Normal Levels of Uric Acid
Having normal uric acid levels in the blood is crucial for optimal functioning of the body. The normal level of uric acid in the blood falls between 3.0 and 7.0 mg/dL. Read ahead to know more...

In the human body system, uric acid is formed as a byproduct of purine metabolism, which is then excreted in the urine. Regarding purines, they are nitrogenous compounds present in various food items such as mushrooms, green peas, wheat bran, meat products, and fish. Chemically, uric acid is a reducing compound that is made up of carbon, hydrogen, nitrogen and, oxygen. It possesses very strong antioxidant
properties; the antioxidant ability of the blood plasma is contributed by uric acid to about 50 percent.

Uric acid, synthesized in the body after breaking down purines, is dissolved in the bloodstream, which is then circulated to the kidney. From the kidney, about 75% of this acid is removed via urination. Failure to excrete appropriate amounts of uric acid due to any bodily abnormalities can lead to severe health conditions. Taking this into consideration, it is very crucial to understand the normal uric acid levels. As this acid is present in the blood and urine, either of the two samples can be used for uric acid testing. But, a blood
test for uric acid is more commonly conducted.

How to Test Uric Acid Levels?

In medical science, the measurement of uric acid levels is conducted as one of the important procedures to rule out some health conditions. The physician may recommend uric acid testing in patients who have complaints for joint pain and kidney disorders. For conducting a uric acid test, the candidate should not eat or drink anything for four hours prior to collection of the blood sample. The physician may also recommend abstaining from certain medications that alter uric acid levels. For testing, a blood
sample is collected either from the elbow or the back of the palm. The collected blood is then tested by laboratory specialists for uric acid levels. In case of urine test for uric acid, a 24-hour urine sample is obtained for laboratory examination.

What are Normal Levels of Uric Acid?

Speaking about the normal uric acid levels, the blood test result should fall between 3.0 - 7.0 mg/dL (milligram per deciliter). Whereas the normal value of uric acid in urine ranges from 250 - 750 milligrams (mg). Remember that the collected urine sample for uric acid test is for one day. These normal ranges of
uric acid may fluctuate slightly from one laboratory to another. A condition of low uric acid level is rare as compared to high levels of uric acid in the blood. Abnormally low concentration of uric acid can be caused due to liver malfunction, kidney diseases, frequent exposure to toxic chemicals, and also hereditary defects.

If the uric acid level is higher than the normal range, then the doctor will perform further medical examination and conduct laboratory tests for diagnosis of the problem. High uric acid in the blood is mostly caused due to two primary reasons; either the body is not excreting uric acid in the urine as it
should, or there is an excess production of uric acid. Elevated uric acid levels or hyperuricemia may also be associated with health conditions like gout, diabetes, hypoparathyroidism, renal problems, and lead poisoning. In addition, it may be manifested as side effects of chemotherapy and radiation therapy.

Among the causal reasons for hyperuricemia, gout is directly related to excess synthesis of uric acid in the body. Over a period of time, uric acid crystals are accumulated in the joints, resulting in severe pain symptoms. Since high uric acid is also caused due to chemotherapy, a test for uric acid levels is performed
prior to administration of chemotherapy medications in cancer patients. Later, uric acid level is examined in between the chemotherapy sessions as a part of the routine medical checkup.

Excess consumption of purine rich foods contribute to elevation of uric acid in the blood. Thus, people who are diagnosed with hyperuricemia, gout, and alike medical conditions should eliminate foods and drinks rich in purines. According to medical studies, the level of uric acid in the blood is related to fluctuation in blood pressure. A recent study reported that reducing the uric acid levels directly lowers the blood pressure significantly. This finding has
proven to be an important achievement for regulating healthy blood pressure range in hypertension patients.

Foods High in Uric Acid
Knowing about foods high in uric acid, can help in prevention of diseases that occur due to a high concentration of uric acid in the body. Scroll down to know more about foods that contain high levels of uric acid.

Uric acid is a by-product of purine metabolism. The human body synthesizes uric acid from the breakdown of purine bases that are present in the DNA, RNA and the energy molecules. Under normal circumstances, the uric acid is eliminated from the body by the kidneys. However, if kidneys fail to do so, it would result in the accumulation of uric acid in the body. High levels of uric acid, which is medically referred to as hyperuricemia, is a condition that must not be taken casually. If uric acid crystals get deposited in one's joints, it may cause the joints to get inflamed. Under such circumstances, one is most likely to experience joint pain, swelling and tenderness.

High levels of uric acid usually leads to the development and aggravation of diseases such as gout. While obesity, kidney problems and use of diuretics or immunosuppressant drugs figure in the list of contributory factors for increased concentration of uric acid in the body, dietary habits could also lead to an increase in the levels of uric acid. Usually, the purines in food, break down to form uric acid during digestion. So, excessive consumption of foods rich in purines would naturally cause high levels of uric acid in the body. Hyperuricemia can therefore be prevented if...
one cuts down on the intake of foods high in uric acid. Here is a list of foods containing uric acid.

**Foods that are High in Uric Acid**

**Meat:** All meat products especially sweetbreads and organ meats (heart, liver, kidney, brain and spleen) have the highest level of purines and are therefore the most likely culprits of disorders caused by high uric levels. While animal meats or the "red meats" such as beef, pork and seafood should be completely avoided, "white meats" such as poultry and ham can be eaten in moderate amounts. Processed meat such as bacon is very high in purines and must not be consumed by those who have been diagnosed with gout.

**Yeast:** Foods which contain yeast such as breads, beer and alcohol beverages contain large amounts of uric acid. Alcohol, in particular, is known to hamper the renal excretion in the kidneys thereby resulting in high levels of uric acid in the body.

**Seafood:** Seafood such as sardines, trout, tuna, sprat, mackerel, ocean perch, anchovies, herring, halibut, salmon, shrimp and lobster also have high levels of purine.

**Vegetables:** Vegetables like asparagus, cauliflower, mushrooms, aubergine, carrots, potatoes, peas and spinach are also moderate purine foods containing 9-110 mg purine in 100 g food. It is advisable to consume foods such as black gram, lentil, chickpeas and dried beans in moderate amounts to control the levels of uric acid.

**Caffeine:** Intake of caffeine found in coffee, tea, beans and leaves of many plants is known to increase the uric acid levels. Excessive consumption of caffeinated drinks can aggravate conditions such as gout which is why people with high uric acid levels should switch to decaffeinated coffee to reduce uric acid levels. Theobromine, which is a chemical found in cacao plant that is used for making chocolates, also contains high levels of uric acid. It would therefore be best to limit the consumption of chocolates.

In addition to these, people prone to having high uric levels should also avoid some acid-forming foods such as processed syrups, packaged fruit juices, sauces, commercial pickles and artificial sweeteners.

**How to Lower the Levels of Uric Acid**

In order to avoid foods high in uric acid, the diet should be fashioned to eliminate all the high purine foods and instead include foods with moderate to low amounts of purine. The uric acid reduction diet should include, a liberal carbohydrate intake, such as pasta and rice and foods low in protein and fats. Eating plenty of raw fruits that have a high water content have also known to be beneficial for reducing uric acid levels. Dehydration reduces kidney function, allowing uric acid to build up and hence, drinking lots of fluids especially water, will help to keep the organs hydrated and dilute the amount of uric acid in the body. Juices made of black cherry, celery, birch leaf and parsley are very effective gout remedies that will help in flushing out uric acid from the tissues.

One can effectively regulate the levels of uric acid in the body by making the necessary dietary changes. Those who have been diagnosed with hyperuricemia must improve their dietary habits and should also follow the treatment guidelines. The dietary changes, should be made in conjunction with other changes in lifestyle so as to relieve the body from the problems occurring due to a high concentration of uric acid.
yperuricemia condition. Uric Acid Diet

Uric acid diet, better known as gout treatment diet involves exclusion of certain foods, that are known to worsen the gout problem. Staying away from such foods, can reduce joint inflammation and help get rid of gout. Avoiding foods that raise uric acid levels in blood, is a simple way to ease pain naturally. Foods that should be avoided are explained below:

**Alcohol**
Alcohol, if consumed even in small quantities, can contribute to worsening of gout. This is because analysis of any alcoholic beverage (beer, wine, etc.), has shown that these drinks contain high levels of purine, thus increasing uric acid content in the body. So a person drinking alcohol, during this joint inflammation condition is indirectly 'hitting an ax on his own leg', as it can aggravate the joint pain.

**Protein Rich Foods**
High protein foods being rich in purines, should not be included in uric acid diet. Fish, poultry products (chicken), eggs, etc. are some of the foods that come under the list of protein rich foods. Even vegetables like spinach, broccoli, lentils, avocados and asparagus are found to be very rich in proteins, hence must be avoided.

**Foods High in Sugar**
People who think that drinking soft drinks is one of the ways of getting rid of uric acid through urine, are completely wrong. This is because soft drinks contain high amounts of sugar, and recent studies suggest that people consuming sweetened carbonated soft drinks have a very high probability of suffering from gout attacks. Sweetened fruit juice, high sugary foods such as cakes and pastries, as well as fructose rich fruits (oranges) can worsen the pre-existing joint pain.

**What to Include in Uric Acid Diet**
Foods that reduce uric acid levels in the body, need to be consumed on a daily basis. Indulging in low purine foods, will help in controlling this condition. These foods form an integral part of low uric acid diet.

**High Potassium Foods**
A diet high in potassium is another effective way to ease discomfort associated with gout. Studies show that sufficient potassium intake can boost uric acid excretion. One of the best sources of potassium are bananas and tomatoes.

**Dairy Products**
Gout sufferers should be very careful in choosing dairy products. Low fat cheese and yogurt as well as skimmed milk are some dairy products that can help combat gout.

**Cherries**
Cherries contain high amounts of vitamin C and potassium, which help in reducing uric acid levels in the body. Anthocyanins, a natural flavonoid, is found in high quantities in cherries which bear anti-inflammatory properties and thus help in reducing pain and swelling. Drinking cherry juice can also help in relieving pain.

**Water**
To encourage elimination of uric acid, drinking plenty of water is crucial. Increasing water intake
will help the body to flush off excess uric acid through urine. This is one of the best home remedies that can work wonders to decrease gout symptoms.

