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THE DENTCARE

Your Monthly Health Care Magazine

Brightening smile the world over

Depression:
a Real Concern in India

**The Elixir
of Life**

**Summer and
Skin Care**

**World
Health Day
7th April**

**Braces for
Mixed Dentition**



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Before



After



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Dear Reader,

April is the month for new beginnings in ways more than one.

It is an opportune moment for us to reflect upon our health and turn a fresh leaf, before a fall could cost you, dearly.

That is reason enough for us to add profound significance to the World Health Day.

Depression is a burgeoning concern that is silently enveloping our society, especially the younger generation. The factors behind its prevalence are manifold. India too is falling prey to this disability, at an alarming pace.

Can we not find an answer? The World Health Organization says “Let's Talk” – a welcome beginning to ward of this menace. Indeed, an elixir to life that we desire.

Making its presence felt, without doubt, is the sweltering summer. Yes, it could end up being the battle of wits. The Dentcare has on offer for you food for thought and simple solutions for your gentle skin. Some respite that!!!

Brace yourself while we remind you that home care is an important part of dental hygiene and lasting smiles, whether it is teeth or implants.

Our organization meanwhile continues to make its presence felt, globally. And where else can you do it with poise than at the International Dental Show, Cologne.

Yet another milestone achieved for the Dentcare Dental Lab as it continues to brighten the smiles of many, world over.

Yours truly,

Prof. (Dr.) George P. John

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BRACES FOR MIXED DENTITION

Technically speaking, literature says that the first orthodontic checkup is ideally at one year of age and the next at 6 years of age. The reason being, 'orthodontics' per se is just a part of the specialty. There can be a lot more to be done, not only to level and align the teeth, but to give a proper balanced function and pleasing profile through 'Dentofacial Orthopedics'

Over the years, it has been a common thinking that orthodontic treatment is done mainly when the permanent dentition is established, usually after the age of 13-14 years. Rather, a common question asked by most practitioners is, "What is the right age to start orthodontics?"

Well, it is a justified thought as orthodontics is aimed at correcting the permanent dentition only and we do not expect fixing braces on deciduous teeth and moving them orthodontically.

Technically speaking, literature says that the first orthodontic checkup is ideally at one year of age and the next at 6 years of age. The reason being, 'orthodontics' per se is just a part of the specialty. There can be a lot more to be done, not only to level and align the teeth, but to give a proper balanced function and pleasing profile through 'Dentofacial Orthopedics', which deals with correcting the skeletal mal-relationships and guiding growth directions.

As the child grows and enters the mixed dentition phase at approximately seven years of age, there are a couple of observations to be made for diagnosing particular patterns. First and foremost is predicting the growth pattern and direction, secondly identification and interception of certain habits during the

transition phase and thirdly determining the type of correction needed utilizing growth and a plan for execution for the same.

Now there are a vast variety of case types with different needs. Following is a gist of commonly observed case types:

Profile patterns

- Understanding the hard and soft tissue profile of the patient in early mixed dentition is important. Kids in this age group are mildly retrognathic (Class 2) and usually become orthognathic with mandibular growth. However, if a child shows unusual Class 2 skeletal and dental relationships, the case should be examined by an Orthodontist. Probably, the case may require some kind of orthopedic or myofunctional appliance to guide the growth of the jaws and the face.
- A few cases frequently exhibit patterns of a prognathism, with may be a reverse overjet or an edge to edge bite. These type of cases need to be checked for pseudo prognathism which occurs due to enlarged adenoids / tonsils and forward positioning of mandible. ENT measures are required to be taken for such type of cases.



Photo Courtesy: Summit Family Orthodontics.com



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True prognathism are notorious cases to be dealt with, as they usually have prolonged treatment durations and high relapse rates. These types of cases, having either maxillary retrognathism or mandibular prognathism or combination should be started with orthopedic gears at around eight years of age for maximum skeletal correction. However, these cases have high rate of burn out and often require dual stage of treatment with extended retention phases.

