

Alan F. Cutler, M.D., F.A.C.G., F.A.C.P., A.G.A.F.  
Janice M. Fields, M.D., F.A.C.G., F.A.C.P.  
Roberto M. Gamarra, M.D., F.A.C.G., F.A.C.P.  
Phillip A. Goldmeier, M.D., F.A.C.G., F.A.C.P.  
Randall S. Jacobs, M.D., F.A.C.G., F.A.C.P.  
Jay R. Levinson, M.D., F.A.C.G.  
Marc S. Piper, M.D., MSc.

Michael H. Piper, M.D., F.A.C.G., F.A.C.P.  
Michael R. Raphael, D.O., F.A.C.O.I.  
Bradley J. Warren, D.O., F.A.C.G., F.A.C.O.I.  
Edward A. Yousif, M.D., F.A.C.G., F.A.C.P.  
Sonia Qatsha, PA-C, RD  
Tara Karmo, PA-C  
Rachelle Packey, PA-C



Digestive  
Health  
Associates

*Board Certified in Gastroenterology*

[www.digesthealth.com](http://www.digesthealth.com)

## **2- DAY COLONOSCOPY BOWEL PREP INSTRUCTIONS -PLENVU**

- **2 weeks before procedure**
  - Discontinue diet medications
  
- **7 days before procedure**
  - Read all prep instructions
  - Make sure your physician has a list and dosage of your current medications, including blood thinners
  - Report all defibrillator devices to the office in which your procedure was scheduled
  - Obtain bowel prep products from your pharmacy
    - Bowel preparations are available by prescription only.
  - Please contact your physician if you have kidney disease or on dialysis.
  - Stop herbals, vitamins, and oral iron supplements
  - If diabetic, contract Primary Care Physician for after colonoscopy medication instructions  
Arrange a driver for after your procedure
  
- **2 days prior procedure**
  - BEGIN CLEAR LIQUID DIET FIRST THING IN THE MORNING AND ALL DAY
  - NO SOLID FOOD, NO ALCOHOL
  - Stop any anti-inflammatory medications. (Motrin, Advil, Ibuprofen, etc.) Tylenol is ok to use
  - The correct timing of this dose is essential to an effective preparation. Drinking fluids following prep will help prevent dehydration
    - See EMAIL/FORM for your BEGINNING TIME for ingestion of prep - Drink entire bottle of 10 oz. magnesium citrate (NOT CHERRY flavored)
  - Prepare a list of all current medications, find insurance cards, get names and addresses of the physicians you want to receive a copy of your procedure report
  - Confirm with your driver that will be staying during your procedure and taking you home.

## Colonoscopy 2-Day, PLENVU - Continued

### • Day before procedure

- BEGIN CLEAR LIQUID DIET FIRST THING IN THE MORNING, ALL DAY
- NO SOLID FOOD, NO ALCOHOL
- The correct timing of this dose is essential to an effective preparation. Drinking fluids following prep will help prevent dehydration
  - See EMAIL/FORM for BEGINNING TIME for the first drinking of prep: Use the mixing container to mix the contents of the labeled Dose 1 pouch with at least 16 ounces of water by shaking or using a spoon until it's completely dissolved. This may take up to 2 to 3 minutes. Take your time-slowly finish the dose within 30 minutes. Refill the container with at least 16 ounces of clear liquid. Again, take your time and slowly finish all of it within 30 minutes.
- You can take your blood pressure, heart, seizure, and thyroid medications.
  - Except blood thinners, iron, and fish oil.
- You can take ½ of your usual injectable insulin dose.
- If nausea occurs, stop drinking laxative for a short time.
- You may apply a petroleum-based product or diaper rash ointment to the rectal area if you experience discomfort from frequent stools.

### • 2<sup>nd</sup> Start Time for Colon Prep

- See EMAIL for your BEGINNING TIME for the second drinking of prep
  - Using the mixing container to mix the contents of Dose 2 (Pouch A & Pouch B – these are stuck together) with at least 16 ounces of water by shaking or using a spoon until it's completely dissolved. This may take up to 2 to 3 minutes. Take your time – slowly finish the dose within 30 minutes. Refill the container with at least 16 ounces of clear liquid. Again, take your time and slowly finish all of it within 30 minutes.