Along with uric acid diet, one should ensure that body weight does not increase. Losing excess pounds and maintaining a healthy weight is necessary to manage gout pain. Studies show that being overweight increases joint related problems. Exercise, such as walking, can help to improve flexibility in joints as well as reduce weight. **Uric Acid Levels**

The normal levels of uric acid range from 2.4 to 6.0 mg/dL for females and 3.4 to 7.0 mg/dL for males. Hyperuricemia or high uric acid levels is supposed to be a greater health risk. When the level of uric acid increases significantly, it can cause several health problems. Those suffering from gout, kidney stones or other kidney diseases need to be very careful about the levels of uric acid.

**Low Uric Acid Levels**

High levels of uric acid could be attributed to genetics, alcohol abuse or an excessive use of caffeine, niacin or certain drugs. Low uric acid levels, on the other hand, are generally associated with certain underlying medical conditions. Genetic mutations that cause xanthine oxidase deficiency and kidney dysfunction are generally responsible for causing hypouricemia. Low purine content in a vegetarian diet can also cause low uric acid levels. Other causes for low uric acid levels include use of uricosurics. These drugs are responsible for increasing the excretion of uric acid from the blood to the urine. Some drugs such as ACTH, corticosteroids, allopurinol, salicylates, coumadin, chlorpromazine, urate oxidase, sevelamer, xanthine oxidase inhibitors and colchicine can also cause hypouricemia by decreasing the production of uric acid.

**Hypouricemia: Diagnosis and Treatment**

The uric acid levels can be found out using blood tests and urine analysis. When a patient seems to be exhibiting symptoms associated with medical conditions such as kidney stone, renal failure or gout, doctors usually order the uric acid test to determine the levels of uric acid.

High levels of uric acid can aggravate the symptoms of gout. When the uric acid crystals get deposited in the joints, it causes pain, tenderness, swelling and inflammation in the joint. For the treatment one has to reduce the intake of foods rich in uric acid. Following a uric acid reduction diet may also help in lowering the levels of uric acid.

Cut down on the intake of foods such as red meat, organ meat, sardines, mackerel, herring, shrimp, lobster, tuna, scallops and certain vegetables such as mushrooms, asparagus, dried beans, cauliflower and spinach. Being high in the purine content, their consumption will worsen the condition. You must also keep yourself well-hydrated at all times. This will help in flushing out uric acid by way of urine. Making these dietary changes is very important for treating this condition.

Certain drugs might also be prescribed to lower the concentration of the uric acid. Those who are suffering from hypouricemia also need to take care. Since this is not a medical condition in itself and low uric acid symptoms are nothing but symptoms of other underlying medical conditions, you must get yourself medically examined. Sometimes a zinc or molybdenum deficiency might cause low uric acid levels, therefore, correcting such mineral deficiencies might also help. Sometimes the drugs used for hyperuricemia may also contribute to hypouricemia, therefore, uric acid levels must be regularly monitored using blood tests.
This was some information on hypouricemia. If your blood test results indicate low uric acid levels, you must get a thorough medical checkup.

Natural Uric Acid Reduction

Maintaining healthy uric acid levels through diet is definitely possible. To manage as well as to stay away from joint problems such as gout, it is necessary to follow a uric acid reduction diet. As aforementioned it is obtained from the breakdown of purines, and so it makes sense to avoid foods that contain high amount of purines. It is observed that protein rich foods are found to be a major source of purines. So, for uric acid reduction, one needs to minimize the intake of protein rich foods:

- Fish
- Poultry products
- Lean meat
- Eggs
- Nuts
- Yogurt
- Milk

Can vegetables be included in the list of foods for uric acid reduction? Certain vegetables are categorized under high purine foods and so their inclusion cannot be tolerated by patients suffering from high uric acid levels. Vegetables that are high in purines, and needs to be avoided are given below:

- Spinach
- Cauliflower
- Asparagus
- Mushrooms

Beverages like beer too can stimulate production of uric acid. Research has shown that consuming beer on a regular basis raises uric acid levels. To be precise, beer drinking predisposes a person to gout. So, those serious about uric acid reduction should not consume beer and other alcoholic beverages.

Foods that Promote Uric Acid Reduction

Gout patients would be glad to know that certain foods have been instrumental in bringing down elevated uric acid levels. According to experts, potassium rich foods (apricots, bananas) should form an integral part of uric acid reduction diet. Fruits like cherries too can contribute to lower high uric acid levels.

Avoiding purine rich foods is a natural way to reduce uric acid levels. Elevated uric acid levels can certainly be brought under control by eating the right food. Studies show that foods high in purines can worsen high uric acid problems such as gout. Joint inflammation in gouts can aggravate, if proper uric acid diet is not followed. Kidney problems associated with abnormally high levels of uric acid might progress to the advanced stage in case the patient doesn’t follow the recommended diet.

Uric Acid Reduction Medications

In order to lower high uric acid levels, the doctor may also prescribe certain medications. These medications are the mainstay of treatment for gouts as they reduce uric acid levels, which is the primary reason behind joint inflammation. Some of the common uric acid supplements are given below:

- Probenecid
  Popularly known as Benemid, this medication has been very effective to bring down high uric
acid levels in the blood. This medication helps to get rid of excess uric acid through urine. Probenecid is also used in the treatment of kidney stones, resulting from elevated uric acid levels. Its ability to reduce uric acid levels is helpful in preventing the recurrence of gouts.

Allopurinol
Uric acid reduction can also be achieved through intake of allopurinol. Also referred as Zyloprim, this medication disrupts the process of breakdown of purines into uric acid. As a result, purines taken from external sources (food) is no longer metabolized into uric acid. Specific enzymes are involved in the conversion of purines to uric acid. Allopurinol impairs the functionality of these enzymes, thus preventing them from carrying out their tasks. The reduced uric acid production helps to improve gout symptoms.

Uric Acid Reduction Supplements
Is it possible to lower uric acid levels through vitamin supplements? According to studies, vitamin C supplements promote reduction in uric acid levels. Elimination of uric acid through urine increases dramatically with intake of vitamin C supplements. However, a point to note that vitamin C supplements have to be taken in the right dosage to get the desired result.

Uric acid reduction treatment involves intake of foods as well as medicines that help to improve the condition of the patient. It is usually the combination of treatment (supplements and food) that works to relieve the symptoms associated with gout.

What Causes High Uric Acid
Several factors can play an important role in raising the concentration of uric acid in blood. Usually, the factors that either increase the production of uric acid or reduce its excretion in the urine can cause the level of uric acid to rise. In general, an increase in uric acid level can be associated with excessive intake of foods rich in purine, Lesch-Nyhan syndrome, excessive alcohol and caffeine consumption, Hodgkin's lymphoma, Non-Hodgkin's lymphoma, obesity, hypothyroidism, leukemia and certain medications like, diuretics, antihypersensitivity, aspirin and certain immune suppressing medications. Sometimes, high uric acid level can also be a genetic condition.

High Uric Acid Symptoms
Abnormally high level of uric acid in blood can cause certain health problems in some individuals. One of the most common health problems associated with high level of uric acid is gout. Gout is a disease characterized by the deposition of uric acid crystals in the joints, especially in the joints of the toes. It more commonly afflicts the big toe, and causes severe pain and inflammation. The affected joint becomes swollen, red, tender and warm to touch. These are the high uric acid symptoms associated with gout.

High uric acid level can also cause the formation of kidney stones. The excess uric acid present in the urine can get crystallized to form stones in the kidney. However, not all kidney stones are caused by high level of uric acid. But if it does, then it can cause pain in the back, lower abdomen and groin area, pain while urinating, frequent urge to urinate and blood in urine or hematuria. High level of uric acid may cause kidney failure as well. However, this is quite rare. If hyperuricemia causes renal failure, then it can adversely affect the removal of waste products from the body, which in turn can manifest in weakness, generalized swelling, lethargy and loss of appetite.

High Uric Acid Treatment
Most of the time, high level of uric acid can be managed or controlled with a few lifestyle or
dietary changes. Individuals with high uric acid levels should reduce the consumption of foods that contain purine. Examples of some foods high in uric acid or purine are, meat, especially red meat such as, beef and pork and organ meat like, liver and heart and seafood such as, sardines, mackerel, herring, trout, tuna, scallops, salmon, shrimp and lobster. Even vegetables like, cauliflower, asparagus, mushrooms and spinach along with wheat bran and dried beans contain high level of purine. While reducing the consumption of such foods, it is equally important to increase the intake of vitamin C and fluid. Drinking plenty of water throughout the day can prove immensely helpful in flushing out the excess uric acid from the body.

If high uric acid level is associated with an underlying health problem, then it can be treated by alleviating that underlying condition along with following a uric acid diet and the above mentioned lifestyle changes. If the underlying condition cannot be cured, then hyperuricemia is considered as a chronic problem. In such a situation, medications are used to manage the level of uric acid in the body. The more commonly used drugs for high level of uric acid or hyperuricemia are, probenecid, allopurinol, febuxostate and sulfinpyrazone.

So, this is a brief overview of high uric acid level, its causes, symptoms and treatment or management. Hope this article was helpful in providing some important information about this condition. To know more about hyperuricemia and its effective management, you can talk to your physician or health care provider. As far as the medications for lowering uric acid level is concerned, use them only after consulting your physician.

Uric acid crystals are a result of oxidation of purines in the body. Needle shaped sharp uric acid crystals are formed during the breakdown of purines. These uric acid crystals are then excreted through urine. However, in cases wherein the kidneys are unable to eliminate the uric acid crystals or if the production of uric acid crystals exceeds the normal levels of uric acid elimination by kidneys, then the uric acid tends to get deposited in the bloodstream. Accumulation of uric acid in urine or blood leads to formation of uric acid crystals. If the amount of uric acid increases
too much, then uric acid may get deposited in joints or between the tissues. This may trigger serious conditions like gout, Lesch-Nyhan syndrome, cardiovascular disease, diabetes, uric acid stone, metabolic syndrome and urolithiasis.

High uric acid level is clinically termed as hyperuricemia. This condition is most prevalent amongst alcoholics as well as high caffeine drinkers. Foods rich in purines are also responsible for causing the formation of uric acid crystals in the body. Also, some people are genetically predisposed to forming uric acid crystals in their body.

Uric Acid Crystals: Symptoms

Uric acid crystals in joints often cause severe unbearable pain. Pain in abdomen, back, side, groin and genitals is very common. These symptoms are similar to that of kidney stones. Besides, swelling, inflammation of the affected part is also common. Sometimes, the skin may peel off from the areas where uric acid crystal deposition takes place. Painful, frequent urination along with blood in urine is also one of the symptoms of uric acid crystals. Other symptoms of this condition include lethargy, chronic fatigue, shortness of breath, nausea, vomiting, etc. Higher levels of uric acid crystals also hamper kidney function resulting in electrolyte imbalance, poor water regulation and inability to perform the function of excretion properly.

