

# TAKE TA

NEWS:

GET THE LATEST

RESEARCH PAGE 2

TREATMENT SMARTS:
THE BENEFITS OF BIOLOGICS

PAGE 3

QUIZ:
TEST YOUR IBD
KNOW-HOW
PAGE 11

SCAN ME

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# THE LATEST ON\_

### **CHANGING THE GUT BACTERIA**

Stem cells are immature cells that can mature and develop into any type of human cell. They could one day be an option for treatment-resistant IBD. Researchers in Japan have used them to change the gut bacteria of people with a genetic form of IBD that doesn't respond well to treatment. They took stem cells from healthy donors and transplanted them into the guts of people with this form of IBD. After the transplant, the gut bacteria of the people with IBD changed to look more like healthy, normal gut bacteria, and the IBD went into remission.

SOURCE: The Journal of Allergy and Clinical Immunology: In Practice

# 3 MILLION

Approximate number of U.S. adults who have IBD.

SOURCE: CDC

# 20S TO 30S

Most common ages when people with IBD get a diagnosis.

SOLIRCE: CDC

### FIRST-LINE TREATMENT

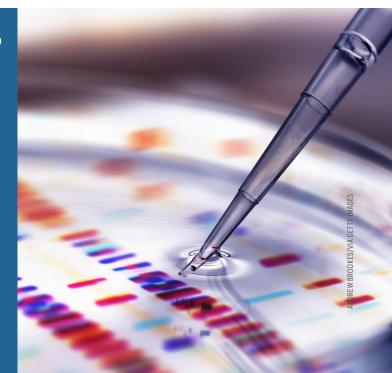
Doctors tend to try other less intense treatments for Crohn's disease before recommending biologics. But new research shows that's not the best approach for people with moderate to severe or fistulizing Crohn's disease. In an analysis of the available research, experts found that people with these types of Crohn's don't get significant benefit from trying other treatments first. The American Gastroenterological Association now recommends they start biologics right away.

SOURCE: The American Gastroenterological Association

### **COULD A NEW DRUG HALT IBD?**

People with IBD have short telomeres. These are strands of DNA that serve as protective caps on the ends of chromosomes and shorten as you age. Inflammation also causes these strands to shorten, and when they shorten, that causes more inflammation. New research shows that in people with IBD, shorter telomeres equal more severe disease. This finding could lead to a new treatment for IBD. Drugs that protect telomeres from shortening could help prevent or reverse the disease.

SOURCE: Proceedings of the National Academy of Sciences





### **BIOLOGIC** BENEFITS

### **HOW INFUSIONS CAN HELP** TREAT YOUR IBD

By Rachel Reiff Ellis Reviewed by Brunilda Nazario, MD, WebMD Lead Medical Director

Biologics are drugs that scientists make in a lab using living organisms instead of traditional chemicals and compounds. They're antibodies that treat inflammatory bowel disease by reducing inflammation. They do this by blocking specific pathways in your immune system that are most likely to trigger inflammation.

Because they work so precisely, biologics can target the exact cause of your IBD symptoms without affecting your whole system like oral medications do. They still have some side effects, but they aren't as commonly seen as the side effects for some corticosteriods. "Some of the newer biologics are designed to be so specific that their immune suppression and side effect risk is quite minimal," says

Megan J. Walker, MD, gastroenterologist at Indiana University Health in Indianapolis.

You take biologics either as a shot you give yourself at home with a preloaded pen, or through IV infusion you get at an infusion center or clinic. Depending on the biologic, you'll take them every 2 to 8 weeks. You can also take them in combination with other medications as needed, such as steroids for flares.

The goal of biologics is to get you to remission-periods of time where you have few to no IBD symptoms. However, alongside remission, you may experience other benefits too.

"When we look at biopsy samples under a microscope and [the] intestine on camera during a colonoscopy, we see that they can also lead to healing of the tissue," Walker says. Some biologics can also help treat effects of IBD outside your intestines, such as in your joints, eyes, and skin. "These extraintestinal symptoms often don't respond to some oral IBD medications, but biologics can control them," Walker says.

Around two-thirds of people who take biologics respond well to them, though it may take some trial and error to find the right one for you. "For some people, a certain biologic may not work at all from the beginning, while in others, the same medication may work for 10 years or more," she says.

