

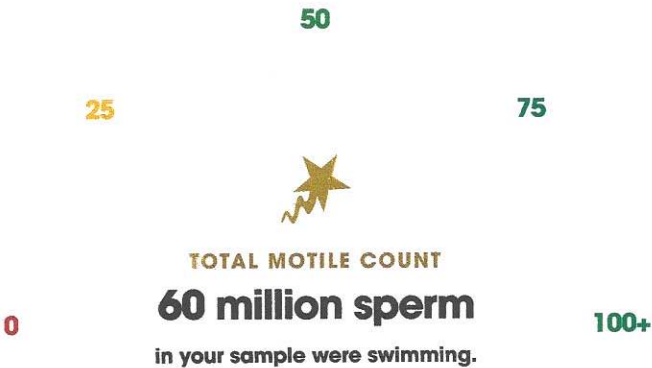


MAL HANCOCK WARNER'S SEMEN ANALYSIS  
APPROVED BY A FELLOW PHYSICIAN ON DECEMBER 16, 2022

# Hey Mal, your semen analysis looks normal.

You are likely to be able to conceive with timed intercourse if your partner is fertile.

We saw 60 million swimming sperm in your sample (the total motile count). This is regarded as the most important factor in determining your fertility. A total motile count of over 40 million is considered normal.



**GUARANTEED ACCURACY**  
Your results were analyzed in our CLIA-approved lab and approved by a physician.

# How we calculated your results

We calculated your total motile count (or the total number of sperm swimming in your sample) by multiplying volume, concentration, and motility.

## Volume

3.75 mL of semen

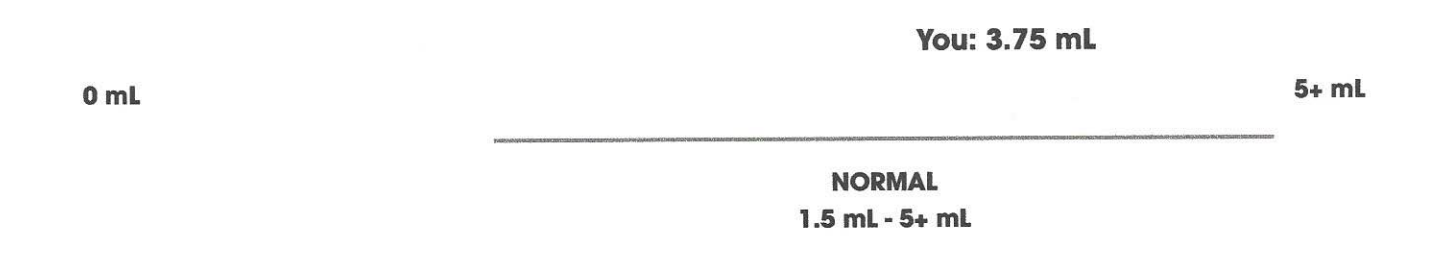


## Normal

You had 3.75 mL of semen in your sample. This is considered in the normal range.

According to the World Health Organization, the average volume of ejaculate in men is 3.7mL, about three quarters of a teaspoon in measurement. Generally, the amount ejaculated can range from 0.1mL to 10mL. The volume can fluctuate quite a bit depending on when you last ejaculated. Typically, the more time between ejaculations results in more volume, as your body has had plenty of time to create more fluid. Heredity, diet, smoking status, and overall health can also affect semen volume.

### WHERE YOU STAND



### DID YOU KNOW?

Men usually produce the most semen when they're in their early thirties. The amount tends to decrease as a man gets older.



# Concentration

94 million sperm / mL

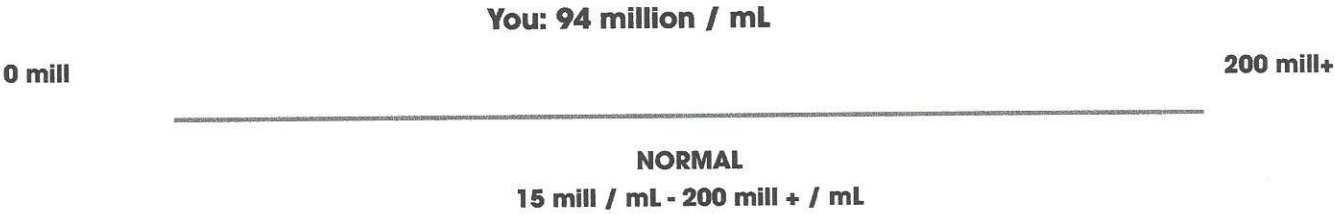


Normal

You had 94 million sperm / mL in your sample. This is considered in the normal range.

According to the World Health Organization, the average concentration of sperm in an ejaculate is 73 million per mL of ejaculate fluid. The range is from 0 to 279 million sperm per mL. Having a low sperm count decreases the odds that one of your sperm will fertilize your partner's egg, resulting in pregnancy. Nonetheless, many men who have a low sperm count are still able to father a child.