- Recognizing particular face types give an idea of the growth patterns, whether it is a horizontal growth, average growth or vertical growth. The etiology, type of appliance selection and treatment outcome are majorly dependent upon this factor.
- So with a simplification of the discussion, average growers and Class 2 profiles need to be followed

up at late mixed dentition phase and Class 3 profiles could be started early in the mixed dentition.

Status of deciduous dentition

As it is rightly said, the deciduous teeth are the best natural space maintainers, provided there are no proximal cavities. Hence, if the patient has early loss of deciduous teeth or mesial migration of permanent first molars is anticipated, some forms of space maintainers need to be installed.

The assessment of the possibility of space loss can be assessed by the radiographs, dental age, status of succedaneous teeth and the growth pattern of the patient. Vertical growers tend to have early space loss compared to horizontal patterns which need to be taken into consideration.

Some cases do even require space regaining orthodontic appliances to



Photo Courtesy: Beritaganid

reverse the effects of early loss of deciduous teeth. Commonly used space maintainers include a Nance holding arch for maxillary arch and lingual holding arch for the mandibular arch. These appliances can be clubbed with 2x4 appliances (appliance where the braces are put on only the two molars and four incisors), if required.

Arch expanders and serial extractions

Many times, we come across cases having narrow maxillary arch with reduced buccal overjet, cases having typical adenoid facies, predominantly mouth breathers and probably having a posterior cross bite.

Since the mid palatal fusion takes place during the late mixed dentition period, suitable arch expanders must not be delayed in cases requiring them for maximum skeletal correction. These not only help develop arch coordination, but also help the patients to develop proper speech, function and esthetics and probably reduces the chances of complex orthodontic corrections later in life.

Since the mid palatal fusion takes place during the late mixed dentition period, suitable arch expanders must not be delayed in cases requiring them for maximum skeletal correction

Sometimes, we do come across single tooth cross-bites, most commonly maxillary incisors. These need to be corrected at the earliest, as the rule says, **'The cross-bite is corrected the first time it is seen'**. Hence, few simple techniques like a wooden stick method or a removable appliance or 2x4 appliances may be incorporated before going into a full bonded fixed appliance.

Simultaneously, deep bites can be corrected in a similar way.

Usually with narrow maxillary arches, posterior maxillary vertical excess and anterior open bite is seen. Such cases need immediate orthopedic appliances like bite planes and head gears or intrusion splints for correction.

Cases which show severe crowding with completely blocked out teeth can be guided into orthodontic eruption with help of serial extractions. However, these need to be carried out keeping in mind the jaw growth possibilities and an accurate growth prediction.

Children with special care needs

Rarely, we do come across patients with special health care needs. Identification and multi-disciplinary management of such cases should be done with extreme precaution. The type of appliance selection and age of implementation all varies from the case type and appliance preference.

Habit breakers

The mixed dentition is the time period when the kids develop habits which affect the developing permanent dentition and jaws. Every malocclusion or an anticipated malocclusion definitely has an etiology and its identification is of paramount importance for the long term prevention and correction. Digit sucking, tongue thrusting and mouth breathing are among the most common habits which tend to have maximum detrimental effects on the growth of face and jaws.

Appliances for correction include habit breakers and modifications in habits, counseling and training. If the



Photo Courtesy: www.lkuf.at

changes have already taken place, either functional or orthopedic appliances may be prescribed before completion of growth and establishment of occlusion. These may range from twin blocks, activators, Frankel appliance and incorporation of head gears. Correct diagnosis and removal of etiologic factors give stability assurance.

The advantage of treating patients in this age group is

- ⊙ The extra oral appliances (like head gears and face masks) and any other functional appliance that alters the face form are not much of an esthetic concern and are taken well by the patients.
- ⊙ The follow up and scheduling becomes easier for this age group as they do not stay busy with work.
- ⊙ The patients can be motivated positively/negatively for proper compliance.
- ⊙ Growth advantage can be utilized for maximum skeletal effects.
- ⊙ The jaws and bones are 'moldable' and thus allow maximum correction without much iatrogenic damage.
- ⊙ A mild malocclusion or a developing one can be prevented from getting converted into a major and complex one.