### • Day of Procedure

- DO NOT TAKE any injectable insulin
- DO NOT TAKE any Oral Diabetes medicine (pills)
- You can take your blood pressure, heart, seizure, and thyroid medications.
  - Except blood thinners, iron, and fish oil.
    - Drink just enough water to swallow the medications.
- You may continue to drink clear liquids until 4 hours before your scheduled procedure time.

### • 4 hours before procedure

- You MUST STOP drinking ALL fluids 4 hours before your procedure.

### • Remember...

- Take insurance cards, picture id, list of medications, and list of physician names to send report.
- You must have a driver 18 years old or older. They must remain at the facility the entire time of your procedure. If you do not have a driver, your procedure will be cancelled.

If you think the prep is not working, after 5pm call 248-544-6959. Do not take more than the prescribed amount of bowel prep.

**A FEE APPLIES IF APPOINTMENTS ARE CANCELLED WITHOUT 48 HOURS NOTICE**

Alan F. Cutler, M.D., F.A.C.G., F.A.C.P., A.G.A.F.  
Janice M. Fields, M.D., F.A.C.G., F.A.C.P.  
Roberto M. Gamarra, M.D., F.A.C.G., F.A.C.P.  
Phillip A. Goldmeier, M.D., F.A.C.G., F.A.C.P.  
Randall S. Jacobs, M.D., F.A.C.G., F.A.C.P.  
Jay R. Levinson, M.D., F.A.C.G.  
Marc S. Piper, M.D., MSc.

Michael H. Piper, M.D., F.A.C.G., F.A.C.P.  
Michael R. Raphael, D.O., F.A.C.O.I.  
Bradley J. Warren, D.O., F.A.C.G., F.A.C.O.I.  
Edward A. Yousif, M.D., F.A.C.G., F.A.C.P.  
Sonia Qatsha, PA-C, RD  
Tara Karmo, PA-C  
Rachelle Packey, PA-C



Digestive  
Health  
Associates

*Board Certified in Gastroenterology*

[www.digesthealth.com](http://www.digesthealth.com)

## **\*\*\* LIQUID DIET \*\*\***

Begin drinking clear liquids the day before the procedure, when you first wake up!

Please remember, NO SOLID FOOD.

Hydration is extremely important for proper preparation, so drink lots of liquids.

### **\*\*\* Allowed Clear Liquids \*\*\***

- Broth- chicken, beef, onion or vegetable
- Juice- apple, white grape, white cranberry, orange (without pulp)
- Sports Drinks- Gatorade, PowerAde
- Soda- Clear or Colas, lemonade or Crystal Light
- Water, Coffee, Tea, Non-dairy creamers
- Popsicle, Slurpee, Frozen Coke, Jell-O

**REMEMBER: NOTHING RED, BLUE OR PURPLE IN COLOR**

### **\*\*\* NOT ALLOWED \*\*\***

Solid food, alcohol of any kind, dairy products and any liquids containing red, blue or purple.

Nothing to drink for 4 hours prior to your procedure.

30055 Northwestern Hwy #250, Farmington Hills, MI 48334 • 248.985.5000 • 248.985.5500 fax  
11900 E.12 Mile Road #307, Warren, MI 48093 • 586.573.8380 • 586.573.8979 fax  
26850 Providence Parkway #510, Novi, MI 48374 • 248.662.4300 • 248.662.4301 fax

Alan F. Cutler, M.D., F.A.C.G., F.A.C.P., A.G.A.F.  
Janice M. Fields, M.D., F.A.C.G., F.A.C.P.  
Roberto M. Gamarra, M.D., F.A.C.G., F.A.C.P.  
Phillip A. Goldmeier, M.D., F.A.C.G., F.A.C.P.  
Randall S. Jacobs, M.D., F.A.C.G., F.A.C.P.  
Jay R. Levinson, M.D., F.A.C.G.  
Marc S. Piper, M.D., MSc.

Michael H. Piper, M.D., F.A.C.G., F.A.C.P.  
Michael R. Raphael, D.O., F.A.C.O.I.  
Bradley J. Warren, D.O., F.A.C.G., F.A.C.O.I.  
Edward A. Yousif, M.D., F.A.C.G., F.A.C.P.  
Sonia Qatsha, PA-C, RD  
Tara Karmo, PA-C  
Rachelle Packey, PA-C



Digestive  
Health  
Associates

*Board Certified in Gastroenterology*

[www.digesthealth.com](http://www.digesthealth.com)

## Understanding Colonoscopy

Your physician has determined that colonoscopy is necessary for further evaluation or treatment of your condition. This brochure has been prepared to help you understand the procedure. It includes answers to questions patients ask most frequently. Please read it carefully. If you have any additional questions, please feel free to discuss them with the endoscopy nurse or your physician before the examination begins.

