# Living Health 'n' wellbeing

**SOMETHING IN THE AIR**
A new study shows that air pollution can cause damage to the kidneys, apart from causing respiratory and cardiovascular diseases.

WELLBEING

## Chew on this leaf!

Hansa Gokul

Betel vine is an evergreen dioecious climbing creeper, which can be grown in a pot in any area in the garden. It consists of many useful minerals and vitamins, which are vital to the human body. The essential oil in the leaves gives it the unique sweet and piquant taste. Slow chewing of the leaves acts as a salivary secretion stimulant, aiding digestion, freshening the breath and strengthening the teeth.

Also, betel leaves have bactericidal, anti-flatulent, antiseptic, carminative, analgesic, antiseptic and aromatic properties too. Its juice and sun-curing colours, bronzes and boils. In fact, the juice is efficacious in dispelling vapourous, bronchovenous and throbbovenous.

Here's a little bit more of the benefits of betel leaves:

- Application of betel leaf juice on the chest relieves bronchial problems, chest congestion and difficulty in breathing.
- As a diuretic, two teaspoons of leaf juice with half a glass of milk facilitates easy urination.
- Regular chewing of the leaves increases lactation in nursing mothers.
- For intense headaches, application of the juice on the forehead gives relief.
- For abdominal and gastric disorders in young children, application of warmed leaf coated with castor oil gives instant relief.
- As a nerve tonic, consume a tablespoon of betel juice with two teaspoons of honey on a daily basis.
- To get rid of persistent cough, sip a tablespoon of betel leaf juice with a teaspoon of honey slowly.
- It is common to see the leaf with areca nut in Asian hours, which sweetens the breath and lightens the heavy feeling after a hearty meal.
- Betel leaf oil is used in the manufacture of toothpastes, oral rinses and chewing gums.

**Caution:** Excessive chewing of betel leaf may lead to oral cancer, pharyngitis, loss of appetite and taste.

# Stretch & strengthen

**YOGA AT WORK** **Sitting at your workstation for long hours is more injurious to your health than smoking. It's time for some damage control with simple yoga exercises that can be done right at your desk, suggests Manish Pole**

We live in an age of fast life cycles and modern gadgetry, where there's no time or space for our health. At most workplaces, stress is considered a part and parcel of modern living today. While we generally enjoy our jobs, other associated factors like long working hours, sedentary lifestyles, job security concerns, reduced incentives and greater demands of output have started fuelling the downward spiral of our health.

### Stress factor

The external event (that causes so stress) is simply a 'trigger' and it's only the individual's internal response to that event that becomes the stress. In other words, we are choosing (generally due to lack of awareness) to get stressed with changes in our life. Stress is experienced when our body's sympathetic nervous system gives a sensation of either 'flight or fight' to external events.

In ancient times, this reaction was our primary defense mechanism and survival as well. For instance, when we would chance upon a dangerous wild animal in the forest, our sympathetic nervous system would send signals to our adrenal glands and they would enhance adrenaline secretion mixed to defend ourselves — by fighting back or running away. However, when triggered in the office, we cannot fight or run away. Instead, our bodies become saturated with biochemicals like the steroid hormone, cortisol. Without the associated energy-expending response, our overbodies begin treating the matter as a pest. Cortisol has been identified as a major contributor to 'belly fat', which can promote heart disease, diabetes and lower-back image.

The human body is designed for movement and not to sit for long hours in a chair. But doing just that has ensured that almost everyone experiences a headache sometime in their life. This coupled with the high levels of air conditioning in offices makes the body prone to joint pains while excessive and continuous use of the computer affects the veins and eyes. Also, the fact that most of our work is mental and the people tend to do so many excessively. And without the adequate physical release, stress piles up.

What can we do to get rid of stress? Here is where the ancient science of yoga can help. Developing a regular yoga practice for at least three hours a week can not only combat the effects of stress, but also reverse much of the damage already done.