Uric Acid Crystals: Treatment

Certain medications can be prescribed in order to dissolve uric acid crystals. However, uric acid diet is the only way to reverse the effects of uric acid crystals in the body. Cutting down on foods high in uric acid is the best way to control uric acid formation. However, if your uric acid levels are so high that they are bordering on gout levels, then it might make sense to completely avoid purine rich foods. Purines are mostly found in all protein rich foods. Hence, cutting down on purines would also cut down your supply of proteins, which could be unhealthy for your body. Hence, incorporate other protein substitutes in your diet before completely eliminating purine from your diet. Meats, seafood, alcohol, herring, mussels, scallops, caviar, baked products, sardines and shellfish should be eliminated from the diet. Similarly, avoid vegetables such as dried beans and peas, asparagus, legumes, mushrooms, spinach, kidney beans, lentils, lima beans, rhubarb, cauliflower, etc.

Drinking cherry juice and baking soda solution helps in relieving the symptoms of uric acid crystals. Drinking lime juice and taking vitamin C supplements may also dissolve uric acid crystals to some extent. Similarly, drinking plenty of water helps to flush out the uric acid from the body and also improves kidney function. Most important thing to remember while lowering uric acid levels is staying away from alcoholic beverages and any product with yeast in it.

Uric acid crystals can be detected under polarized light during a uric acid test. Tests are often conducted if the doctor suspects presence of uric acid crystals. In case you experience any unusual symptoms or unbearable pain, do not hesitate to
Uric acid is a waste byproduct of the metabolism of purines. This white, crystalline odorless compound is usually found in the urine and blood. Sometimes due to improper metabolism of proteins, excessive amounts of uric acid tend to get accumulated in the kidneys which can crystallize and form uric acid stones. Hyperuricosuria, or excess levels of uric acid in the body, can also lead to the formation of calcium stones. This condition is also known as uric acid urolithiasis. These uric acid crystals are one of the most common types of kidney stones. The calculus also settle down in the urinary bladder, ureter and the pelvic region. These stones also initiate the precipitation of calcium oxalate crystals. Kidney stones in men are more common than in women. Uric acid stones can also be formed as a result of chemotherapy or gout. Let us take a look at the symptoms, methods of treatment and preventive measures for uric acid stones.

Uric Acid Stones Symptoms

Normally kidney stones do not show any symptoms of their occurrence in the body. But if the individuals suffers from recurrent urinary tract infections or pain in the groin, then it may be an indication of the presence of uric acid stones. One of the main symptoms of kidney stones is severe pain in the region where the kidneys are located, which may radiate to the back and other parts of the body. The pain is also triggered even by slight movements. Other kidney stones symptoms include pain while urinating, traces of blood can be seen in the urine, the color of the urine will be abnormal like dark green or brownish yellow. Some individuals may also experience vomiting induced nausea and fever accompanied by chills.

Uric Acid Stones Treatment

Diagnosis is an important step to detect the presence of uric acid stones in the body. Though these stones are asymptomatic, their presence can be detected in the X rays and scan of the abdominal region. The doctor may also advice the individual to undergo urinalysis in order to observe the presence of red blood cells and acid crystals in the urine. Once the exact situation is diagnosed, then the patient may have to undergo treatment to relieve the pain and prevent further complications. The methods of treating kidney stones depend on the type of stones and the symptoms observed like hematuria (blood in the urine) and urine color. The doctor may administer treatment to ease the pain and relieve other symptoms. In case of severe symptoms, the patient may require hospitalization and fluids and medications to dissolve the uric acid stones and relieve the symptoms may have to be administered intravenously. Earlier, in case of a bigger stone, surgery would be required to remove it. But thanks to modern medicine, stones of any size can be removed using lithotripsy, which is a non invasive procedure.
Uric Acid Stones Diet

The first step towards uric acid stones prevention is to keep a check on the diet. Drinking plenty of water and other fluids is essential to prevent the formation of uric acid stones. Foods that are rich in uric acid like meat, sardines and sweet bread should be completely avoided if the individual is prone to kidney stones. Red wine is also a strict no-no for this condition. Kidney stones diet must consist of foods that are low in purine like yogurt, milk and buttermilk, etc., steamed vegetables, fresh fruit or vegetable juice and whole wheat tortilla. Tender coconut water is also considered to be an excellent means to prevent the formation of kidney stones.

A healthy diet and a routine checkup will prevent many kidney diseases. Hope you found this article on uric acid stones useful and informative.

5 Dimensions of Health

Good health is vital to every individual, but there is much more to good health, than just good dietary habits. There are five dimensions to good health, explore them, for a better and happier life.
Overall good health and wellness are inter-dependent on five dimensions, namely physical, intellectual, emotional, social and spiritual. These good health parameters have been set by the World Health Organization (WHO) in 1948. Our body and mind are tuned to send us signals for any nonfunctional activity, generally called symptoms. It's important to read and understand them in time, to ensure balance of mind, spirit and body.

**Physical:** Physical health refers to the state of the body; its compositions, development, functions and maintenance. Following are a few ways to ensure good physical health.
- Eat nutritious food, to keep the body and mind energized.
- Never skip meals or overeat.
- Water is essential for cleansing the body.
- Fitness through exercise will increase immunity and endurance levels of the body.
- Regular medical checkups can help in arresting an illness, in its early stages.
- Sleep at least for 7 uninterrupted hours daily.
- Avoid addictive substances.

**Intellectual:** This is a cognitive ability to develop skills and knowledge to enhance one's life.
- Our intellectual capacity helps to stimulate our creativity and insight in decision making.
- Setting realistic goals will go a long way in life planning.
- Explore every opportunity with an open mind.
- Be aware of the demands and expectations from you.
- A positive outlook, especially when dealing with conflicts.

**Emotional:** Our ability to accept and cope with our own and others feelings is defined as emotional well-being. Emotions contribute to almost all aspects of our life, at times, even setting course of actions. Symptoms of emotional problems; as hopelessness, depression, anxiety and even suicidal tendencies are not always easily detectable, but can lead to dire consequences. Awareness and acceptance of our strength and shortcoming, is essential for our emotional well-being.
- Ability to handle stress and seek help, if needed.
- Build strong communication networks among family, friends and peers.
Social: To build and maintain satisfying relationships, comes naturally to us, as we are social animals. Being socially accepted, is also connected to our emotional well-being. We should increase our ability to interact with people and their ideas. Accept and understand diverse cultural norms. Build networks among different kinds of people. Adopt a positive self image. Enhance your interpersonal communication skills.

Spiritual: Our good health is incomplete without being spiritually healthy. To seek meaning and purpose of life is termed as being spiritual. Spiritual health dimension, refers to our personal belief and value, our own acceptance or rejection of the creation. There are no prescribed ways, to attain spiritual well-being, it's more a matter of looking inwards, at our own depth of understanding, our existence and creation.

Life as we know is a puzzle; health dimensions are like separate pieces, that need to be fitted together to make meaning. Though we all seek a harmonious balance between the mind, body and spirit, to lead an optimal fulfilled life, its rarely attained in totality. Our own feelings of weakness and non-acceptance of life's events, causes much distress in our daily life. Little understanding of the roles these dimensions play, will perhaps lead us to what we seek the most viz. Health and Happiness.

Why is Health Important

Why is health important to us is a question which can be viewed from various perspectives. In this article we have highlighted various facts on why is it important to be healthy...
When we are talking of health, we are not just talking about good physical health but also about sound mental health. Good health can be described as the condition where both our body as well as our mind are functioning properly. The main causes behind ill health are various types of illnesses, improper diet, injury, mental stress, poor hygiene, unhealthy lifestyle, etc. Over the past few years, our attitude towards health has changed and we are unaware why is health important for all of us. Read more on healthy living.

Why is Health Important to us?

There are several advantages of a healthy life. Your body will be free from various forms of health problems and thus you will get a longer life. You can live a life without suffering from aches, pains and discomfort. You will be able to perform in every sphere of your life to the best of your ability. Apart from this, it makes you look good and attractive and you start feeling good about yourself! When you are healthy, you can lead a physically active life even after growing old. Your body will be able to heal faster the regular wear and tear associated with aging. In short, good health brings about a drastic improvement in the overall quality of your life.

Why is Health Important in the Workplace?

The importance of health in the workplace lies in the fact that it is related to the productivity of the employees. An organization should also give the prior importance to the health care of its employees through its policies. When the organization is showing interest in the well-being of its employees, they will also in turn feel more responsible and loyal towards the organization. It improves employee retention, reduces absenteeism and cuts down on company's health care costs.

On the other hand, as an employee, you should also take good care of your health, both in the workplace as well as at home. This will make you feel more energetic and you will be able to carry out both simple as well as strenuous tasks without pushing yourself too hard. When the physical and mental state is free from work pressures and mental stress, then you will be able to handle your daily chores at workplace with a positive attitude. You will feel motivated enough to finish off the task at hand and will be interested to work on more number of things. Your mind will be focusing more on the positives and will not be bothered much about the negatives. And at the end of the day, you can sleep well. Thus, you do not have to start a day with a body ache or joint pain or stomach upset. You do not have to apply for a medical leave too often and you will get your monthly salary at the end of the month without any deductions.

Why is Health Important for Children?

Kids' health is important for proper growth and development of their mind and body. They require enough energy to spend the entire day in school. They should be able to focus in the classroom and fully participate in the activities on the field. For this, they need proper nutrition which includes carbohydrates, proteins, calcium, minerals, etc. Today, most parents have a basic knowledge of food and health related issues. However, they often fail to understand why is health care important for their children. Regular health check up with a health care provider is a must for every children. This helps to learn from the experts whether the child's development in terms of height and weight is right or not. Other aspects of health that have to be monitored are their behavior, oral health and eye check up which are equally important. This will also prevent any health problems in future. Read more on staying healthy for kids.
Healthy Habits
Hope you have understood why health is important for every individual, young or old. Staying healthy has a huge impact on the performance and efficiency of every individual. Doing excellent work will help you to be a valuable member of a healthy society. We can maintain a healthy life if we follow a disciplined life. For this, we have to eat healthy foods, keep our body fit with regular exercises and stay away from unhealthy habits like smoking and heavy drinking. It is also essential to keep our mind healthy by nurturing right kind of thoughts and by proper stress management.