### **What is a colonoscopy?**

Colonoscopy is a procedure that enables your physician to examine the lining of the colon (large bowel) for abnormalities by inserting a flexible tube that is about the thickness of your finger into the anus and advancing it slowly into the rectum and colon.

### **What preparation is required?**

The colon must be completely clean for the procedure to be accurate and complete. Your physician will give you detailed instructions regarding the dietary restrictions to be followed and the cleansing routine to be used. In general, preparation consists of either consumption of a large volume of a special cleansing solution or several days of clear liquids, laxatives, and enemas prior to the examination. Follow your doctor's instructions carefully. If you do not, the procedure may have to be cancelled and repeated later.

### **What about my current medications?**

Most medications may be continued as usual, but some medications can interfere with the preparation of the examination. Aspirin products, arthritis medications, anticoagulants (blood thinners), insulin, and iron products are examples of medications whose use should be discussed with your physician prior to the examination. You should alert your doctor if you require antibiotics prior to undergoing dental procedures, since you may need antibiotics prior to colonoscopy as well.

### **What can be expected during colonoscopy?**

Colonoscopy is usually well tolerated and rarely causes much pain. There is often a feeling of pressure, bloating, or cramping at times during the procedure. Your doctor will give you medication through a vein to help you relax and better tolerate any discomfort from the procedure. You will be lying on your side or on your back while the colonoscope is advanced slowly through the large intestine. As the colonoscope is slowly withdrawn, the lining is again carefully examined. The procedure usually takes 15 to 60 minutes. In some cases, passage of the colonoscope through the entire colon to its junction with the small intestine cannot be achieved. The physician will decide if the limited examination is sufficient or if other examinations are necessary.

### **What if the colonoscopy shows something abnormal?**

If your doctor thinks an area of the bowel needs to be evaluated in greater detail, a forceps instrument is passed through the colonoscope to obtain a biopsy (sample of the colon lining). The specimen is submitted to the pathology laboratory for analysis. If colonoscopy is being performed to identify sites of bleeding, the areas of bleeding may be controlled through the colonoscope by injecting certain medications or by coagulation (sealing off bleeding blood vessels with heat treatment). If polyps are found, they are generally removed. None of these additional procedures typically produce pain. Remember, the biopsies are taken from many reasons and do not necessarily mean that cancer is suspected.

30055 Northwestern Hwy #250, Farmington Hills, MI 48334 • 248.985.5000 • 248.985.5500 fax  
11900 E.12 Mile Road #307, Warren, MI 48093 • 586.573.8380 • 586.573.8979 fax  
26850 Providence Parkway #510, Novi, MI 48374 • 248.662.4300 • 248.662.4301 fax

## Understanding Colonoscopy - Continued

### **What are polyps and why are they removed?**

Polyps are abnormal growths from the lining of the colon which vary in the size from a tiny dot to several inches. The majority of polyps are benign (noncancerous) but the doctor cannot always tell a benign from the malignant (cancerous) polyp by its outer appearance alone. For this reason, removed polyps are sent for tissue analysis. Removal of colon polyps is an important means of preventing colorectal cancer.

### **How are polyps removed?**

Tiny polyps may be totally destroyed by fulguration (burning), but larger polyps are removed by a technique called snare polypectomy. The doctor passes a wire loop (snare) through the colonoscope and severs the attachment of the polyp from the intestinal wall by means of an electrical current. You should feel no pain during the polypectomy. There is a small risk that removing a polyp will cause bleeding or result in a burn to the wall of the colon, which could require emergency surgery.

### **What happens after a colonoscopy?**

After colonoscopy, your physician will explain the results to you. If you feel alert after the procedure, your judgement and reflexes may be impaired by the sedation for the rest of the day, making it unsafe for you to drive or operate any machinery.

You may have some cramping or bloating because of the air introduced into the colon during the examination. This should disappear quickly with passage of flatus (gas). Generally, you should be able to eat after leaving the endoscopy, but your doctor may restrict your diet and activities, especially after polypectomy.