### TIME TO TRY

Megan J. Walker, MD, shares a few reasons you might need a biologic.

Your IBD is severe at the time of your diagnosis, like Crohn's disease with fistulas.

You've had a bad flare such as ulcerative colitis that didn't respond to steroids or sent you to the hospital.

Other treatments have stopped working for your mild to moderate disease.

You have a coexisting autoimmune disease such as ankylosing spondylitis or rheumatoid arthritis that isn't under good control.

You're having bad side effects from other medications.

Your doctor may not suggest a biologic immediately after your diagnosis, but they're no longer "last-line" treatments you turn to after all other choices have failed, and they may even work as first-line treatments for moderate to severe ulcerative colitis or Crohn's, Walker says. "Data has shown that patients are more likely to respond well to biologics when they're introduced earlier in the disease course, within the first 2 years," Walker says.



### Important Safety Information for ENTYVIO® (vedolizumab)

- Do not receive ENTYVIO if you have had an allergic reaction to ENTYVIO or any of its ingredients.
- ENTYVIO may cause serious side effects, including:
- o Infusion-related and serious allergic reactions can happen while you are receiving ENTYVIO or several hours after treatment. You may need treatment if you have an allergic reaction. Tell your healthcare provider or get immediate medical help if you get any of these symptoms during or after an infusion of ENTYVIO: rash, itching, swelling of your lips, tongue, throat or face, shortness of breath or trouble breathing, wheezing, dizziness, feeling hot, or palpitations (feel like your heart is racing).
- ENTYVIO may increase your risk of getting a serious infection. Before receiving and during treatment with ENTYVIO, tell your healthcare

- provider if you think you have an infection or symptoms of an infection, such as fever, chills, muscle aches, cough, shortness of breath, runny nose, sore throat, red or painful skin or sores on your body, tiredness, or pain during urination.
- o People with weakened immune systems can get progressive multifocal leukoencephalopathy (PML) (a rare, serious brain infection caused by a virus). Although unlikely while receiving ENTYVIO, a risk of PML cannot be ruled out. PML can result in death or severe disability. There is no known treatment, prevention, or cure for PML. Tell your healthcare provider right away if you have any of the following symptoms: confusion or problems thinking, loss of balance, change in the way you walk or talk, decreased strength or weakness on one side of the body, blurred vision, or loss of vision.
- Liver problems can happen in people who receive ENTYVIO. Tell your healthcare provider right

- away if you have any of the following symptoms: tiredness, loss of appetite, pain on the right side of your abdomen, dark urine, or yellowing of the skin and eyes (jaundice).
- The most common side effects of ENTYVIO include common cold, headache, joint pain, nausea, fever, infections of the nose and throat, tiredness, cough, bronchitis, flu, back pain, rash, itching, sinus infection, throat pain, and pain in extremities. These are not all the possible side effects of ENTYVIO. Call your healthcare provider for medical advice about side effects.
- Before receiving ENTYVIO, tell your healthcare provider about all of your medical conditions, including if you: have or think you may have an infection or have infections that keep coming back; have liver problems; have tuberculosis (TB) or have been in close contact with someone with TB; have recently received or are scheduled to receive a

vaccine; or if you are pregnant, breastfeeding, plan to become pregnant, or plan to breastfeed.

### Please see the Important Facts for ENTYVIO on the adjacent page and talk with your healthcare provider.

You are encouraged to report negative side effects of prescription drugs to the FDA.

Visit **www.fda.gov/medwatch** or call 1-800-FDA-1088.

### Uses of ENTYVIO® (vedolizumab)

ENTYVIO is a prescription medicine used in adults for the treatment of:

- moderately to severely active ulcerative colitis
- moderately to severely active Crohn's disease



ENTYVIO is a trademark of Millennium Pharmaceuticals, Inc., registered with the U.S. Patent and Trademark Office and is used under license by Takeda Pharmaceuticals U.S.A., Inc.