Top Seven Health Myths even Doctors Believe
Maybe those doctors are only using 10% of their brains, but researchers debunked seven of the top health myths that even physicians believe are true.

Repeat something often enough and soon it will seem to be true. So appears to be the case with many commonly held medical factoids that turned out to be false, according to researchers who released a study this week in the British Medical Journal.

Dr. Rachel Vreeman and Dr. Aaron Carroll, professors at the Indiana University School of Medicine were curious about facts they’d heard repeated by physicians to their patients, and wondered how many of them were actually myths.

They narrowed an extensive list down to seven medical "facts" which proved to have no basis in
science, and did research on each one:

1. **You need to drink eight glasses of water daily.** This recommendation apparently has no basis in scientific fact. A 1945 article made the statement that people should drink, on average, one milliliter of fluid for every calorie consumed. But the researchers found evidence that even if this were true, most of those fluid milliliters are consumed within food, or in other liquids, including milk, coffee, tea, etc.

2. **People only use about 10% of their brains.** The researchers could find no evidence supporting this claim, and numerous reports refuting it. Multiple studies have shown that at any given time, no one part of the brain is completely dormant. Sources attributing the claim to Albert Einstein could not be located.

3. **Fingernails and hair keep growing after death.** This creepy factoid has fascinated many a childhood campfire gathering, but is in fact not true. Growth of any bodily tissue requires an active process that simply cannot be carried out once an organism is no longer alive. The authors of the study quote forensic anthropologist William Maples: "It is a powerful, disturbing image, but it is pure moonshine. No such thing occurs."

4. **Once you start shaving, hair only grows back thicker and darker.** Apparently hogwash. It only looks thicker because the finer, tapered end of the hair has been removed, and newly emerging hair has not been exposed to sunlight and is therefore darker.

5. **Reading in dim light will wreck your eyes.** Never mind what your mother told you, this just isn't true, say the study doctors. Your eyes might feel temporarily dry and achy, but these effects stop once you stop reading in the dim light, and have no lasting effects.

6. **Eating turkey will make you sleepy.** While turkey does contain trace amounts of tryptophan, the "sleepy" amino acid, it doesn't have any more than most other similar foods, such as beef or chicken. Post-Thanksgiving napfests can be blamed instead on the fact that you simply overstuffed yourself and all the energy in your body has gone to try to digest the feast.

7. **Cell phones will interfere with medical equipment at hospitals.** While some studies showed a small percentage (4% or fewer) of incidents involving mobile phones interfering with medical equipment, most of those cases were when the phone was within one meter of the equipment. No serious malfunctions causing any kind of injury or death have ever been reported.

The researchers concluded their report by saying that they embarked on their study not to embarrass their fellow physicians, but to remind them all that they would be smart to always be on their toes and make sure that the information passed on to patients has a legitimate basis in fact.

The study's authors add that most people see their doctors as figures of authority, and that the research can help patients to be aware that even their doctors might sometimes not have all the necessary information at hand.

In other words, it never hurts to ask questions or to do a little fact-checking for yourself.

Now, if only someone will do a study proving that green beans are actually not good for you...

**The Importance of Health Ethics**
Health ethics pertain to the responsibility of an individual with respect to his own health and the community health. The depleting health in certain parts of the world is attributed to the unhealthy attitude rather than the actual ailments in existence.

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The health concerns such as excessive drinking, smoking or obesity demand a responsible action on the part of the governments around the world, which may result in restrictions on human freedom to some extent. Therein, comes our role of adhering to the ethical standards and following the rules laid down to nurture a healthy society. Initially people thought that government initiatives such as pasteurization of milk was an 'interference' in the public choices of food. The contention slowly faded away. Now, in the 21st century, there is a need to act more responsibly on the individual level to overcome the 'lifestyle' diseases. How far is a society willing to accept certain responsibility for public health is an ethical issue.

Understanding Health Ethics

Public health is a broad term and includes the efforts of a society to prevent any form of illness and improve the health of the populace. Health ethics play an important role in determining the effects of an initiative or a measure, in prevention of an illness. It focuses on inculcating healthful lifestyle in the society at large, than dealing with individual health issues. Medical ethics is a term related with health ethics which primarily deals with keeping track of growing biomedical technology, research and medical care. The term 'health' is a generic one, and includes both medicine and health concerns. Health ethics treat the issues of justice, equality and human rights as an integral part of health practices. It is important to keep in mind these
ideals while providing a health care service.

**Concerns of Health Ethics**

The practitioners of health services have a set of guiding principles which ensure certain standards and public trust in health care. The ethical code of conduct laid down, ascertains a patient's welfare. There are many situations in health care that have legal and social implications for both the medical practitioner and the patient. For example the confidentiality of a patient’s health records is the ethical responsibility of the physician handling the case. Another issue is the relevance of *euthanasia* or mercy killing. The question of 'freeing' a person from suffering is as much an issue of morality as it is of medicine. In these contexts, ethical judgment and a guiding framework to deal with the issues becomes very important.

The importance of health ethics is a very relative concept in case of many individuals. A lady was about to deliver a baby and medical complications required that blood transfusion be performed in order to save the mother. However, the lady was a strong adherent of some religious principle and had already stated, not to perform the transfusion even if that resulted in her death. Now, her husband gave the go ahead for the procedure and both the baby and the mother were saved. But, the mother filed a case against the concerned doctors, stating violation of her rights. Ethically, it may seem that saving her life was the right thing to do. But, the same can also be regarded as an infringement of the lady's rights, which makes it unethical.

Thus, the adherence to health ethics and their importance should be clearly laid down as a set of legal principles. Health is a community issue as much as an individual concern. Hence, a clear set of policies governing the importance of health ethics is highly essential to support healthy living in the 21st century.

**Gout and Alcohol**

Gout is a physical condition triggered due to the presence of excess uric acid in the body. The extra uric acid content forms crystals of urate in body tissues and joints. The condition worsens with alcohol abuse and the ingestion of fatty foods. The chronic joint inflammation and decreased kidney function greatly affects the quality of life...
What is Gout?

Gout is by far one of the most frequently recorded illnesses in modern history. The condition arises due to an inherited abnormality in uric acid levels. Purines are a part of the food components commonly ingested. They break down to form uric acid. However, if there is an abnormality in the body’s ability to handle this breakdown, excess secretion of uric acid results in painful arthritis, the development of kidney stones, kidney failure due to blockage of the kidney tubules with uric acid and the onslaught of hyperuricemia or elevated blood uric acid levels. Gout is a medical term that refers to a uric acid overload and the deposit of uric acid crystals and/or lumps in and around body joints and tissues.

Gout is characterized by rapid joint inflammation. There are a number of trigger factors held responsible for the precipitated uric acid crystal deposition in the synovial fluid and lining. However, among them, alcohol consumption is a leading factor. This does not relate to people who do indulge in the vice moderately or occasionally. Alcohol abuse has a direct impact on the body’s uric acid levels. Gout has been associated with lifestyle since the beginning. The onslaught of this 'disease of the kings' is triggered with the regular consumption of red meat, excessive salt and alcohol. The combination is lethal in the absence of sufficient physical exercise.

Gout and Alcohol:

Research reveals that indiscriminate alcohol consumption and abuse is directly linked to the development of gout. Beer is known to greatly increase the risk of developing gout. Alcohol consumption not only affects the production of uric acid, but also its flushing out from the body. Alcohol, especially beer, has purines that accumulate, triggering an increased production of uric acid. The intake of alcohol generates the need for snack consumption and it is this intake of crackers, cheese, salted peanuts and fatty snacks like chips, that results in a sedentary lifestyle. Gout is more common in men than it is in women. It is known to affect males post-puberty and women, after menopause.

Gout is a painful and disabling physical condition. The condition is characterized by a painful swelling in the joints. Shellfish and alcohol are known to be the two biggest ingested triggers of the condition. The increased uric acid levels result in larger deposits of monosodium urate crystals around joints that attract white blood cells. Gout is associated with physical conditions such as obesity, hypertension and diabetes; all conditions that are also associated with alcohol abuse. Consuming too much alcohol inhibits uric acid secretion, leading to a gout attack. Dietary accompaniments, usually indulged alongside alcohol consumption, like protein-rich red meats and shellfish trigger the onset of gout. All types of alcoholic beverages should be avoided to keep gout at bay. Foods high in purine content that needs to be avoided, especially alongside alcohol consumption, include:

- Organ meats like brain, liver, and kidney.
- Preserved fish like herring and mackerel.
- Shellfish like anchovies, mussels and scallops.
- Meats like bacon, turkey and veal.

Gout Treatment:

The treatment options available to address the onslaught of gout include:

- Non-steroidal anti-inflammatory drugs.
- Cold compresses.
Lifestyle changes with rigid dietary restrictions and a complete cessation of alcohol consumption. Gradual weight loss. The development of gout arthritis needs to be addressed immediately. It is important to bring the symptoms to the attention of a rheumatologist and adhere to the dietary restrictions within the generated diet plan. Gout demands some important lifestyle changes that once incorporated, usher in relief from the painful condition. Alcohol consumption, especially beer, needs to be ruled out completely.

**High Fructose Corn Syrup Not so Sweet for Your Health**

This very common sweetener is turning out to be an unhealthy addition to your diet.

By Anastacia Mott Austin

Try going one entire day without consuming something that contains high fructose corn syrup.

You can't do it.

It's in everything. Breakfast cereal, bread, fruit juice, soda, cookies, crackers, frozen food, salad dressing, pasta, canned goods, yogurt, sports drinks.

Sweeter and cheaper to produce than sugar, corn syrup also extends the shelf life of foods. Originally created in the late 1970s, it is processed by milling cornstarch, then combining corn syrups that have been enzymatically processed to boost their fructose levels with regular corn syrup. It has gained popularity in recent years, with a 1,000 percent increase in its consumption between the years of 1970-1990, and is now used in virtually every form of processed food.

Yet a recent study released by the aptly named American Chemical Society has shown that foods containing high-fructose corn syrup have very high levels of chemicals called reactive carbonyls. Reactive carbonyls are found at higher levels in the blood of individuals who have diabetes, and can cause complications from the disease.

The compounds are so named because they react with unbound glucose and fructose molecules and cause tissue damage, a side effect of uncontrolled diabetes.