### **What are the possible complications of colonoscopy?**

Colonoscopy and polypectomy are generally safe when performed by physicians who have been specially trained and are experienced in these endoscopic procedures.

One possible complication is perforation or tear through the bowel wall that could require surgery. Bleeding may occur from the site of biopsy or polypectomy. It is usually minor and stops on its own or can be controlled through the colonoscope. Rarely, blood transfusions or surgery may be required. Other potential risks include a reaction to the sedatives used and complications from heart or lung disease. Localized irritation of the vein where medications were injected may rarely cause a tender lump lasting for several weeks, but this will go away eventually. Applying hot packs or hot moist towels may help relieve discomfort.

Although complications after colonoscopy are uncommon, it is important for you to recognize early signs of any possible complication. Contact your physician who performed the colonoscopy if you notice any of the following symptoms: several abdominal pain, fever and chills, or rectal bleeding of more than one-half cup. Bleeding can occur several days after polypectomy.

### **To the patient**

Because education is an important part of comprehensive medical care, you have been provided with this information to prepare you for this procedure. If you have any questions about your need for colonoscopy, alternative tests, the cost of the procedure, methods of billing, or insurance coverage, do not hesitate to speak to your doctor or doctor's office about it. The doctors are highly trained specialists and welcome your questions regarding their credentials and training. If you have any question that have not been answered, please discuss them with the endoscopy nurse or your physician before the examination begins.

Alan F. Cutler, M.D., F.A.C.G., F.A.C.P., A.G.A.F.  
Janice M. Fields, M.D., F.A.C.G., F.A.C.P.  
Roberto M. Gamarra, M.D., F.A.C.G., F.A.C.P.  
Phillip A. Goldmeier, M.D., F.A.C.G., F.A.C.P.  
Randall S. Jacobs, M.D., F.A.C.G., F.A.C.P.  
Jay R. Levinson, M.D., F.A.C.G.  
Marc S. Piper, M.D., MSc.

Michael H. Piper, M.D., F.A.C.G., F.A.C.P.  
Michael R. Raphael, D.O., F.A.C.O.I.  
Bradley J. Warren, D.O., F.A.C.G., F.A.C.O.I.  
Edward A. Yousif, M.D., F.A.C.G., F.A.C.P.  
Sonia Qatsha, PA-C, RD  
Tara Karmo, PA-C  
Rachelle Packey, PA-C



Digestive  
Health  
Associates

*Board Certified in Gastroenterology*

[www.digesthealth.com](http://www.digesthealth.com)

## **COLONOSCOPY PREP FAQ'S**

### **Do I need to drink all of the bowel prep solution?**

Yes. In order to properly see the lining of the colon, the colon must be completely clean. A colon that is not properly cleaned may make it hard to find colon polyps and colon cancer. This may lead to incomplete exams, missed polyps and a need to repeat the exam at another time.

### **What if I don't like the taste and cannot take all of the prep?**

If you do not like the taste, try adding a powdered flavoring to the solution like Gatorade, Crystal Light or Lemonade. Avoid red, blue or purple colored flavoring.

If you experience nausea, take a short break from drinking the prep. You may also try drinking something warm such as tea. The warmth can sometimes settle the stomach. As soon as the nausea goes away, continue to drink clear liquids to prevent cramping and dehydration. Also, when you start the drinking process, try drinking the prep more slowly.

You can also try to drink the prep solution through a straw. After, rinse your mouth out with water right away to limit the unpleasant taste some will experience.

### **My prep has not started to work yet. Is that OK?**

Everyone has a different response to the bowel prep. Some people start having diarrhea within an hour of drinking the solution. Others have no response for a few hours. Be patient and continue drinking the prep as instructed.

### **What happens if I forget and have food and/or drink less than 4 hours prior to the procedure?**

Your colonoscopy will be cancelled. This requirement is set forth by the anesthesia department.

### **Why can't I drive myself home after the procedure?**

You will be given medicine that will make you sleepy for your procedure. This medicine impacts your judgement and reflexes. For medical and legal reasons, you may not drive yourself home after your procedure.

### **How long will the test take?**

The test will take 20-30 minutes to complete. However, please plan to spend approximately 3 hours at the facility.