#### **IMPORTANT FACTS**

ENTYVIO (en ti' vee oh) (vedolizumab) for injection, for intravenous use

### What is the most important information I should know about ENTYVIO?

### ENTYVIO may cause serious side effects, including:

- Infusion-related and serious allergic reactions. These
  reactions can happen while you are receiving ENTYVIO or
  several hours after treatment. You may need treatment if you
  have an allergic reaction. Tell your healthcare provider or get
  medical help right away if you get any of these symptoms
  during or after an infusion of ENTYVIO: rash, itching, swelling
  of your lips, tongue, throat or face, shortness of breath or
  trouble breathing, wheezing, dizziness, feeling hot, or
  palpitations (feel like your heart is racing).
- Infections. ENTYVIO may increase your risk of getting a serious infection. Before receiving ENTYVIO and during treatment with ENTYVIO, tell your healthcare provider if you think you have an infection or have symptoms of an infection such as fever, chills, muscle aches, cough, shortness of breath, runny nose, sore throat, red or painful skin or sores on your body, tiredness, or pain during urination.
- Progressive Multifocal Leukoencephalopathy (PML). People with weakened immune systems can get progressive multifocal leukoencephalopathy (PML) (a rare, serious brain infection caused by a virus). Although unlikely while receiving ENTYVIO, a risk of PML cannot be ruled out. PML can result in death or severe disability. There is no known treatment, prevention, or cure for PML. Tell your healthcare provider right away if you have any of the following symptoms: confusion or problems thinking, loss of balance, change in the way you walk or talk, decreased strength or weakness on one side of the body, blurred vision, or loss of vision.
- Liver Problems. Liver problems can happen in people who
  receive ENTYVIO. Tell your healthcare provider right away if
  you have any of the following symptoms: tiredness, loss of
  appetite, pain on the right side of your stomach (abdomen),
  dark urine, or yellowing of the skin and eyes (jaundice).

See "What are the possible side effects of ENTYVIO?" for more information about side effects.

### What is ENTYVIO?

ENTYVIO is a prescription medicine used in adults for the treatment of:

- moderately to severely active ulcerative colitis.
- moderately to severely active Crohn's disease.

It is not known if ENTYVIO is safe and effective in children under 18 years of age.

### Who should not receive ENTYVIO?

**Do not receive ENTYVIO** if you have had an allergic reaction to ENTYVIO or any of the ingredients in ENTYVIO. See the end of this Medication Guide for a complete list of ingredients in ENTYVIO.

Before receiving ENTYVIO, tell your healthcare provider about all of your medical conditions, including if you:

- have an infection, think you may have an infection or have infections that keep coming back (see "What is the most important information I should know about ENTYVIO?").
- have liver problems.

- have tuberculosis (TB) or have been in close contact with someone with TB.
- have recently received or are scheduled to receive a vaccine.
   Talk to your healthcare provider about bringing your vaccines up-to-date before starting treatment with ENTYVIO.
- are pregnant or plan to become pregnant. It is not known if ENTYVIO will harm your unborn baby. Tell your healthcare provider right away if you become pregnant while receiving ENTYVIO.
  - Pregnancy Registry: There is a pregnancy registry for women who use ENTYVIO during pregnancy. The purpose of this registry is to collect information about the health of you and your baby. Talk with your healthcare provider about how you can take part in this registry or you may contact the registry at 1-877-825-3327 to enroll.
- are breastfeeding or plan to breastfeed. ENTYVIO passes into your breast milk. Talk to your healthcare provider about the best way to feed your baby if you take ENTYVIO.

Tell your healthcare provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins and herbal supplements. Especially tell your healthcare provider if you take or have recently taken Tysabri (natalizumab), a Tumor Necrosis Factor (TNF) blocker medicine, a medicine that weakens your immune system (immunosuppressant), or corticosteroid medicine.

### **How will I receive ENTYVIO?**

- ENTYVIO is given through a needle placed in a vein (intravenous infusion) in your arm.
- ENTYVIO is given to you over a period of about 30 minutes.
- Your healthcare provider will monitor you during and after the ENTYVIO infusion for side effects to see if you have a reaction to the treatment.

### What are the possible side effects of ENTYVIO?

ENTYVIO may cause serious side effects, see "What is the most important information I should know about ENTYVIO?".

The most common side effects of ENTYVIO include: common cold, headache, joint pain, nausea, fever, infections of the nose and throat, tiredness, cough, bronchitis, flu, back pain, rash, itching, sinus infection, throat pain, and pain in extremities.