## WHERE YOU STAND



## DID YOU KNOW?

Severe or prolonged exposure to glycol ethers (common in strong solvents and paint) can cause reductions in sperm concentration, motility, and morphology.



# Motility

17% of your sperm were swimming

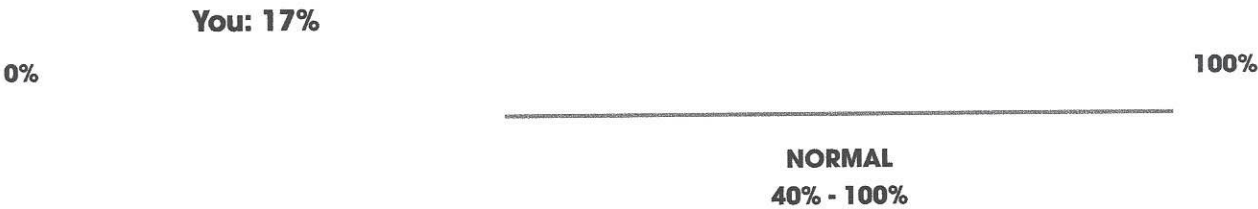


## Below Normal

17% of your sperm were swimming in your sample. This is considered in the below normal range.

Sperm motility refers to the percentage of your sperm that are swimming. This can include non-progressive movement (sperm swimming in circles, instead of swimming in a straight line). While your sperm motility is a bit below normal, there isn't cause for alarm. Sperm motility can change substantially due to many factors and physicians always suggest having two semen analyses performed before coming to any conclusion. Some things that impact sperm motility are: obesity, exposure to chemicals, injury to the pelvic area, smoking, poor diet, varicoceles (veins inside the scrotum become enlarged causing an increased temperature), fevers, genetic disorders, ejaculatory frequency, or using a lubricant while producing a sample.

### WHERE YOU STAND



### DID YOU KNOW?

Poor sperm motility may also occur if a man has infrequent sexual activity. In this case, a second ejaculate collected soon after could be better.



# Total Motile Count

60 million of your sperm were swimming

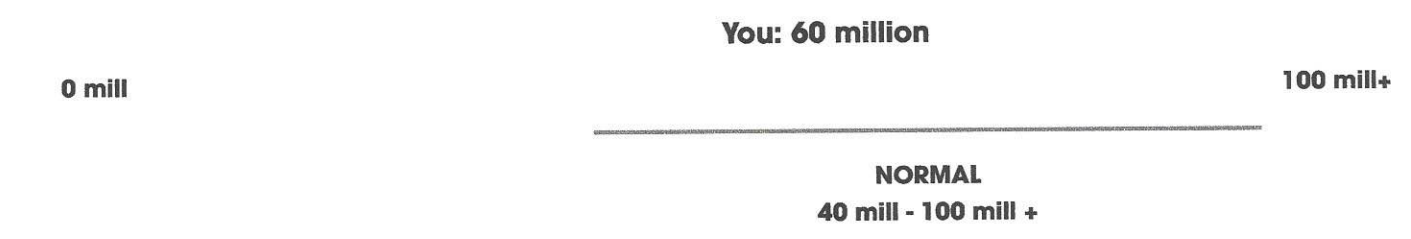


## Normal

We calculated that 60 million of your sperm in your sample were swimming. You are in the normal range for total motile count.

Multiple studies show that total motile count is regarded as the most important factor for conceiving. It is calculated by multiplying the volume by the sperm count per mL by the motility (% moving). With 60 million motile sperm in your sample, you should be able to conceive with timed intercourse if your partner is fertile.

### WHERE YOU STAND



### DID YOU KNOW?

Studies show that men who exercise regularly have higher testosterone levels and better semen quality than men who are inactive.





# We also looked at the shape of your sperm cells.

Your sperm's shape (morphology) is usually tied to your lifestyle habits. While morphology is not used to calculate your total motile count, it is important for fertility because sperm typically have to be a certain shape to be able to swim to and penetrate an egg.

## Morphology

5% of your sperm were normally shaped

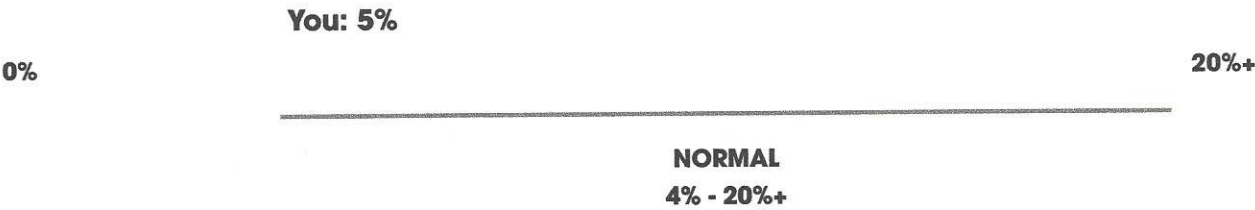


### Normal

5% of the sperm in your sample were shaped normally. This is considered in the normal range.