Chi-Tang Ho, lead author of the study and food science professor at Rutgers University, tested 11 different brands of soda containing high-fructose corn syrup and found "astonishingly high" levels of reactive carbonyls.
In fact, the amount of carbonyls found in a single can of soda was five times the level found in the blood of a diabetic.

An increased chance of diabetes isn't the only trouble with high-fructose corn syrup. Previous studies have linked the sweetener with elevated heart disease risk, elevated cholesterol, and blood clotting disorders. HFGCS has also been shown to interfere with certain birth control pills, elevating insulin levels in susceptible women. A recent study linked HFCS with obesity.

The study was conducted with two groups of volunteers who consumed either three glucose or three fructose laden drinks per day over the course of 10 weeks. At the completion of the study, performed by Dr. Peter Havel and Kimber Stanhope, all the volunteers had gained weight. But the fructose group had gained more abdominal fat and had higher liver triglyceride levels. "When you provide a high-fructose diet to the liver, it tends to process much of that fructose into [fats] which is why you get high triglyceride levels," said Stanhope to reporters. "The triglyceride response to fructose is likely to turn out to be the greater health concern."

Much of the cheaply produced corn used in HFCS is genetically modified, and conflicts have arisen when manufacturers of foods containing HFCS try to pass off their products as "all-natural."

Jeff Cronin, a representative for the Center for Science in the Public Interest, told reporters, "When you hear corn syrup, you think you squeeze corn and get syrup. But it's not even close to being natural."

The CSPI has sued the makers of food products labeled as "natural" which contain HFCS. Kraft Foods had labeled their Capri Sun drinks as such, even though they contained the ingredient. After the lawsuit, the labeling was changed.

What's a health-conscious consumer to do? Experts recommend avoiding processed foods as much as possible, as well as checking labels closely, as so many foods contain HFCS.

It's also important for parents to be aware of what's going into their children's mouths. Avoiding sodas seems like an easy choice, but HFCS is also found in teething biscuits, applesauce, and supposedly "natural" fruit drinks.

When in doubt, check the label. Both adults and children can learn to reshape their eating habits to include diets higher in fruits and vegetables and lower in all sugars, including HFCS.

**Natural Remedies for Gout**

Gout, historically known as the 'rich man's disease' or 'disease of kings', is a disease caused by the presence of high levels of uric acid in the bloodstream. This uric acid gets deposited in the joints and results in pain, inflammation and swelling of the body joints. Besides its causes, let's talk about the natural remedies for gout...
Gout is a type of arthritis that has been identified for over 2000 years. It is a type of inflammation of the joints, accompanied by severe joint pain and swelling. Gout generally affects the big toe, most times suddenly and the affected person experiences severe pain. However, gout can also affect the ears, ankles, elbows, knees and wrists.

When the level of uric acid deposition in the body exceeds the normal level, then this condition called gout is caused. Uric acid (natural waste in the human body) gets deposited in the joints of the body causing them to swell. This condition is seen commonly in middle-aged men and also in women after menopause.

Causes of Gout

Uric acid, which is the end product of the body’s chemical processes is removed by the kidneys and discarded from the blood and body via urine. However, in those suffering from gout, the amount of uric acid in the blood is high because of more uric acid formation or low amounts of uric acid being discarded by the kidneys through urine. Uric acid is usually found dissolved in the blood. However, when their levels increase in the blood, uric acid crystals or needles are formed which then get deposited in the different joints, thereby causing the pain, inflammation and swelling.

Natural Remedies for Gout
This painful disease can be treated at home itself with the help of some simple and effective natural remedies. Some of the natural remedies to treat gout are:

**Cherry, Apple and Banana Treatment**
What better way to counter pain than with sweet-sour red cherries. This remedy is an old and effective gout remedy to reduce uric acid levels in the body. Vitamin C helps eliminating the uric acid, and since cherries are rich in Vitamin C, they are helpful in treating gout. Consumption of 10-15 cherries a day provides relief from recurrent attacks of gout. Drinking a glass of cherry juice is also very effective.

The malic acid present in the apple is known to neutralize the uric acid and thereby provide relief to a gout sufferer. Thus, it is advisable to eat one apple after every meal. Besides apples, even bananas are quite effective. The sufferer is advised to take 8-9 bananas a day, continuously for a period of 4 days. This will definitely help in providing relief.

**Lemon Treatment**
Lemon is another fruit which is rich in Vitamin C, and it not only helps cure sore joints but also strengthens the body’s connective tissues. Squeeze the juice of half a lemon in a glass of water and have it thrice a day: morning, noon and night. The citric acid present in the lemon will dissolve the uric acid crystals and reduce their deposition in the joints.

Besides lemon juice, another form of lemon treatment is to take 10-15 washed lemons and have them ground (without seeds but with the skin). Add around 2 pounds of honey to the ground lemon and refrigerate the mixture. Have one spoon of this honey-lemon mix everyday before every meal.

**Vegetable Juice Treatment**
Consumption of carrot juice daily is very effective in treating gout. Prepare a combination of vegetable juices, such as - 300ml carrot juice, 100ml beetroot juice and 100ml cucumber juice. This 500ml juice mixture should be had everyday. The juice of French beans is also quite beneficial. Drinking half a cup of this juice for a period of one month can help treat gout.

**Raw Fish Therapy**
This therapy is quite effective, and is just a 10-day long therapy with the assurance that the pain will go away. Buy 5 pounds of raw fish fillets and divide the fish fillets into 5 equal parts. Put these in plastic bags and freeze them. Take one bag each night and defrost it. Place your leg into the bag, ensuring that the fish fillet is placed at the spot where your leg is hurting the most. Put a sock over the plastic bag and bind the plastic and sock to your feet with a band. Leave the fish bag on your feet for the night. The next morning undo the bag and wash your feet with warm water. Continue this treatment for the next 9 days.

**Charcoal Therapy**
Take a basin and mix half cup of charcoal powder to a little water until a paste is formed. Place the aching foot in the basin and pour enough water to cover the foot completely. Allow your foot to remain in the charcoal bath for 30-50 minutes. You will definitely get relief from the pain.

**Epsom Salt Therapy**
If the big toe is affected, then Epsom salt therapy can help. Epsom salt contains magnesium, which is beneficial to remove the toxins, waste materials and heavy metals from the blood. Soaking your feet in a tub of (250-500gm) Epsom salts will bring relief from gout pain. You could even have an Epsom salt bath by adding 2 cups of Epsom salt into the bathtub while the warm water fills. These Epsom salt baths can be taken thrice a week.
Besides the above mentioned remedies, exercise is also another effective form of gout treatment. Exercises nourish the cartilage of the joints, strengthens them and also helps the body to get rid of body waste. Gout is a painful disease, however, you can control its severity by resorting to various natural remedies such as the ones mentioned above. But leaving gout untreated can lead to various other health problems such as joint deformation, high blood pressure, kidney failure and so on. It is always advisable to consult your family physician or gout specialist before experimenting any gout treatment.

Gout can be defined as a type of arthritis wherein uric acid and its salts are deposited in certain joints due to which there is inflammation of the great toe and feet. As a result of this condition people can suffer from problems like arthritis and disabilities of bones. Gout symptoms are seen when there is swelling in bone joints and restriction in movement due to the pain caused by this swelling. The pain in such a condition is unbearable but it can be treated. There are two types of gout with respect to their severity viz. acute; which is a less serious state and commonly affect one single joint. Chronic gout is when the uric acid deposition causes complications like arthritis thus affecting multiple joints. Let's take a look at how treatment differs for both forms of gout.

**Acute Gout Medications**
Acute gout is the primary stage of uric acid deposition and it can be treated easily as it is not that serious. Here are some of the widely used gout medications for acute gout.

- **Corticosteroids**
  Corticosteroids are one of the best gout medications. Steroids like triamcinolone, prednisone and prednisolone are injected directly into the joints to relieve pain as these are mainly painkillers. However, because of the many side effects of steroids, they are always a second choice while treating acute gout.

- **Colchicine**
  Colchicine is also one of the painkillers used to reduce the joint pains. It is one of the oldest gout medications to be used, but only for those people who can tolerate its side effects.

- **Non-steroidal Anti-Inflammatory Drugs (NSAIDs)**
  They are the most preferred and effective treatment considered for acute gout. Some of them like oxaprozin (Daypro), ibuprofen (Motrin), indomethacin (Indocin), etc. are the most widely used NSAIDs. These drugs are called anti-inflammatory because they block prostaglandins which dilate blood vessels and cause inflammation. They can be consumed by the patient three to four times a day. Read more on acute gout treatment.

**Chronic Gout Medications**
This is a much severe stage of gout as it can lead to further complications like arthritis. These drugs can reduce the uric acid levels and also prevent acute gout attacks.

- **Uricosuric Agents**
  Drugs like probenecid or sulfinpyrazone help the kidneys release extra uric acid formed by the
body. Patients who cannot excrete enough uric acid from their body need such agents to get rid of it.

**Xanthine Oxidase Inhibitors**
Allopurinol reduces the amount of uric acid produced by the body and is taken by patients who produce excessive amounts of uric acid.

**Gout Medication Over the Counter**
Some over the counter drugs advised by physicians are listed below:
- NSAIDs like Percocet, Arthrotec and Celebrex, ibuprofen and Naproxen.
- Analgesics such as TENS pain relief machines.
- Losartans such as Hyzzar and Cozzar, used for low uric acid levels.
- Probenecid, also called Probalan or Benemid is used to eliminate uric acid.
- Vitamins like Vitamin C (500 mg) and supplements like bromelain are also used to reduce uric acid levels and act as anti-inflammatory drugs to relieve from pain.

**Gout Medication Side Effects**
Along with their healing abilities, these drugs have their own side effects which are mentioned below:
- When oral steroids such as prednisone, more than 10 mg, is mixed with corticosteroids there are chances of gastrointestinal bleeding.
- NSAIDs can cause repetitive ulcers if a patient already suffers from them.
- Alcohol with NSAIDs can cause ulcers, liver toxicity and gastrointestinal bleeding.
- Some anti-coagulants such as coumadin or some mixed with NSAIDs leads to stomach bleeding as well.
- Other side effects of gout medication are nausea, diarrhea, breathing difficulty, swelling tongue, lips and face, muscle cramps, indigestion.
- Headache, rapid weight loss due to low appetite, yellowing skin and eyes, decreased hearing and ringing in the ears, tingling sensation, numbness and dizziness is also very common.
- Blood in urine and vomit, dark and bloody stools are some of the very serious side effects seen in gout medication.
- Injection of corticosteroids can lead to weak cartilages and deteriorating joints.
- Colchicine side effects include purpura (discoloration due to bleeding under the skin), myopathy (dis-function of various muscles), azoospermia (absence of sperm), aplastic anemia, thrombocytopenia (reduction in platelet production).