### **Can I have a colonoscopy if I am having my menstrual period?**

Yes, the procedure can still be performed. We ask that you use a tampon if possible.

30055 Northwestern Hwy #250, Farmington Hills, MI 48334 • 248.985.5000 • 248.985.5500 fax  
11900 E.12 Mile Road #307, Warren, MI 48093 • 586.573.8380 • 586.573.8979 fax  
26850 Providence Parkway #510, Novi, MI 48374 • 248.662.4300 • 248.662.4301 fax

## Understanding Your Pathology Report After your Colonoscopy

When your colon was biopsied, the samples taken were studied under the microscope by a specialized doctor with many years of training called a *pathologist*. The pathologist sends your doctor a report that gives a diagnosis for each sample taken. This report helps manage your care. The questions and answers that follow are meant to help you understand the medical language used in the pathology report you received for your biopsy.

### **What if my report mentions the cecum, ascending colon, transverse colon, descending colon, sigmoid colon, or rectum?**

These are all parts of the large intestine. The cecum is the beginning of the colon, where the small intestine empties into the large intestine. The ascending colon, transverse colon, descending colon, and sigmoid colon are other parts of the colon after the cecum. The colon ends at the rectum, where waste is stored until it exits through the anus.

### **What is a polyp in the colon?**

A polyp is a projection (growth) of tissue from the inner lining of the colon into the lumen (hollow center) of the colon. Different types of polyps look different under the microscope. Polyps are benign (non-cancerous) growths, but cancer can start in some types of polyps. These polyps can be thought of as pre-cancers, which is why it is important to have them removed.

### **What is an adenoma (adenomatous polyp)?**

An adenoma is a polyp made up of tissue that looks much like the normal lining of your colon, although it is different in several important ways when it is looked at under the microscope. In some cases, a cancer can start in the adenoma.

### **What are tubular adenomas, tubulovillous adenomas, and villous adenomas?**

Adenomas can have several different growth patterns that can be seen under the microscope by the pathologist. There are 2 major growth patterns: **tubular** and **villous**. Many adenomas have a mixture of both growth patterns, and are called **tubulovillous** adenomas. Most adenomas that are small (less than ½ inch) have a tubular growth pattern. Larger adenomas may have a villous growth pattern. Larger adenomas more often have cancers developing in them. Adenomas with a villous growth pattern are also more likely to have cancers develop in them.

The most important thing is that your polyp has been completely removed and does not show cancer. The growth pattern is only important because it helps determine when you will need your next colonoscopy to make sure you don't develop colon cancer in the future.

### **What if my report uses the term sessile?**

Polyps that tend to grow as slightly flattened, broad-based polyps are referred to as *sessile*.

### **What if my report uses the term serrated?**

Serrated polyps (serrated adenomas) have a saw-tooth appearance under the microscope. There are 2 types, which look a little different under the microscope:

- Sessile serrated adenomas (also called sessile serrated polyps)
- Traditional serrated adenomas
  - Both types need to be removed from your colon.

**What does it mean if I have an adenoma (adenomatous polyp), such as a sessile serrated adenoma or traditional serrated adenoma?**

These types of polyps are not cancer, but they are pre-cancerous (meaning that they can turn into cancers). Someone who has had one of these types of polyps has an increased risk of later developing cancer of the colon. Most patients with these polyps, however, never develop colon cancer.

**What if my report mentions dysplasia?**

Dysplasia is a term that describes how much your polyp looks like cancer under the microscope:

- Polyps that are only mildly abnormal (don't look much like cancer) are said to have **low-grade (mild or moderate) dysplasia**.
- Polyps that are more abnormal and look more like cancer are said to have **high-grade (severe) dysplasia**.

The most important thing is that your polyp has been completely removed and does not show cancer. If high-grade dysplasia is found in your polyp, it might mean you need to have a repeat (follow-up) colonoscopy sooner than if high-grade dysplasia wasn't found, but otherwise you do not need to worry about dysplasia in your polyp.

**How does having an adenoma affect my future follow-up care?**

Since you had an adenoma, you will need to have another colonoscopy to make sure that you don't develop any more adenomas. When your next colonoscopy should be scheduled depends on a number of things, like how many adenomas were found, if any were villous, and if any had high-grade dysplasia. The timing of your next colonoscopy should be discussed with your treating doctor, as he or she knows the details of your specific case.