When it comes to fertility, sperm morphology refers to the shape of your sperm. Don't be shocked at how low the typical range is — many fertile men have a high percentage of abnormal sperm. Just think: you're making 1,500 per second, so there are bound to be some errors! Typically misshapen sperm can have two tails, a tail that is too short, two heads, or circular heads.

### WHERE YOU STAND



### DID YOU KNOW?

Sperm cells that have well shaped head sections are most likely to have the fewest DNA imperfections... so maybe you can read a sperm by its cover.



# Ways you can take action.

It takes 72 days for your sperm to reach full maturity. Lifestyle changes you make now could improve your fertility in the next few months. Take advantage of our \$20 discount to test whether lifestyle changes improve your fertility.

## Stop smoking



Studies show that men who smoke have a lower sperm count and poor motility. Smoking has also been associated with abnormal sperm shapes that are believed to be caused by an increased presence of reactive oxygen species. These are highly reactive chemicals that antioxidants enzymes typically neutralize, but that accumulate in levels higher than the body can manage due to smoking.

## Maintain a healthy weight



Being very thin (BMI<20) or obese (BMI>30) can have a negative impact on your fertility. In very obese individuals, certain hormones become unbalanced due to signaling hormones from fat cells. Testosterone levels decrease substantially and can lead to an increase in an individual's ability for storing fat. Very thin individuals can lack the energy sources necessary to support key functions within the body. This can lead to hormone imbalances as well as reduce production of sperm cells and semen.

## Drink fewer alcoholic drinks



Studies show that reducing alcohol consumption can improve seminal volume and morphology.

## Eat healthy foods



Studies correlate high intake of fruits and vegetables with decreased risk of low motility. Fruits and vegetables have high levels of antioxidants that help neutralize reactive oxygen species. However, it's important to note that non-organic fruits and vegetables typically have high levels of pesticide residue. The negative impacts of pesticide residues can outweigh the positive benefits provided by the fruit or vegetable. Washing your produce can help reduce pesticide intake.

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## Get your cardio in



Exercising regularly improves many aspects of your health, including your sperm health. Exercise has been shown to decrease inflammation and improve semen parameters and decrease sperm DNA fragmentation. When choosing between exercises, there is some data showing that moderate-intensity exercises such as jogging or moderate cycling have the most positive impact on sperm health. When taking these exercises to the extreme, there can be potential negative impacts on sperm production due to elevated body temperatures and pressure on the groin when cycling—so don't overdo it.

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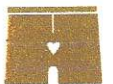
## Improve your sleep



Sleeping less than 6 hours a night has been shown to be correlated with reduced fertility. The exact reason that sleep impacts your fertility is still unknown, but reduced sleep and inconsistent sleep/wake cycles have been shown to cause hormonal imbalances. Hormones like melatonin that play a large role in sleep also impact the release of testosterone and other sex hormones. These hormones play a key role in sperm production so make sure to maintain consistent and sufficient sleep cycles to improve their regulation.

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## Wear boxers instead of briefs



Loose fitting underwear has been associated with higher sperm concentration and sperm health. Tight fitting underwear increases the temperature of the testicles which can lead to increased FSH hormone levels. This can impair sperm production and is reversible if scrotal temperature is decreased consistently over a long period of time.

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## Stay out of the hot tub



Increased scrotal temperatures cause decreased sperm production. Sperm cells need to be roughly 2°C lower than body temperature in order to form properly. Elevated temperatures cause defects in the sperm formation process and can even cause a complete halt of sperm production. When exposed to high temperatures, cells produce heat shock proteins that help prevent other proteins that are sensitive to thermal swings from incorrectly folding. High levels of heat shock proteins are very detrimental to sperm production and impact DNA fragmentation.

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## Don't stress



Being stressed isn't just an emotional experience—substantial physical changes occur in the body when an individual is stressed. Stress hormones like glucocorticoids impact Sertoli and Leydig cells in the testicles which leads to a decrease in sperm motility and testicular function. Being stressed while producing a semen sample has even been shown to decrease motility by up to 48%.

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# Fellow Lab Results

REPORTED ON DECEMBER 16, 2022 AT 5:56 P.M. PST

PATIENT INFORMATION

Patient Name:Mal Hancock Warner

Patient Date of Birth:08/18/1970

SAMPLE INFORMATION

Sample ID:3172565

Sample Type:Semen

Collection Date and Time:12/15/2022 4:18 a.m. PST

Sample Source:Ejaculate

LAB INFORMATION

Lab Director:Dr. Wayne L. Garrett

CLIA License #:05D2177822

Lab Address:1933 Davis St. Ste. #263

COLA Accreditation #:31245

San Leandro, CA 94577

SEMEN ANALYSIS PARAMETERS

	VALUE	REFERENCE
Total Motile Count (millions/ejaculate)*	60	≥40
Sample Volume (mL)	3.75	≥1.5
Concentration (millions/mL)	94	≥15
Motility (%)	17	≥40
Morphology (%)	5	≥4 <sup>+</sup>
Count (millions/ejaculate)	351	≥39



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