Gout medication is easily available and also effective, so don't hesitate to use these but before you do, consult your doctor and then use, only prescribed over the counter drugs.

**What is Gout**
Gout is the result of high uric acid content in the bloodstream. Uric acid or the crystals of monosodium urate gets deposited on the joint cartilages, tissues and tendons, sparking the onslaught of acute arthritis and eventually chronic gouty arthritis...
Gout is a result of prolonged, untreated and high uric acid level in the bloodstream. The condition is also referred to as the 'Disease of Kings' or the 'Rich Man's Disease'. The epithets are the result of research that reveals gout to be part and parcel of affluent societies, rich in protein and fat diet and alcohol. However, it is not rare to observe the condition among the poorer classes, who indulge in regular alcohol abuse, worsened by insufficient food intake. The onslaught of gout is characterized by an excruciating joint pain. The pain is usually unexpected and accompanied by swelling, stiffness and soreness.

The condition is most observed in the toes of men, but also affects women and other body parts or joints as well. It is accompanied by fever, intense joint pain and inflammation of the tissues, in and around the affected joint. Gout attacks the big toe, heel, ankle, instep, wrist, knee, fingers, elbow and/or the spine. There have been cases where the condition has arisen out of immobility caused to joints due to a previous injury. Similarly, hyperuricemia patients also develop tophi or uric acid crystal deposits in tissues such as observed in the helix of the ear. Elevated levels of uric acid in the urine is indicative of the accumulation of uric acid crystals in the kidneys or bladder. If left untreated, the condition could culminate in uric acid kidney stones.
What Causes Gout?

Gout is a medical condition that arises when crystals of uric acid precipitate on the articular cartilages of body joints. The accumulation is also observed on tendons and surrounding tissue. Blood serum comprises uric acid as a vital component; however, in the case of hyperuricemia or hypouricemia, the elevated or lower levels of uric acid leads to the onslaught of gout. The precipitation of uric acid is also observed in the case of low blood pH, a condition medically referred to as acidosis. Purine metabolism causes the natural excretion of uric acid in the urine. During the course of a normal cellular turnover, purines are generated. They can also be ingested as part of the daily diet. It helps a lot to incorporate low purine diet tips while generating a diet plan to treat gout.

In the case of primary gout, the high levels of uric acid in the blood, that is the result of the intake of protein-rich foods that cause gout, alcohol and/or hereditary factors causes obesity and exposure to an increased risk of diabetes, hypertension and heart disease. Primary gout is also observed as the outcome of health conditions such as those that arise out of lead poisoning and renal failure. On the other hand, secondary gout is a complication that arises from other medical conditions like metabolic syndrome and blood cancer or leukemia. Gout has been identified as a comorbidity condition of polycythaemia, renal disorder, obesity, diabetes, high blood pressure and hemolytic anemia. Gout also arises out of organ transplant.

The diagnosis of the condition involves microscopic analysis of uric acid crystals, aspiration of synovial fluid, haemogram to define blood count, thyroid function tests, analysis of the erythrocyte sedimentation rate and/or ultrasound imaging. The gout treatment options adopted are primarily to manage symptoms, prevent severe attacks and lower the serum uric acid level. Non-steroidal anti-inflammatory drugs (NSAID), colchicine and glucocorticoids and joint injections help to manage symptoms of gout. In order to prevent the onset of acute attacks or reduce the severity of prevalent joint pain attacks diclofenac, etoricoxib, ketoprofen and/or sulindac and similar NSAIDs are prescribed. The onset of gout can be effectively prevented with the help of medication, a low-fat and low-protein diet plan, reduced intake of purines and heat therapy. The condition is treated with the help of drugs such as xanthine oxidase inhibitors and uricosurics and/or total parenteral nutrition within a dedicated gout diet.

Gout has lived up to its reputation for being the 'Rich Man's Disease' by enlisting famous sufferers such as Nostradamus, Sir Isaac Newton, Thomas Jefferson, Benjamin Franklin and Mel Brooks.

Acute Gout Treatment

Acute gout is the result of the excess of uric acid formation on the joints. This results in excruciating pain and inflammation of the joints. The appropriate acute gout treatment should be a combination of medications and natural remedies for gout cure.
Caused by the elevated levels of uric acid in the body, acute gout manifests itself in acute inflammatory attacks of the joints. This is usually the result of the formation of uric acid crystals in the body which result in the inflammation and swelling of the joints. Before we can look at the acute gout treatments, let us look at some of the primary causes for gout formation.

**Acute Gout Causes**

High levels of uric acid in the body, also referred to as hyperuricemia, is the primary cause of acute gout in people. The excess uric acid levels in the body can be related to a range of factors such as a sedentary lifestyle, a diet consisting of alcohol, sugar, seafood, meat and even obesity. Medical conditions such as diabetes, hypertension, renal disorders and sickle cell anemia can result in gout as well. Leukemia, renal failure and metabolic syndrome are some of the common causes for acute gout. Certain medications such as hydrochlorothiazide are known to be the cause of acute gout. Read more on gout causes, symptoms, and treatments.

**Treatment of Acute Gout**

For treating acute gouty arthritis, the doctor may recommend certain medications. This is based on the health of the individual and his/her preferences. There are essentially two types of medications for treating gout. They are classified under reliever and preventative medications. While NSAIDs and Colchicine are some of the common reliever medications for treating acute gout, preventative medications lower the levels of uric acid in the body and prevent the disease in
the long run. The medications for treating gout include:

**Non-steroidal anti-inflammatory drugs (NSAIDs):** To reduce the swelling and the intense pain associated with gout, high doses of NSAIDs may be prescribed by the doctor. Once the gout is cured, lower doses are prescribed to prevent future attacks. The common over-the-counter NSAIDs include ibuprofen such as Motrin and Advil and naproxen such as Aleve. The acute cases of gout may require stronger doses of NSAIDs such as Indocin. Please keep in mind that NSAIDs may cause bleeding, ulcers and stomach pain. Pregnant women may want to consult their doctors before taking any of the over the counter NSAIDs. More on [gout pain relief](#).

**Colchicine:** Although NSAIDs continue to remain the preferred choice for the treatment of acute gout, in certain cases colchicine, a type of pain reliever that effectively reduces gout pain may be recommended by the doctor. Remember that colchicine may result in side effects such as vomiting, nausea and diarrhea. More on [colchicine side effects](#).

**Corticosteroids:** In case the NSAIDs and colchicine fail to treat the gout, corticosteroids such as prednisone may be used as a treatment for acute gout. The steroids can either be directly injected into the inflamed joints or taken in a pill form. The common side effects include poor wound healing, decreased immunity and thinning bones.

**Preventive Gout Medications:** Medications which reduce the uric acid formation in the body are known as preventive drugs for gout. Allopurinol, febuxostat (Uloric), and probenecid are some of the most common preventive medications that are used for eliminating the excess uric acid levels in the body. It is important to keep in mind that allopurinol can result in side effects like stomach pain, headache, diarrhea and rash. In this case, stop the use of the drugs and consult a doctor immediately. More on [allopurinol for gout treatment](#).

**Lifestyle and Diet Changes:** In addition to these methods of acute gout treatment, there are certain changes in lifestyle and diet that can help prevent a gout attack. To treat gout naturally, avoid a diet which contains foods rich in purines. This [gout diet](#) inhibits the uric acid formation after the metabolism of the food. The common purine rich foods include fish, seafood, yeast and yeast extracts, peas, beans, lentils, asparagus and mushrooms and meat/meat extracts. Include at least six to eight glasses of water each day and avoid alcohol. Read more on [purine free diet](#).

Read more on:
- [Gout Natural Remedies](#)
- [Home Remedies for Gout](#)

Gout usually attacks the joints and causes excruciating and throbbing pain. The joints usually are quite tender and inflamed. The acute gout cases can lead to joint deformities and loss of motion in the joints. Proper and timely acute gout treatment is necessary, especially when you have had several attacks in the year. This also enables a patient to avoid the acute case of gout becoming a chronic one.

**Diagnose Yourself**

When you attempt to diagnose yourself, you are putting your health at a big risk, because you can never be too sure about what it is exactly that has affected you. There are certain ways in which it can be done, but there are also several dangers associated with it.
There are different reasons why you may want to diagnose and treat yourself. Sometimes it may be an embarrassing health problem that you are not comfortable confronting, or perhaps the lack of finances that may prevent you from visiting a professional to find the root cause of the problem. Another reason why you tend to diagnose yourself is because you may fear visiting a doctor, and may fear discovering something that may be more serious than you can imagine. Whatever the reasons, you must know that diagnosing yourself can do you more harm than good. In some cases, you may be right, but in some, what you may assume is the problem, may actually be something else. This is particularly true of those who resort to the internet for all their health information, as there is a lot of contradictory information that is present online. In any case, if you are looking for information on how to diagnose yourself, here's a very basic way to diagnose minor conditions.

**How to Diagnose Yourself**

Before you read this method of diagnosing yourself, you must understand that it is not a sure shot way of putting a finger on the problem. Secondly, these methods might work for smaller conditions such as allergy breakouts. It cannot be used to diagnose more serious health conditions. However, if you still think it is something you need to do, here are the basic rules that are involved in diagnosing yourself.

**Understand the Symptoms:** Check for your normal vital signs before you attempt to diagnose yourself with symptoms of the problem you think you may be suffering from. This could take some time. For instance, if you suddenly have an allergy break out, you have to take time to understand the triggers of the symptoms. What is it that is causing an allergy? Is it food, or something you are exposed to? This is going to take a couple of days to understand. This will probably help you come up with an answer to your problem.

**Understand Family History:** In some cases, a gene that runs in the family may be the reason why you are facing a particular problem. For instance, a condition such as a back problem may be one that your mother or father's side is prone to. This however, does not mean that the condition cannot be controlled. Though you may be prone to it, you can definitely reduce the intensity with which it affects you.
Diagnosing yourself will take some time. You must diligently maintain a diary and note the changes that are taking place as and when you are trying to treat it. This will help you get to the bottom of the problem.