Yogasanas (poses) stretch and strength-en the muscles, causing the secretion of beneficial hormones and also allowing the entire body to be replenished with a fresh supply of blood. Through breathing practices called pranayama, we draw in higher levels of prana (life force energy) and oxygen. This helps purify the subtle channels and nervous system, it expands the lungs' capacity, and bestows great vitality and strength. By invoking the parasympathetic nervous system, we create a fertile ground for better rest, a stronger heart and a much calmer mind.

But for time-pressed individuals, where is the time for yoga? It turns out there is, in fact, lots of time and space for it right at your desk. For your yoga routine to be effective, you should be able to incorporate the practice in your daily life, especially at your office. While it may seem a challenge at first, you will have to make a habit of getting up from your workstation every two hours and stretching yourself.

### Give your body a break

Here are some yoga exercises to help you get started:

- **Sitting tadasana:** Interlock your fingers, turn your palms outwards and stretch your hands upwards while inhaling. Hold the posture for a few seconds with normal deep breathing.
- **Neck stretches:** Cervical pain is experienced because of maintaining the neck in a static posture for unnaturally long periods of time. Too many office-goers are suffering from various stages of cervical spondylitis. *Ardhma Moolu* helps alleviate these pains and enhances the flow of prana in and the head area so that you feel refreshed.

From a straight position, exhale and turn your face to the side so that you are looking to the right for three breaths and then to the left. Inhale and look up towards while holding your breath, then exhale and return to the normal position. Now inhale and drop your chin to your chest, holding the breath. Exhale and return to the start position.

- **Sitting dwikonasana:** Another common complaint of computer users is rounded shoulders, which leads to shoulder and upper back pains and causes low levels of energy because the breathing is always shallow.

Hold one wrist with the other hand behind your back; push your shoulders backwards and chest outwards. Inhale and look slightly upwards so that the focus of the stretch remains the shoulder area.

- **Sitting spinal twist:** With your right hand hold your chair's left armrest or the left side of your seat. Twist your left shoulder and turn backwards and place your left hand on your chair's backrest. Now you're looking over your left shoulder, hold this posture for a few seconds. Then repeat on the other side.
- **Ardha chandrasana:** Stand straight with your feet shoulder-width apart. Raise your right hand up and as you exhale, take your hand and your entire torso to the left. Stretch as much as is comfortable and hold for a few seconds. Repeat on the other side.
- **Hamstring stretch & padahastasana:** Sedentary jobs cause hamstrings to tighten, which then leads your lower back to kurt and has to compensate for tight hamstrings.

Stand straight with feet shoulder-width apart. Place your palms on your desk and take your feet back till your back is flat and parallel to the floor. Hold for a few seconds allowing your back to stretch. Now take your palms off the table and stretch them towards the floor, allowing your hamstrings to stretch. Hold for a few seconds. Once you come up, do the reverse — a backward bend. Place your palms on your hip and stretch your torso backwards.

- **Eye exercises:** Most of our energy is drained through our eyes. Keep them closed for 20 seconds every once in a while. Practise blinking — make 20 rapid blinking movements of the eyes to exercise them. Rub your palms together and take the warmth to your eyes (palming).
- **Sahaj pranayama:** People often start their day with a lot of focus but gradually their energy and focus dissipates. Take the time to gather yourself. This is easily done by closing your eyes and taking 10 deep abdominal breaths — your stomach expands when you breathe in and returns to the normal position when you exhale. You may internally chant 'Sa' as you inhale and 'Ham' as you exhale while counting down breaths from 10 to 0. The slower and deeper you breathe, the calmer you will feel.

So, what are you waiting for? Shut your eyes, twist your torso and take in some deep breaths. Your body needs it.

*(The author is co-founder & director, Tata Yoga, Bengaluru)*

VITAL SIGNS

## Future fathers need to quit smoking

Everyone knows that a woman who smokes and plans to become pregnant should stop smoking. A new study suggests that a future father should quit, too.

Brazilian researchers analysed the sperm of 20 smokers and 20 nonsmokers and found that the smokers' sperm was damaged to an extent that could reduce the chance of fertilisation and might also lead to health problems in the baby.