These are not all of the possible side effects of ENTYVIO.

Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

### **General information about ENTYVIO**

Medicines are sometimes prescribed for purposes other than those listed in a Medication Guide. You can ask your pharmacist or healthcare provider for information about ENTYVIO that is written for health professionals.

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For more information, go to www.ENTYVIO.com or call 1-877-TAKEDA-7 (1-877-825-3327).

# COMMON CAUSES OF A FLARE

# NOT EVERYONE FLARES UP IN RESPONSE TO THE SAME TRIGGERS. LEARN WHICH ONES MIGHT SPELL TROUBLE FOR YOU.

By Sonya Collins Reviewed by Neha Pathak, MD, WebMD Medical Editor

The triggers that cause inflammatory bowel disease (IBD) flares can vary from one person to the next. At first, it might be hard to figure out what exactly is triggering you.

"If you've just been diagnosed with Crohn's or colitis, you may not understand what's causing your flares," says Edward V. Loftus Jr., MD, a gastroenterologist at Mayo Clinic in Rochester, MN. "But you'll gain more insight over time."

If the cause of your flares is still a mystery, consider some of these common culprits.

### **CIGARETTES**

If you haven't kicked the habit yet, a diagnosis of IBD—especially Crohn's disease—is all the reason you need. "A patient with Crohn's who smokes is twice as likely to have a flare, require hospitalization, or require surgery than someone who doesn't smoke or who quit," Loftus says. (There aren't studies that show the same thing about ulcerative colitis, but of course, that's no reason to keep smoking.)

### **NSAIDs**

Over-the-counter painkillers called nonsteroidal anti-inflammatory drugs (NSAIDs) don't agree with some people who have IBD. Ibuprofen and naproxen are a couple of examples. For headaches and other pains, try acetaminophen instead.

### **ANTIBIOTICS**

These infection-fighting drugs kill bad bacteria. But sometimes, they kill helpful bacteria as well. "Antibiotics deplete some of the good bacteria in your colon and allow overgrowth of a bad bacteria called Clostridium difficile," Loftus explains. An infection with this bad microbe can trigger IBD symptoms. Now, you might have to take antibiotics at some point. But if you start to have a flare, your doctor might want to test you for Clostridium difficile.

### NOT TAKING YOUR MEDICINE

Once your condition is stable, you may think you don't need your medicine. But if you stop taking it, you can find yourself in a flare. "That's actually one of the most common causes of flares," Loftus says. It's simple: If you take your medication, you'll be less likely to have a flare.

### **FOOD**

It can be tricky to figure out exactly which foods might set you off. In general, stick to a healthy diet and steer clear of junk food. "Less sugar, less grease," Loftus says. "We know these can be inflammatory and make you gassy and bloated."

### **STRESS**

It may be unavoidable sometimes, but stress does spark flares in some people. You don't have to eliminate all the stress from your life, and you couldn't even if you tried. You just need an outlet for it.

"It can be whatever works for you—taking a walk, talking to a therapist or a priest, prayer, meditation or yoga—whatever helps reduce your stress," Loftus says. Just make sure you're not turning to unhealthy habits or triggers—like smoking or junk food—to relieve stress.

### **ASK THE EXPERT**

Here are some questions you might want to ask your doctor about flares.

 Could something besides IBD be causing my symptoms?





By Jamie Horrigan, MD

Reviewed by Brunilda Nazario, MD, WebMD Lead Medical Director

Growing up, I thought it was normal to have frequent GI issues like diarrhea and stomach cramps. It wasn't until my pediatrician in middle school asked me about my bowel habits that I realized things were different for me in that arena.

My doctor thought I probably had irritable bowel syndrome (IBS) and suggested I stop eating dairy for a possible milk protein intolerance. That seemed to ease things for a few years, but then my sophomore year of college, my digestive symptoms worsened again. I was advised to go gluten-free, and after that, again, things weren't perfect but my symptoms were more manageable.

Then when I was a senior in college, my symptoms suddenly intensified. At one point, I experienced 9 days of relentless all-day and -night diarrhea. I was having trouble eating, was often nauseous, and my stomach would

become bloated after just a few bites of food. I also started having drenching night sweats two to five times a night. My knees became sore and swollen to the point where even laying in bed was really painful. I lost almost 20 pounds over the course of 2 ½ months—pounds I didn't really have to lose. My energy was poor, and I could not explain why things were suddenly so much worse.