The Dangers of Diagnosing Yourself

As mentioned before, this is not a sure shot way of diagnosing yourself. In many cases, what you consider to be a small problem may be a symptom of a bigger problem. For instance, a headache could be a symptom of a condition of the brain, mild pain in the left arm may be the symptom of a heart condition or heart disease, and a rash on the skin may also be a symptom of the development of skin cancer. The point here is not to scare you, but to make you realize the potential dangers of diagnosing yourself, because you may tend to overlook the seriousness of the condition.

When you ignore certain symptoms, or take medication to eliminate them, you are not treating the root cause of the problem; you are just eliminating the problem temporarily. This problem can further go ahead and become severe, and if you don't prevent it, curing it may become difficult. For instance, one of the common symptoms of diabetes is tiredness and exhaustion. When you diagnose yourself, you may assume that the exhaustion is from not getting enough sleep, not eating right, stress, etc. You will try to correct all of these, but you are not aware of the fact that you 'may' be diabetic. This will cause the condition to worsen, and diabetes has the ability of slowly affecting all other organs of the body such as the eyes, the kidneys, the brain, and several other body parts. Though a lot of websites enable you to diagnose yourself online, it should be avoided for the reasons mentioned here.

It is now up to you to keep these considerations in mind when you try to diagnose yourself. In any case, getting a professional consultation is extremely essential, so that relevant tests can be conducted and the actual condition identified. Do not take your health lightly. It is only good health that enables you to enjoy the little things in life.

Carbon Dioxide in Blood

The importance of oxygen in the bloodstream is well-known, however, very few know about the importance of adequate carbon dioxide in the bloodstream. High or low carbon dioxide in blood can lead to adverse effects on the body.
Carbon dioxide (CO₂) plays an important role in the human body. It is a waste product of cellular metabolism, exhaled by the lungs at the same time that oxygen is inhaled. This waste product is involved in the transportation of oxygen from the blood, to the cells of the body. CO₂ helps dilate the smooth muscle tissues and helps regulate the cardiovascular system. CO₂ gets converted to carbonic acid, thereby becoming a primary regulator of the alkaline/acid balance of the body. Moreover, CO₂ plays a role in the proper functioning of the digestive system. Thus, carbon dioxide in blood levels plays a very important role in the body. The normal concentration of CO₂ in the bloodstream is 40 mm of Hg.

High Carbon Dioxide in Blood (Hypercapnia)

When the level of CO₂ goes beyond 45 mm of Hg in the arterial bloodstream, the condition is called hypercapnia (hypercarbia). The levels of CO₂ in the body increase due to various factors such as hypoventilation, diminished consciousness, drug overdose, asthma, seizures or lung diseases. Hypoventilation is a condition that occurs when the ventilation is inadequate to perform the necessary gaseous exchange. The lack of adequate ventilation results in increased concentration of CO₂ in the blood.

Causes of Hypercapnia

• Inhaling excess CO₂

Hypercapnia can also be caused when the body is exposed to environment comprising high concentrations of CO₂, such as volcanic regions. Inhalation of exhaled CO₂-rich air can also lead
to high CO₂ levels in the blood.

• Sleep Apnea
Sleep apnea is a condition in which the normal breathing pattern of a person is disturbed. The asleep person stops breathing, thereby stopping the intake of fresh oxygen supply. Moreover, carbon dioxide from the lungs is not exhaled. This automatically causes the oxygen levels in the blood to reduce and CO₂ levels to increase, thereby resulting in hypercapnia.

• Chronic Obstructive Pulmonary Disorder (COPD)
This is a medical condition in which the person finds difficulty in breathing. When one inhales, air reaches the alveoli of the lungs and gaseous exchange takes place. However, in people with COPD, less air travels in and out of the body due to either damaged alveoli, inflamed alveoli or alveoli that have lost their elasticity. This results in less intake of oxygen and inability to expel carbon dioxide completely.

• Snorkeling
Sometimes, inadequate ventilation occurs in divers, resulting in an incomplete expulsion of CO₂ from the blood, while exhaling. This happens because divers breathe into a full face diving mask, diving helmet or long snorkel, which fails to permit complete passage of CO₂ into the environment. This results in inhalation of exhaled CO₂ rich air. Since the diver is constantly exercising, the metabolic activity continues to increase, thereby producing more CO₂. The final result is hypercapnia.

**Symptoms of Hypercapnia**
Some of the mild symptoms of this condition are lethargy, irritability, confusion and headaches. The other signs of early hypercapnia encompass:
- Flushed skin
- Extra systoles
- Increased blood pressure
- Reduced neural activity
- Muscle twitching
- Loss of consciousness
- Convulsions

**Hypercapnia Treatment**
The basic first aid, one can give a person suffering from high carbon dioxide levels in the blood is by quickly taking the person away from the carbon dioxide source. Then oxygen will be administered to the patient, to elevate oxygen levels in the blood. Most patients recover when the level of oxygen in the arterial blood increases.

**Low Carbon Dioxide in Blood (Hypocapnia)**
While most of us are of the school of thought that oxygen is the useful gas, while CO₂ is the waste our body expels, the latter is important as well. Even slight dip in the concentration of CO₂ levels in the arterial blood can affect the respiratory pattern of the body. Also known as hypocarbia, hypocapnia refers to the condition of reduced CO₂ levels in the arterial bloodstream and is the opposite condition of hypercapnia. This condition is sometimes aroused by the treatment of medical emergencies, such as hyperkalemia, high blood pressure (hypertension), etc. On the other hand, hypocapnia can also be self induced, by hyperventilation.

**Causes of Hypocapnia**
The state of breathing faster and deeper than necessary is termed as hyperventilation. Such a condition occurs during physical exercises, wherein, the person breathes through the mouth...
while exercising. This over-breathing results in light-headedness and several other undesirable symptoms, that are associated with panic attacks. Hyperventilation reduces the CO\textsubscript{2} levels in the bloodstream, below the normal 40 mm of Hg, thereby resulting in an increased level of pH value. Since CO\textsubscript{2} increases the acidity in the blood, low CO\textsubscript{2} level leads to increased alkalinity in the blood. This, in turn, leads to the constriction of blood vessels that supply blood to the brain. Moreover, transport of essential electrolytes for the functioning of the nervous system is also reduced. Low level of CO\textsubscript{2} in the bloodstream, can cause cerebral vasoconstriction, thereby resulting in cerebral hypoxia.

**Symptoms of Hypercapnia**
Mild symptoms pertaining to this condition are constipation, nasal blockage, constant coughing, etc. The other symptoms are:
- Visual disturbances
- Anxiety
- Transient dizziness in the person
- Muscle cramps
- Blackouts
- Increase in asthma severity

**Hypocapnia Treatment**
If not treated on time, hypocapnia can conduce to lung damage and various lung diseases. Patients are given training on breathing, so as to avoid such a problem in the future.

Most of the CO\textsubscript{2} content in the body is in the form of bicarbonate. Thus, when laboratory tests are conducted to check the CO\textsubscript{2} level in the blood, it is actually measuring the blood bicarbonate level. The level of carbon dioxide in the blood has to be around 40 mm of Hg, for the proper functioning of the body. Deviations in the amount of carbon dioxide in blood can lead to dizziness, respiratory and cardiac arrest and even death

**Average Height of a Woman**
Height of an individual is influenced by several factors. This article offers some information about average height of a woman in different countries.
Height is the length of an individual, measured from foot to head. Good height not only plays a vital role in building an impressive personality, but also indicates a sound growth of an individual. During the child development period, the overall health of the child is determined by her height and weight. Normal height and weight indicate good development. Thus, in medical diagnosis, height is of immense importance. However, height cannot be the sole determining factor of a person's health, as there are several factors which affect the height of an individual. In human beings, women are naturally shorter than men. This is true irrespective of the ethnicity or geographic location. Before we delve into the number game, let's try to find out what are the factors that affects the average height of a woman.

Factors Affecting Average Height for Women

Ethnicity
People belonging to particular ethnic groups inherit most of the traits of that ethnic group. Likewise, women of African-American origin are taller than women of other ethnicities. Similarly, North European women are taller than those from rest of the Europe. Asian women especially Chinese, Japanese are shorter than other women in the world.

Genetic Composition
Heredity plays a very important role in determining the height of an individual. If you have tall parents, then you are most likely to inherit their height. Similarly, your grandparents' height also matter a lot when you analyze the genetic composition and its effects on the human height.
Nutrition
Nutrition of women is a major issue of concern, especially among underdeveloped nations. In the absence of proper nutrition, women in these countries report a stunted growth. Thus, your nutrition also plays a pivotal role in determining your height.

Average Height of a Woman

Average Height of a Woman in the US
As per the figures published by the National Center for Health Statistics, the average height for an adult female in the United States is about 63.8 inches or 5 feet 3.8 inches, which comes to about 164 cms. North American women are a tad taller with an average height of about 5 feet 4.6 inches. This is for adult females in the age group of 20 to 29.

Average Height of a Woman in Canada
At 5 feet 3.4 inches, Canadian women are only a few centimeters shorter than American women. When expressed in centimeters, this comes to around 161 cms.

Average Height of a Woman in India
Indian women, though taller in the continent are shorter by American-European standards. An average Indian women measure about 5 feet 1 - 2 inches, which is the maximum in the continent of Asia.

Average Height for Women Worldwide

<table>
<thead>
<tr>
<th>Country/Region</th>
<th>Average Female Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>5ft 0.8''</td>
</tr>
<tr>
<td>Japan</td>
<td>5ft 1.6''</td>
</tr>
<tr>
<td>Germany</td>
<td>5ft 4.9''</td>
</tr>
<tr>
<td>France</td>
<td>5ft 3.7''</td>
</tr>
<tr>
<td>Iran</td>
<td>5ft 3''</td>
</tr>
<tr>
<td>Iraq</td>
<td>5ft 1.3''</td>
</tr>
<tr>
<td>Italy</td>
<td>5ft 4.2''</td>
</tr>
</tbody>
</table>
Australia: 5ft 4.5"
Belgium: 5ft 4.3"
South Africa: 5ft 2.5"
Sweden: 5ft 5.7"
Netherlands: 5ft 6.4"
New Zealand: 5ft 5"
England: 5ft 4.4"

Read more on:
Correct Weight for Height
Ideal weight for Height
Average Height of a Man

The average height of a woman changes every 2 - 3 decades. An increasing trend in the height has been reported so far. According to the research done by National Center for Health Statistics, the average height of an American female has rose from 5 ft 3" in 1960 to 5 ft 4" in 2002. All the figures mentioned in this article are as per the statistics and surveys conducted in year 2002. Thus, these figures are likely to become obsolete within the next few years.

