

SPECIAL POINTS OF INTEREST:

- Ejection Fraction
- Sleep
- Dill Vegetable Dip
- New Blood Pressure Medication

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## What is an Ejection Fraction?

**What is an Ejection Fraction or EF?** The EF is a measurement of how much blood the heart pumps out with each contraction. It is determined by an equation that looks at the ratio of how much blood is pumped out when it squeezes to how much blood it fills with when it relaxes. **What is a normal EF?** A normal EF is usually between 55 and 75 percent but it may vary depending on how it is measured. An EF in the range of 35-50 percent means the heart is moderately weak and below 35 percent is considered severely weak. **How is the EF measured?** An EF is most commonly measured by an echocardiogram. This is an ultrasound of the heart. There is an equation that is used to determine the EF when doing an echocardiogram, however



there is also some judgement made on the EF when the cardiologist reads it as well. Other testing modalities that can assess the EF include a nuclear stress test, cardiac catheterization, cardiac MRI, and MUGA scan. Please note the EF measurement may vary depending on what test is done. An EF measurement cannot be obtained by a physical exam, an EKG, or a pacemaker/defibrillator. **Does a low EF cause symptoms?** It can but not in all individuals.

Usually some symptoms of exertional fatigue or shortness of breath will occur. Other symptoms may include weight gain related to fluid build up. Fluid can occur in the legs, abdominal cavity, and lungs. Chest pressure and palpitations can also occur.

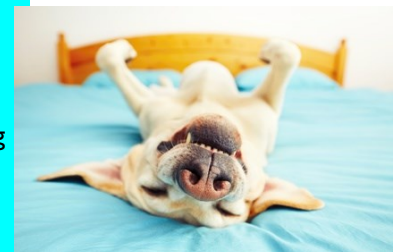
**What causes a low EF?** Many things may cause a low EF. Some of those reasons include a heart attack or blockages in the heart arteries, a fast heart rate from an abnormal heart rhythm such as atrial fibrillation, uncontrolled high blood pressure or diabetes, alcohol and drug abuse, some medications, infection, and heart valve problems. There are instances in which the cause is not known, however it is very important to look for an underlying cause.

**What is the treatment for a low EF?** The first priority is to treat the underlying cause. This may mean placing a stent to correct a blocked artery or shocking the heart to get the rhythm back to normal. Cont.....Page 3 (1,3).

### Tip of the Month

**Improving Your Sleep:**

1. Avoid alcohol, cigarettes, and heavy meals in the evening.
2. Make sure to get some sunlight during the day but keep it dark at night during sleeping hours.
3. Wind down about an hour before bedtime with a warm bath and do some light reading. Avoid electronics including the computer or TV as they help keep you awake!
4. Consider changing your mattress if it has been more than 9-10 years.
5. Keep your bedroom cool. (5).



# Dill Vegetable Dip



Recipe from  
"Breaking the Salt  
Habit" by Erik  
Williams. (2).

## Ingredients:

- 1\4 cup Light Mayonnaise
- 3\4 cup Light Sour Cream
- 1 1\2 Tbsp. Dry Dill Weed
- 3\4 tsp. Garlic Powder
- 1\2 tsp. Oregano
- 1\8 tsp. Ground Sage

## Directions:

1. Mix all ingredients in a small bowl.
2. Serve.

(Would serve with carrots, cucumbers, sliced bell peppers).

## Nutrition Info

Yields 16 servings  
1 Serving = 1 Tbsp

Calories: 25  
Total Fat: 2g  
Sat Fat: 1g  
Cholesterol: 4mg  
Potassium: 11mg  
Carbohydrates: 2g  
Protein: 1g  
Fiber: 0g  
Sugar: 1g  
Sodium: 28mg

**Quote of the Month:** "If you don't make the time to work on creating the life you want, you're eventually going to be forced to spend a lot of time dealing with a life you don't want." Kevin Ngo

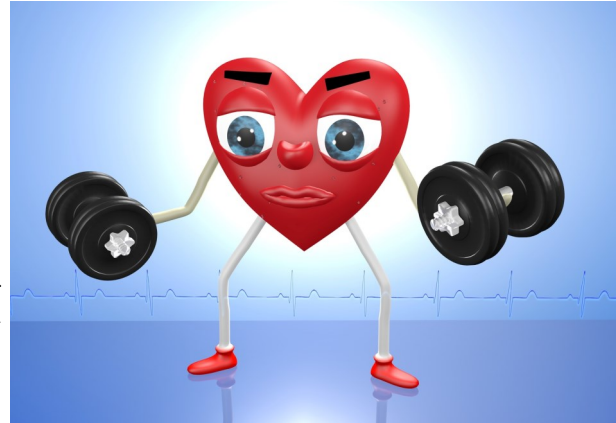
## Did you Know?

Did you know that the FDA has approved a new blood pressure medication? The medication is called Byvalson and is a combination drug between Bystolic (nebivolol) and Diovan (valsartan). Both of these drugs have been on the market for several years now for the treatment of high blood pressure. The new drug was approved by the FDA on June 6, 2016 and will hit the market in the second half of this year. Byvalson is approved as a fixed dose, meaning there is no dose change. It comes in a single dose 5\80 which is 5mg of Bystolic and 80mg of Diovan. It is to be taken once daily. Both doses are on the lower side of the dosing schedule for each drug but together were effective in lowering blood pressure in the study.

People who cannot take this medication include people that have slow heart rates, low blood pressure, active heart failure, liver failure, or had an allergic reaction to one of the drug components prior. This drug is contraindicated for women who are pregnant or who may become pregnant as it may cause harm to the fetus. In people who have kidney disease and or high potassium, this drug may not be suitable as it may further elevate potassium. Monitoring of kidney function and potassium with a lab study may be necessary. Not only does Byvalson lower the blood pressure but it also lowers the heart rate (pulse) as well. Byvalson can be taken with or without food. In summary, Byvalson is a new drug that is not so new but may serve as an option for some individuals. (6,7).

**FDA  
APPROVED**

Medicines are the mainstay of treatment for a weak heart. The first medication usually started if fluid build up is present is a diuretic. Once a person is stabilized, then medicines known as beta blockers and ACE-inhibitors or ARBs are initiated. A new class of drug called an ARNI (angiotensin receptor-neprilysin inhibitor) may also be used instead of ACE-inhibitors or ARB. Another diuretic that acts on aldosterone may also be used. These medications are usually increased gradually to the highest tolerated dose. Limiting factors may include heart rate, blood pressure, kidney function, and high potassium. After the medications have been advanced, then the EF will need to be reassessed to see if it has improved. If the EF remains above 35 percent, then medicines will be continued and the EF will be monitored intermittently long term. If the EF is below 35 percent, an implantable cardioverter defibrillator (ICD) may be needed.



When the EF is less than 35 percent, the heart has a higher chance of going into a life threatening heart rhythm which can cause sudden death. An ICD can treat this heart rhythm by shocking heart. Some individuals may require advanced treatments. This may include placing a pump on the heart known as a left ventricular assist device (LVAD). If a person is not a candidate for an LVAD or after an LVAD is placed, a heart transplant may be needed.

In addition to these treatments, exercising regularly and maintaining a healthy weight are very important. Smoking cessation, keeping blood sugars under control, and treating sleep apnea are also extremely helpful. Alcohol intake should be kept to a minimum and drug abuse should be avoided.

To sum up, the EF is a good and fairly reliable measurement of the heart's pumping ability. There are variables in its measurement and it can change rapidly or slowly over time. The good news is that the EF can improve with treatment but it is something that has to be monitored over time. (1,3,4).