I ended up seeing a GI doctor who was obviously concerned with my symptoms. He ran blood work, did stool studies, and had me undergo a gastric emptying study, which showed I had pretty significant gastroparesis—a term that technically translates to "paralyzed stomach and intestinal tract." It was taking several hours for food to pass through my stomach.

Finally, a colonoscopy and upper endoscopy revealed my Crohn's disease. The diagnosis was a shock to me. And at



the same time, it was also a relief. I had been experiencing these symptoms for so long. It was encouraging to know that what I was dealing with had a name—and even better, treatments.

All I knew about Crohn's at that point in time was that it was a digestive condition a friend of a friend had. I remembered she followed a special diet, and that was about it. But as I learned more about my diagnosis, that "friend of a friend" and I became really close. She was the only person I knew who personally had Crohn's and was a really great source of support, especially because we both had a shared interest in how our diet affected our Crohn's.

This focus on Crohn's nutrition led





### JAMIE'S TIPS

- + Take an active role in your health. Alongside your treatments, focus on healthy habits. Eat well. Exercise regularly. Sleep. Laugh every day (or do something you love every day). And find ways to keep your stress low.
- + It's OK to get a second opinion. Academic medical centers or providers who specialize in IBD can be valuable sources of care, if they're available in your area.
- + It gets better. The first year of diagnosis is often the hardest. You may go through several treatments before you find one that works. Stay positive. You're still figuring out life with IBD. And you will.

me to create an Instagram account (@sweetenedbynature) so I could share what I was cooking and also see what other people with Crohn's were eating. Quickly, it grew into a community of support and, soon after, a blog (sweetenedbynatureblog.com). Through that platform, I was able to share recipes, connect with other people with Crohn's, and encourage those struggling with their diagnosis.

One thing I want people to know is that nutrition really matters. That doesn't mean you have to drop everything and follow a particular diet, though some people do really well on these special diets. But at the end of the day, eating more "real food" and less processed "junk" will benefit not only

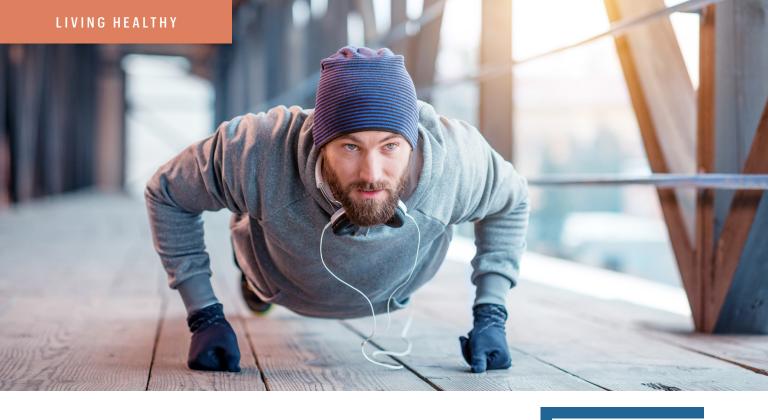
your Crohn's symptoms, but also your overall health.

A new, major diagnosis can feel very scary and isolating, especially when you don't know anyone else with the disease. It helps so much to have support and encouragement in that area, whether it's a medical professional, a book, blog, or online community, so you don't have to go through this disease on your own.

Since my diagnosis, I've graduated from both college and medical school. I'm currently a resident physician in internal medicine, and I think my Crohn's gives me a unique angle for treating not only IBD patients, but also those with other chronic diseases. I have a lot of compassion and empathy for what they're going through.

My disease is under good control for the most part these days. I take a biologic infusion every 8 weeks-a nurse comes to my house and administers the medication through an IV. Finding the right medication can certainly be a challenge. I've been lucky to respond to many of these medications but have still been on six different Crohn's medications.

Self-care is also very important. There's a lot of power in proper nutrition, rest, and managing your stress. As a resident, I often work up to 80 hours a week. So for me, making sure I get enough sleep, meal prep, sneak in some exercise, and make time for fun is what I need to do to feel my best at work. You have to do what's best for your body.