Average Height of a Man

The average height of a man is not a uni-dimensional entity. There are many factors linked to average height of a men. The race, the residing area, lifestyle and few others. Scroll down to know more about average height for men.
Height Determinants

Race: Race is a very important factor when it comes to height. The Aryan race is different from the Afro Americans. Likewise the white native Americans are different from the Afro Americans. Each race has a set of particular genes, which effect the height.

Heredity: As we all know and have seen in most cases, a couple having good height is most often than not going to have children who grow into tall adults. If the impact is not directly from the parents, the immediate kin and those height trends influence the height of the children. Genetics in fact, is the most powerful factor determining our height. Read more in correct weight for height.

Lifestyle and Upbringing: The upbringing of the children also has an impact on their growth. Obviously, height is an inevitable aspect of physical growth. Hence, those children who mostly have healthy food, indulge in lots of physical activity and a sport like basketball or athletics, are
probably going to grow taller than those who are not doing this. This is just an aspect related to average height of men.

*Other Factors:* The health of the mother during pregnancy may also affect the height of the children. It is actually a trickle down effect. The healthier the family, the better the chances of taller adults.

*Improved Health Standards:* In addition to all the above factors, better standards of living, better facilities and improved health standards have led to an increase in the average height of man. This is true with regards to women as well. Evidences have shown that over the centuries the average height of people has increased. This explains why average height of a man in 1900 was less than what it is today. People are taller now! Read on health and wellness.

### Average Height of a Man In The World

<table>
<thead>
<tr>
<th>Country/Region</th>
<th>Average Male Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>5.9ft</td>
</tr>
<tr>
<td>India</td>
<td>5.5ft</td>
</tr>
<tr>
<td>China</td>
<td>5.6ft</td>
</tr>
<tr>
<td>Japan</td>
<td>5.7ft</td>
</tr>
<tr>
<td>Germany</td>
<td>5.10</td>
</tr>
<tr>
<td>France</td>
<td>5.8ft</td>
</tr>
<tr>
<td>Iran</td>
<td>5.7</td>
</tr>
<tr>
<td>Iraq</td>
<td>5.5ft</td>
</tr>
<tr>
<td>Italy</td>
<td>5.8ft to 5.9ft</td>
</tr>
<tr>
<td>Australia</td>
<td>510ft</td>
</tr>
<tr>
<td>Belgium</td>
<td>5.9ft</td>
</tr>
</tbody>
</table>
Average Height Of a Man in The US

As mentioned in the table, the average height of a man in the US currently is between 5.9 to 5.10 feet. This is in the age group of 20 to 29. Within Americans as well, there are distinctions. White Americans are a tad taller than the African Americans. They have 5 ft 10.4 inch and 5 ft 10.1 inch height respectively. Amongst others, the south Americans like Mexicans clock to around 5 ft 7 inches. But all said and done, the Europeans are by far the men who "look down upon" (pun unintended!) the other races when it comes to height. Read more on ideal weight for height.

The Erstwhile Colonial Era in USA

The average height of men in USA in the colonial era was a bit less (5 ft 7 inches), according to anthropological and historical studies. Earlier people did not measure or document their heights. That is why all the researchers have are close to real guess work and information on height which has been hard-earned. However, there was a period when there was no drastic increase in the height of men and then in past century or so it got the spurt.

There, that was about the average height of a man and the different aspects related to it. Average height of men is all about your genes and heredity, fellas! So if someone compliments you about your height, it would be apt to thank your parents, right! This is where I sign off!

Hours of Sleep Needed

Are you oversleeping? What are the recommended hours of sleep? The article deals with information on the hours of sleep needed by an individual.
After a long day of physically and mentally taxing work, your body requires rest. When you sleep, your body and mind relax and get ready for another day's work. It is essential to fulfill this need, as otherwise, it will adversely affect your health and efficiency. People who do not sleep enough, are known to be irritable and short-tempered. But that does not mean that oversleeping or not working is the answer! There should be a balance between work and rest. So that leaves us with the question, how many hours of sleep is needed by a normal human.

**What is Sleep?**
It is quite tricky to define sleep. One could say that is a temporary state of unconsciousness which can be revived and is characterized by short term suspension of motor and sensory activities. But unlike a coma, this state of unconsciousness is reversible. There have been several researches into the causes and effects of sleep, but none have been able to clearly state the advantages of a good sleep. But not sleeping the needed hours of sleep regularly, leads to a number of physical problems such as lowered body temperature, decrease in the levels of secretion of growth hormones and sometimes, there may even be a variability in the rate of heartbeats. There may also be several nervous system problems, drowsiness, inability to concentrate and make logical decisions. On the other hand, a good night’s sleep will ensure long term health and wellness.

**Minimum Hours of Sleep Needed by Age**
The recommended hours for sleep required by people varies with age. The average hours of sleep needed vary based on what stage of the life cycle you are in.
Infants: New-born babies and infants need a lot of sleep. Most infants that are less than 3 months old, require up to 18 hours of sleep per day. As the babies grow, up to 3 years, they tend to sleep the whole night and also take a nap in the afternoons. 14 hours of sleep is needed by babies of this age.

Children: As you grow up, the number of hours of sleep start reducing. Children between 3-5 years generally need about 12 hours of sleep. Kids between 5-10 years of age usually have 10 hours of sleep. Adolescents also need 8-10 hours of sleep daily.

Teenage and Adults: People in this age group generally need the lowest hours for sleep. 8 hours of sleep is required by most adults, while the elderly may need only 6 hours of sleep.

Sleeping Problems
Many people suffer from sleep disorders such as insomnia. They aren't able to get their full quota of sleep and hence suffer the same problems that occur due to lack of sleep. Most of the time, insomnia is caused due to alcoholism, drug and stimulants consumption and stress. If you are not getting your full quota of sleep, I suggest you read these articles on How to Fall Asleep Fast and Tips to Fall Asleep. You can also use sleeping medication, but only after consulting your doctor.

So this was all about the hours of sleep needed. It is very essential to get your daily quota of sleep, otherwise you will end up with a sleep debt. So if you have any sleeping problems, you should sort them out quickly, so you have a normal, trouble-free lifestyle!
You already began to learn how CO₂ travels through the blood. There are three main ways, and they are, in order from most used to least used:

1. as bicarbonate ions
2. as carbamino-hemoglobin
3. dissolved in plasma

These are all depicted in this figure from your book. I will now discuss each of these ways in a little more detail.
Bicarbonate Ions

The majority (approximately 70%) of carbon dioxide is carried in the blood this way.

Most of the time that carbon dioxide encounters water, it undergoes a chemical reaction with the water. This chemical reaction is:

\[ \text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{HCO}_3^- + \text{H}^+ \]

If you count, you'll see that this equation is balanced (only one C atom on each side, 3 O atoms on each side, and 2 H atoms on each side). \text{HCO}_3^- is the bicarbonate ion. The \text{H}^+ is a regular hydrogen ion. If the hydrogen ion is left to hang out in the plasma, this would cause problems. You see, any increase in hydrogen ions leads to
a decrease in pH, and so the plasma would get more acidic. This is not a problem, however, because the hydrogen ion readily associates with hemoglobin; therefore it is not floating around affecting the pH.

That means that when carbon dioxide and water combine, their main product is the bicarbonate ion. This is rather handy for us. The bicarbonate ion acts as a buffer for our blood, maintaining blood pH at approximately 7.4. I'll explain how this works some more when we get to Chapter 21… so review your pH information to be ready for that chapter!

It is extremely useful that since we have to transport carbon dioxide
anyway, we have a way to use it while it is being transported! We use it to maintain our blood pH. Pretty cool, huh?

As I noted in the oxygen section, transport is only good if we can release the transported material. Remember how this was NOT the case for carbon monoxide? The transport of carbon monoxide served us in no way. Well, we are able to release carbon dioxide by reversing the chemical reaction listed above.

Again, whether we transport CO₂ or not depends on the partial pressures of CO₂. When the partial pressure of carbon dioxide is higher in the tissues than in the blood, the reaction
proceeds as drawn above, and bicarbonate ions are formed. However, when the partial pressure of carbon dioxide is higher in the blood than outside of the blood (as is the case in the lungs), the equation reverses, and bicarbonate ions recombine with hydrogen ions to release carbon dioxide (and water). Carbaminohemoglobin

15% - 25% of carbon dioxide is carried this way.

CO\textsubscript{2} can also attach to hemoglobin. However, it does not attach to the iron within the heme group like oxygen and carbon monoxide do. Instead, it attaches to the globin protein itself. Therefore, one hemoglobin molecule
can carry 4 oxygen and 4 carbon dioxide molecules at the same time! They do not interfere with one another.

As described for the carbon dioxide to bicarbonate transition, the carbaminohemoglobin to carbon dioxide plus hemoglobin transition also depends on the partial pressures of carbon dioxide. When the partial pressure of CO\textsubscript{2} in the tissues is higher than in the blood, carbaminohemoglobin forms, while if the partial pressure of CO\textsubscript{2} in the blood is higher, carbaminohemoglobin releases its CO\textsubscript{2}.

Dissolved in plasma

Only 7% of carbon dioxide is carried
this way.

This is a rather inefficient way to carry carbon dioxide, but it does occur. Carbon dioxide merely diffuses from one tissue to another based solely on the pressure gradient of carbon dioxide partial pressures.

Platelet levels can be measured in routine bloodwork, something which is usually ordered before surgery. Individuals with platelet disorders may have reduced or elevated platelet levels. A variety of methods can be used to treat these disorders, depending on which condition a patient has.

Apheresed platelets are generally less likely to produce an adverse reaction in the recipient. Platelet transfusions are often prescribed for those who are undergoing chemotherapy, bone marrow/stem cell transplant or organ transplant, and those with AIDS.

Low Platelet

Platelet Count
Platelets Function on wiseGEEK:
Hemostasis can be disrupted when certain congenital or acquired conditions affect platelet function or production. An individual with an unusually high platelet count, a condition known as thrombocytosis, is at risk of excessive blood clotting in the extremities or the brain.

Acquired conditions that may cause abnormal test results include autoimmune disorders that create antibodies against platelets, such as AIDS. Myeloproliferative diseases that cause the bone marrow to produce too many red blood cells, white blood cells and platelets, may also cause problems with the ability of platelets of aggregate.