The DNA in smokers' sperm was fragmented, probably because of oxidative stress from the cadmium and nicotine in cigarette smoke. Sperm DNA fragmentation has been shown in other studies to be associated with an increased risk of genetic problems in the offspring as well as with an increased risk of childhood cancer. Mitochondria, the energy centres of cells, were also less active in the sperm of smokers.

The study, in *JAMA Internal Medicine*, also found that smokers had a larger percentage of non-intact acrosomes, the part of the head of the sperm that releases enzymes that allow the sperm to penetrate the ovum's shell. And the researchers discovered alterations in the proteins in smokers' seminal plasma that might impair fertilisation.

"All these effects were found in nonsmokers," said the senior author, Ricardo Pereira Bertolla of the São Paulo Federal University. The message, he said, is straightforward: Smoking alters a man's capacity to produce sperm that can successfully fertilise an egg.

Nicholas Bakalar
NYT

# A bit of everything

**INTEGRATIVE** **To deal with diabetes through both conventional and alternative medicinal therapies, Dr Rama Mishra recommends integrative medicine**

There has been an alarming rise in the incidence of diabetes and other lifestyle disorders in India during the last decade, thanks to drastic lifestyle changes and stress. Among the various treatment options, integrative medicine has emerged as a safe choice.

Integrative medicine combines modern and alternative systems of medicine, with a focus on wellness and health rather than mere treatment of symptoms. The treatment modalities are designed after proper diagnosis to mitigate, control or reverse a problem based on standardised processes and evidences.

The fundamental principle of integrative medicine is that it integrates the strength of all systems of medicine and reduces the ill-effects of excessive medication. This style of treatment considers both the patient and practitioner as equal partners in the healing process.

Appropriate use of both conventional and alternative methods facilitates the body's natural healing process. For diabetes control programmes under integrative medicine, both allopath doctor and alternative doctors work functionally together by screening, treating the root cause by lifestyle modification, evaluating, monitoring and tapering down the medication gradually, with a regular follow-up programme.

The interventions under integrative medicine include screening, diet correction, diabetic yoga therapy, ayurveda and naturopathy, external treatment to stimulate pancreas, insulin secretion, evaluation and gradually reducing the dosage of medication, all under the guidance of team of doctors, guided by a diabetologist.

Diabetic reversal is usually a 60-90 day programme and its cost is much lesser when compared to the lifelong treatment with various drugs and treatment of complications due to uncontrolled diabetes. The real advantage here is protecting health and life from ill effects of long-term medication, preventing the risk of damage of the major organs, leading to increased risk of mortality, and risk of spending huge amounts of money later in life.

Integrative medicine's long-lasting benefit is that the patients get a detailed picture of what diabetes is and the technique used to reverse the process. In such scenarios, patients are thoroughly guided by doctors and therapists on a daily basis for making the changes without affecting their routine too much. Within a few days of following the recommendations, patients see and feel a significant change in their sugar levels as well as cognitive symptoms.

*(The author is diabetologist, Wellbeing Health Centre, Bengaluru)*

TRUE OR FALSE?

## Eat whole grains, live longer?

Two large review studies have reached the same conclusion: Eating whole grains is associated with significant reductions in the risk for premature death.

One report, in *JAMA*, found that whole grain consumption was associated with a reduction in the risk for death from cancer, coronary heart disease, respiratory disease, infectious disease and diabetes. Using data from 45 studies, researchers calculated that, compared with eating none, eating 90 grams of whole grains a day reduced the risk for all-cause mortality by 17%.

The other analysis, in *Circulation*, used data from 14 prospective studies with 786,076 participants and found that compared with those who ate the least whole grain foods, those who ate the most had a 16 percent reduced risk for all-cause mortality and an 18% reduced risk for cardiovascular mortality.

A slice of 100% whole grain bread contains about 16 grams of whole grains, and current dietary guidelines recommend 48 grams or more of whole grains daily. The senior author of the Circulation study, Dr Qi Sun, an assistant professor of nutrition at Harvard, cautions: "You shouldn't hope that you will cure diseases with whole grain foods."