# THE BENEFITS OF EXERCISE

### HOW MOVING YOUR BODY CAN HELP YOU HEAL

By Rachel Reiff Ellis

Reviewed by Neha Pathak, MD, WebMD Medical Editor

Regular exercise is critical for good health. If you feel like your IBD symptoms get in the way of workouts, talk to your doctor about ways you can get it in safely.

"Exercise can help people with IBD in particular because it theoretically may decrease inflammation and therefore promote healing of the gut," says Erica J. Brenner, MD, pediatric gastroenterologist at UNC Health in Chapel Hill.

Fitting a fitness routine into your life can help you thrive with IBD in these key ways:

### **LESS STRESS**

When you're under stress, it can kick your IBD into high gear. "There's emerging evidence that stress may have a negative effect on the disease course and even trigger flares," Brenner says. Exercise-any kind, from yoga to walking to aerobics—is a proven stress-buster. You'll boost your mood, quiet your mind, and help

your body fight inflammation with a fitness routine.

### **LOWER WEIGHT**

Carrying excess weight can increase IBD symptoms. Moving your body more may help you shed extra pounds that could be contributing to flares. "Exercise can decrease body fat, and body fat has been shown to increase inflammation in the intestine," Brenner says. Talk to your doctor about what your goal weight should be and how to get there.

### IMPROVED MENTAL HEALTH

IBD can tax you not only physically but mentally. Depression and anxiety often come along with other IBD symptoms. Exercise releases "feel-good" hormones called endorphins into your bloodstream and reduces feelings related to depression and anxiety. Try to get 30 minutes of movement three to five times a week for the best effect.

### **BETTER BONE HEALTH**

Studies show regular exercise

### **EXERCISE DOS** AND DON'TS

Erica J. Brenner, MD, shares tips for working out safely.

DO talk to your doctor about the frequency and intensity with which you should exercise.

**DON'T** exercise during a flare. Concentrate on resting and recovering and postpone exercise until you feel well enough to work out.

DO start small and listen to your body.

**DON'T** get dehydrated. Drink plenty of water!

increases bone density, which makes for stronger bones. That's especially important when you have IBD, Brenner says. "People with IBD may have lower bone density both because of the disease itself and as a side effect of certain IBD medications such as steroids." Weight-bearing and resistance exercises are best for building up bone strength.



# **TEST YOUR IBD KNOW-HOW**

As someone living with inflammatory bowel disease, you likely know more than most about your condition. See if you have a handle on these bowel disease basics.

By Rachel Reiff Ellis Reviewed by Neha Pathak, MD, WebMD Medical Editor

ulcerative colitis	S.
○ True	○ False
2. Most people are diagnosed with IBD before age 35.	
○ True	○ False
3. You have to have getting it yourse	e a family member with IBD to be at risk of olf.
○ True	○ False
4. More people with ulcerative colitis need surgery to treat their condition than those who have Crohn's disease.	
O True	False
5. Stress causes IB	D.
○ True	<b>○</b> False

1. Over 10 million people in the U.S. have Crohn's disease or

- 1. False: Around 1 million to 2 million Americans deal with some form of IBD—about 70 to 150 cases per 100,000 people.
- 2. True: Most people get their IBD diagnosis in their young adult years, between ages 20 and 30.
- 3. False: Only 5% to 20% of people with IBD have a first-degree relative with the disease. Environment and certain immune system reactions are other triggers for it.
- 4. False: Only around one-third of people with UC need surgery to treat their symptoms, while up to 70% of people with Crohn's disease require it.
- 5. False: Although stress can make symptoms worse when you have a flare, it doesn't give you the disease.



### Do you have questions about biosimilars and IBD?

Biosimilars are designed to be near-identical copies of approved biologic therapies that are **safe and effective**. They feature the same active ingredient, mechanism of action (how they work), and dosing.

The Crohn's & Colitis Foundation offers new resources on biosimilars for the treatment of IBD, including:

- What biosimilars are
- How they work
- What you need to know if you are switched from a biologic treatment to a biosimilar



### Learn more:

crohnscolitisfoundation.org/what-is-ibd/medication/biosimilars