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Sowkhya

Magazine™

A close-up photograph of several eggs in a woven basket. The basket is filled with light-colored straw or hay. Most of the eggs are a warm, brownish-tan color, but one egg in the center is a stark, bright white. The lighting is soft and warm, highlighting the textures of the straw and the smooth surfaces of the eggs.

THE HUMBLE EGG

Welcome to the November edition of Sowkhya Magazine™.

In this month's edition, we talk about a food that we as humans have been eating for generations – eggs. The humble egg is one of the best natural food that is currently available. It is rich in protein and is extremely helpful in building muscle tissue and repairing cells following an illness. We prepare eggs in a number of ways – we boil them, fry them, poach them, scramble them – the list goes on. Either way, the nutrition it provides is unparalleled.

Also discussed in this month's edition is a 'basic' article about fever. Fever is something we have experienced at some point in our lives, and no doubt we all remember how unwell we all feel when we suffer from it. Along with fever, we have spoken about another common condition that we all talk about and have suffered from – allergies. Some of us are more prone to it, and some of us tolerate it well.

Finally, we have touched upon the thyroid gland – an essential gland for human life. We see many patients with underactive and overactive thyroid glands in our clinic, so a discussion on this was most certainly warranted.

As always, we hope you enjoy this month's edition of our newsletter. Wishing you a healthy month ahead!



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The Humble Egg – A Nutritious Food Source

For hundreds of years now, man has been eating eggs as a part of their diet. Different kinds of eggs have been available to man as food, such as chicken eggs, quail eggs, duck eggs and ostrich eggs.

Eggs are a rich source of protein along with numerous vitamins and minerals. But before we discuss these health benefits, let's take a look at the history of the egg.

History of the egg

Okay, firstly we would like to say that we are not discussing the commonly asked question 'what came first – the chicken or the egg?' here! Instead, you may be interested to know that man started consuming eggs as early as 3200 BC, though in China and Egypt eggs were consumed as early as 1400 BC! Jungle fowl eggs were considered healthy and a good source of nourishment, and over time these fowl were looked after in farms and their eggs used as food.

The word 'egg' is derived from the Old English word 'æg', though later on the Old Norse word 'egg' came into being in 1500 BC. This word is used even to this day.

Nutritional value of the egg

The great thing about eating eggs is that they are a relatively inexpensive source of high quality nutrients. The egg contains 2 parts – the white and the yolk ('yellow'). Both these contain vitamins, minerals, fats, proteins and antioxidants.

Protein – The egg white is 100% protein. It does not contain any cholesterol within it, and is one of the best parts of the egg to be consumed if one is looking to build muscle. When heated, the egg white coagulates and becomes an opaque white clump of protein that is readily edible. When consumed, it has 100% bioavailability, meaning that the entire protein content is absorbed and available to the body for nourishment.

One of the most important amino acids (building blocks of proteins) present in eggs is leucine. Leucine plays an important role in the utilisation of glucose by skeletal muscles following exercise. This makes it an excellent food to have after a workout.

Vitamins – Eggs are rich in most vitamins, though it does not contain vitamin C. It is particularly high in vitamin B12 and vitamin B2, along with vitamins A, D and E. It is also a good source of folic acid.

Minerals – Eggs are rich in iodine, which is important in maintaining the health of the thyroid gland. It also contains selenium – a mineral that has powerful antioxidant properties and maintains normal sperm production in men. Eggs also contain phosphorus which can maintain bone health. Zinc in eggs can promote wound healing and recovery following an illness.

Fats – The egg yolk is mostly fat. It is estimated that 9% of the egg is fat, and a big part of this is healthy mono-unsaturated fats. The yolk also contains omega-3 fatty acids which protect the heart and blood vessels. Eggs are rich in cholesterol and lecithin; fats that are responsible for maintaining the health and integrity of cells in the body. Cholesterol is required for the production of different hormones in the body as well.

How many eggs should you eat?

The jury is still out on this one. However, most medical bodies now recommend that when eating an egg, discarding the egg yolk from time to time is a good idea. The cholesterol in the egg yolk can be harmful if eaten every day. Egg yolks on an average have around 186 mg of cholesterol, and the recommendation is no more than 200mg a day, especially if you have other health problems. If you are looking to lose weight without losing muscle mass, then eating just the egg whites and avoiding the yolks is a good idea.

The humble egg is probably the most nourishing food on the planet, and is here to stay for generations to come.



Fever – What is it?