Nicholas Bakalar
NYT

# Saying no to sugar

**ON A HIGH** **Apart from causing tooth decay, weight gain and elevated cholesterol levels, bingeing on saccharine can also fester a variety of diseases in children at an early age, warns Wanitha Ashok**

Among the many lifestyle disorders on the rise today, child obesity is definitely a disconcerting one. While several factors contribute to children's weight problems, excessive sugar consumption tops the list. Let's take a deeper look at this problem.

Parents, especially mothers, are inclined to overfeed their children. A common misconception is that baby fat is good. A slim child is considered weak and even malnourished, whereas a plump kid is viewed as prosperous and healthy. Moreover, children are carefree about weight concerns. So, they seek their food entirely going by their taste buds. Therefore, when it comes to sugar, children are oblivious why they should not have more of it. This practice can make children highly susceptible to weight gain coupled with an increased risk of developing a number of diseases at an early age.

### Every calorie counts

A recent study published in the journal *Obesity* argues that sugar is not just bad because it makes you gain weight, but it can bring about rather more sinister metabolic changes in the body. The researchers studied the effects of sugar restriction on 43 obese children, aged nine to 18, who had at least one metabolic problem, like high blood pressure or high triglycerides (blood fat) or markers of fatty liver. For nine days, they ate a sugar-restricted diet, but their calories were kept to constant as possible, by substituting in starches and carbs for the sugars.

At the end of the nine days, the kids' average diastolic blood pressure decreased by 5 Mm Hg, their triglycerides were lowered by 33 points, their LDL (bad cholesterol) went down 10 points, insulin levels were reduced by a third, and fasting glucose and liver function tests improved. Researchers concluded that 'a calorie is not a calorie.' Where those calories come from determines where in the body they go.

Supporting the findings, an article published in the *American Journal of Clinical Nutrition* states that one of the damaging effects of a diet high in sugar and other refined carbohydrates is that it puts you at risk for developing type 2 diabetes. If you already have diabetes, whether it is type 1, type 2 or gestational, too much sugar in your diet can prevent you from keeping your blood sugar levels within a healthy range.

Sugar calories are worst because they lead to weight gain, abdominal obesity, decreased HDL and increased LDL, elevated blood sugar, elevated triglycerides, and high blood pressure. This increases your risk of heart disease. What's more, sugar can overload and damage your liver. Also, all types of sugars can cause tooth decay.

Moreover, if you have the habit of eating sugar at every meal, it means that your immune system will be functioning at half capacity for most of the day. According to a classic study cited in *USA Today*, in 2003, eating too much sugar can seriously compromise your immune system's ability to fight viruses, bacteria and parasites.

If you cannot avoid sugar completely, try to limit its intake and find healthier alternatives. Thanks to scientific advancements, we have artificial sweeteners to the rescue. Quite a few brands are available in the market today, which offer low to zero calorie content to help you manage your weight issues. And they are not just for diabetics who struggle with sweet pangs. Regular use of these substitutes is also recommended for better oral health. As they have no sugar, there is no risk of tooth decay; yet you have enhanced flavour. It is a win-win situation.

Besides this, you should swap your sugary drinks, biscuits and cakes with healthier snack options. For instance, always keep naturally sweet fruits such as dates, bananas, grapes and figs or raisins handy. Not only will they satisfy sweet cravings, but you will also gain rich fibres, vitamins and minerals.

Eating at regular intervals of two-three hours also helps in restricting sweet cravings. Avoid processed foods; instead consume more whole foods. Increase your consumption of healthy fats, such as omega-3, saturated, and monounsaturated fats. Add more fermented foods such as curd, idli and dhokla to your meals. The good bacteria in these foods support digestion and provide detoxification support, which helps lessen the burden on your liver.

Making healthy choices is easier than you think. But you need to do it begin now to stay fit.

*(The author is a fitness expert from Bengaluru)*