**What if my adenoma was not completely removed?**

If your adenoma was biopsied but not completely removed, you will need to talk to your doctor about what other treatment you'll need. Most of the time, adenomas are removed during a colonoscopy. Sometimes, though, the adenoma may be too large to remove during colonoscopy. In such cases you may need surgery to have the adenoma removed.

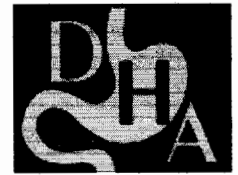
**What if my report also mentions hyperplastic polyps?**

Hyperplastic polyps are typically benign (they aren't pre-cancers or cancers) and are not a cause for concern.



Alan F. Cutler, M.D., F.A.C.G., F.A.C.P., A.G.A.F.  
Janice M. Fields, M.D., F.A.C.G., F.A.C.P.  
Roberto M. Gamarra, M.D., F.A.C.G., F.A.C.P.  
Phillip A. Goldmeier, M.D., F.A.C.G., F.A.C.P.  
Randall S. Jacobs, M.D., F.A.C.G., F.A.C.P.  
Jay R. Levinson, M.D., F.A.C.G.  
Marc S. Piper, M.D., MSc.

Michael H. Piper, M.D., F.A.C.G., F.A.C.P.  
Michael R. Raphael, D.O., F.A.C.O.I.  
Bradley J. Warren, D.O., F.A.C.G., F.A.C.O.I.  
Edward A. Yousif, M.D., F.A.C.G., F.A.C.P.  
Sonia Qatsha, PA-C, RD  
Tara Karmo, PA-C  
Rachelle Packey, PA-C



Digestive  
Health  
Associates

*Board Certified in Gastroenterology*

[www.digesthealth.com](http://www.digesthealth.com)

## **COLONOSCOPY BILLING AND HOW IT MAY AFFECT YOU**

In an effort to help patients understand the potential of charges associated with his/her colonoscopy procedure, we have defined screening, surveillance, and diagnostic colonoscopy types below. This is meant to be informational and in no way is to be considered a guarantee of payment or all inclusive. All insurance policies are written differently, and this is meant as a guideline.

The term "**Screening**" colonoscopy refers to a patient who falls under the following criteria:

1. It is the first time a colonoscopy is performed and you are over the age of fifty.
2. It has been more than 10 years since your last colonoscopy, you are over the age of fifty and have no symptoms, no history of colon cancer, no polyps, and/or gastrointestinal disease.
  - a. This colonoscopy type is billed as a preventative screening and is exempt from deductible and co-insurances.

The term "**Surveillance**" colonoscopy refers to a patient who falls under the following criteria:

1. Surveillance colonoscopy can be performed at various ages and intervals based on the patient's personal history of polyps and/or cancer. However, surveillance colonoscopies are generally performed outside of the normal frequency period. This treatment can result in additional out of pocket costs. *Such as: Deductible and/or Co-Insurance.*
2. When a screening and/or diagnostic colonoscopy results in a biopsy of polyps, the discovery of polyps changes the treatment to intervals of surveillance screenings. The surveillance screening intervals will continue until there are no polyps present.

The term "**Diagnostic**" colonoscopy refers to a patient who falls under the following criteria:

1. A patient, regardless the age, that has a gastrointestinal sign, symptom(s) and/or relevant diagnosis.

Frequently patients are under the assumption that all types of colonoscopies are considered screening and are covered at no cost. Medical circumstances and physician medical decision making can change the type of colonoscopy. Please contact your insurance company to further understand your benefits.

**PLEASE CALL BILLING AT 586-573-3940 WITH ANY BILLING QUESTIONS!**

30055 Northwestern Hwy #250, Farmington Hills, MI 48334 • 248.985.5000 • 248.985.5500 fax  
11900 E. 12 Mile Road #307, Warren, MI 48093 • 586.573.8380 • 586.573.8979 fax  
26850 Providence Parkway #510, Novi, MI 48374 • 248.662.4300 • 248.662.4301 fax  
16001 West 9 Mile Rd, 3<sup>rd</sup> Floor, Southfield, MI 48075 • 248.985.5000 • 248.985.5500 fax  
205 W. Grand River #200, Brighton, MI 48116 • 248.662.4300 • 248.662.4301 fax  
1225 South Latson Rd #380, Howell, MI 48843