Fever – we have all suffered from it at some point in our lives. Having a fever usually indicates that something is wrong in our body. But why exactly do we develop a fever? What is the mechanism that causes a rise in our body temperature? Here we take a look at this.

Defining fever

The current definition of fever is an 'abnormal rise in body temperature, often accompanied by headache'. The normal body temperature is 37 degrees Celsius, or 98.4 degrees Fahrenheit. A body temperature above this is termed as 'fever'.



What causes fever?

Fever often arises due to some form of infection from bacteria or virus. When these organisms enter the body, they release harmful chemicals and substances called 'endotoxins'. As the name suggests, these are toxic to the human body, and in turn stimulate the formation of products called 'pyrogens'. These pyrogens are what is responsible for fever (fever is also called pyrexia).

When pyrogens are released into the blood stream, they travel to the brain where they stimulate certain nerve fibres. These nerve fibres are located in a part of the brain called the hypothalamus, which contains the brain's thermostat. Stimulation of this area increases body heat. The normal body temperature point is now 'reset' to a higher level, and this is fever.

The common stimulants for fever are the pyrogens interleukin 1, 6 (called IL-1 and IL-6) and tumor necrosis factor – alpha (TNF- α). These are products that have powerful stimulating potential on the hypothalamus, and treatments are targeted towards these molecules.

How do medicines bring down fever?

Medicines such as paracetamol, aspirin and ibuprofen are commonly used to treat fever. They work by resetting the thermostat in the hypothalamus, and promote the formation of specific products that reduce the level of pyrogens in the body. It can take a few days before fever completely subsides. If you are suffering from fever that is not improving, make sure you see your doctor today.

Sniff-Itch-Acchhoo?! You May Have an Allergy.

Allergies – they can be the bane of our lives. Constant runny noses, sneezing and that ticklish cough can be annoying, and yet there is little we can do to prevent them from happening.

Most of the responses that we have like sneezing and itching occur due to what is called as an 'allergic response'. An allergic response is a series of immune reactions that occurs within the body in response to a trigger (called allergen).

The allergic response is brought about by certain cells in the body called the lymphocytes. The lymphocytes are a part of the immune system and are released when an individual is exposed to allergens. These allergens can be dust, cat fur, pollen, oil, drugs, hair dye and fish to name but a few.

When the body is exposed to the allergen, a series of immune reactions take place. These reactions lead to the generation of a protein called Immunoglobulin E, commonly called IgE. IgE binds to special cells called mast cells, releasing mediators such as histamine and prostaglandins. These mediators are ultimately responsible for the allergic reaction.

Allergic responses are responsible for more serious conditions such as bronchial asthma. Severe allergies are called anaphylactic responses, and can be life threatening in some patients.

Why are some people prone to allergies?

There does not appear to be a clear explanation for this. Allergic responses tend to come and go depending on the season and the exposure to triggers. There does appear to be a role for genetics in allergies, and in those who have a family history of allergies, chances are they too will develop them. Some individuals who suffer from nasal allergies may also be allergic to certain fruits and vegetables (called oral allergy syndrome).

How can they be prevented?

The best way to prevent an allergy is to recognise and avoid the triggers. If you are allergic to dust, wear a mask or just avoid dust as much as you can. Allergy inducing skin products must be avoided. Eat a healthy diet and exercise regularly – this can improve your immune system. Make sure to visit your doctor if suffer from an allergic response.

Papaya – An Under-rated Plant

Amongst the many fruits that are currently available, the papaya stands out from the pack. The soft flesh of the plant has a number of different benefits, and in this article we shall take a look at some of these.

The papaya contains an active ingredient within it called 'papain'. Often, this is used as a meat tenderizer in restaurants, as this can breakdown the protein elements in the meat, along with the carbohydrates and fats. It is also believed to have medicinal value.

The papaya is believed to help reduce cholesterol levels in the blood, which in turn can prevent heart disease. Given the exceptionally low content of sugar in papaya (100 g of papaya = 43 calories), it is an excellent fruit to be eaten by individuals with diabetes. The high fiber content in papaya can help maintain normal bowel motion. Papaya also contains a chemical called carpain, which is effective against parasite infections in the body.

There is strong scientific evidence that the juice of papaya leaves if consumed regularly can help increase the number of platelets and white cells in the blood. This makes it useful in treatment of viral infections such as dengue fever.

