimumab



HEADING TO THE PRESSES!

We always try to feature a scientific paper that uses our CORE Studies data. Look for this one titled, "Potential impact of family history based screening guidelines on early onset colorectal cancer detection," coming out soon in the important journal Cancer!

Research collaborators at the University of California, San Diego (Drs. Gupta, Bharti, Martinez and others) recently used our CORE data to test the American Cancer Society (ACS) family history-based early screening criteria. They wanted to find out 1) whether the criteria accurately identified individuals at risk for early-onset colorectal cancer (CRC) and 2) if so, whether early age of screening initiation would have detected their colorectal cancer earlier (or even prevented it). The researchers studied the reported family history of 2,473 CCFR participants diagnosed with CRC age 40-49. They found that only 25% (1 in 4) of the cases would have met the ACS' criteria for early-onset CRC. However, of those who did meet the early-onset CRC criteria, 98% could have been diagnosed earlier had the early age of screening been initiated. Also of interest, 44% of all CRC cases meeting early-onset CRC criteria were diagnosed at the same age as their youngest first-degree relative with CRC. These results illustrate the importance of family history to patient care and suggest that efforts to collect and act on family history should be intensified. Bottom line: find out your family history and share your history with your family members.