But there is a dark side. Excessive consumption can cause orange pigmentation of the skin (called carotinemia). People with latex rubber allergy are likely to be allergic to papaya (the papaya skin has latex in it). A small number of people may be allergic to papain. Unripe papaya must be avoided by pregnant woman, as the latex can precipitate premature labour. Papaya must also be avoided by patients taking blood thinners such as Warfarin and Acetrom as it may increase bleeding.

The papaya is a wonderful fruit, with numerous health benefits. Enjoy it in moderation, and let it work its magic.



The Thyroid Gland – Essential For Human Life

The normal working of the human body is dependent on a number of factors. Amongst these, hormones play a pivotal role in helping the body work like a well-oiled machine. The thyroid hormone is one such hormone that is released by the thyroid gland.

The thyroid gland

The thyroid gland is a butterfly shaped gland located in the neck. It consists of two lobes that are present on either side of the wind pipe. These two lobes are connected by a small bridge of tissue called the isthmus. The thyroid gland has a very rich blood supply, giving it a brownish red colour.

Functions of the thyroid gland

The thyroid gland secretes thyroid hormones T3 and T4. The hormone production is under control of thyroid stimulating hormone (TSH) secreted by the hypothalamic-pituitary axis in the brain. The hormone thyroxine, also called T4, plays an important role in maintaining a number of normal body functions. The thyroid hormones are responsible for normal bone growth and development at a young age. It can help maintain a normal body weight. The thyroid hormones also help regulate body temperature. Normal levels of thyroid hormone also have an effect on the heart rate. They also have an effect on the menstrual cycle in women.

The thyroid gland also produces a hormone called calcitonin. While this is not produced as a major hormone, calcitonin is responsible for maintaining calcium levels in the blood and bone health.

The synthesis of thyroid hormones is dependent on iodine. Our diet in India is rather poor in iodine, which is why the government initiative to sell iodised salt was passed. Sea salt also contains iodine, but not as much as compared to fortified iodised table salt.

Thyroid gland disease

In certain situations, the thyroid gland may become overactive or underactive. This is especially common in women. An overactive thyroid gland results in a condition called hyperthyroidism, while an underactive thyroid gland results in hypothyroidism.

1. Hyperthyroidism

This is where the thyroid gland over-produces the thyroid hormones. It is often caused from autoimmune disease (called Grave's disease) where cells in the body start to attack the thyroid gland. There may be a problem with the way the thyroid hormone levels are regulated by the brain.

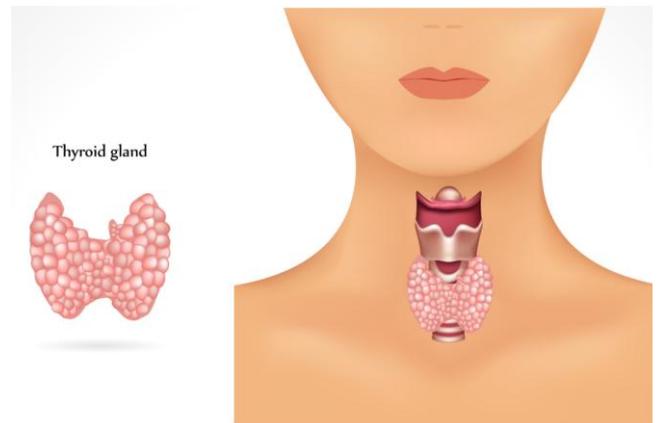
Patients with an overactive thyroid gland can experience hot flushes, sweating, weight loss (despite having a normal appetite), loose motions, lack of sleep, irritability and hair loss. The heart rate may increase and patients may experience palpitations.

The diagnosis of hyperthyroidism is made from simple blood tests. The TSH will be low while the T3 and T4 will be very high. Treatments include drugs such as carbimazole given for 1 to 2 years.

2. Hypothyroidism

Here the thyroid gland is underactive and not secreting enough thyroid hormones. Patients can feel very tired, may experience weight gain, hair loss, constipation, hoarse voice, dry skin and a slow heart rate. Hair loss is common. Patients with hypothyroidism may develop clinical depression. Patients can be easily treated with thyroid hormone supplements. Regular blood tests to estimate TSH (this will be high) and T3 and T4 (this will be low) will be needed to make sure the right dose of medication is prescribed.

The thyroid gland is essential for human life. Not correcting an abnormal thyroid function can result in an individual getting weaker and developing heart problems. Make sure you get your thyroid function checked today – all it takes is a simple blood test!



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