The drawbacks and difficulties of this age group include

- Carelessness and casual attitude lead to appliance loss and breakages.
- The treatment usually gets extended till 14 years of age at least, followed by long retention periods, may lead to compliance burn out and consequent relapses.
- Long treatment durations cause iatrogenic hard tissue damages like demineralization and white spot lesions, root resorption and periodontal breakdown.
- Continuation of growth causes changing occlusal relationships and the predictability of the case should ensure sufficient over corrections.

Hence, we have seen it is not just a crowded or spaced arch that a dentist must look for while checking a mixed dentition child. A thorough knowledge of the mechanics and physiology of growth and development will form essential diagnostic aids. It would be ideal to get an opinion of the Orthodontist where all the factors may be kept in mind and evaluated accordingly.

As it is rightly said, **'the Eyes do not see what the Mind does not know'**.

The jaws and bones are 'moldable' and thus allow maximum correction without much iatrogenic damages



The soft tissue, surrounding a dental implant should be keratinized, which will appear pink and firm when there are no signs of infection. The peri-implant soft tissue protects the bony tissues that are in contact with the implant, from the oral environment.

If the mucosa is not keratinized, it becomes vulnerable to microbial attack and subsequently to peri-implantitis. In other words, the perimucosal seal dictates the success of the implant. An implant, once exposed to the oral environment attracts plaque, 85% elimination of which on a daily basis is critical to the health of the implant.

To protect the implants, patients should choose safe home-care products, for example, the toothpaste should contain components of low abrasiveness so that it will not scratch the surface of the implant. It is better to avoid dentifrices with stannous fluoride, sodium fluoride, baking soda, stain removers and the so called, smoker's toothpaste.

Fluoride ions are aggressive on the protective oxide layer of titanium and titanium alloys. Their presence may possibly start a localized corrosive degradation by pitting and crevice corrosion processes. Antibacterial toothpaste containing triclosan / copolymer is recommended for dental implant maintenance. Colgate Total is the only toothpaste clinically proven to reduce plaque bacteria for up to 12 hours to help treat peri-implant mucositis.

Brushing

Toothbrushes and interdental products to be used with implants have been widely researched to find out which is the most effective for implants. The results show no significant difference between sonic, electric or manual tooth brushes.

The main focus needs to be on adaptation to the implant / prosthesis and the patient's dexterity. Instruct the patient to brush the implants twice daily to remove bacterial plaque with a low

To protect the implants, patients should choose safe home-care products, for example, the toothpaste should contain components of low abrasiveness so that it will not scratch the surface of the implant

HOME CARE OF **IMPLANTS**



abrasive dentifrice. Soft toothbrush options include a manual brush, electric / sonic brush, Waterpik or end-tuft brush.

Nylon coated interdental brushes / proxabrushes are also an excellent alternative to clean, especially in tight and hard-to-reach areas around implants and prostheses. Nylon only interdental brushes (no metal wire) are necessary to prevent scratching the implant or prosthesis. The interproximal brushes work extremely well when dipped in non-alcohol antimicrobial rinse or gel. It is extremely important to brush under, around and in the peri-implant crevice circumferentially.

Flossing

There are many types of floss in the market and generally it is highly recommended to use unwaxed tape or implant specific floss in order to protect the tissue surrounding the implant. Alternatively for a bar-retained / full fixed retained prostheses or wider interproximal spaces, a floss threader or specialized floss that has a built-in threader is necessary.

To floss the implant, insert the floss in the contact area on both sides of the implant. Wrap in a circle and crisscross in front, switch hands and move in a shoe-shine motion into the peri-implant crevice, which is highly susceptible to inflammation.



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Photo Courtesy: www.geriatel.es

Brush with an anti-plaque white toothpaste

In addition, antimicrobial mouth rinses may be recommended, especially if inflammation is present or if the patient has dexterity problems and difficult-to-reach areas. If the patient is prone to inflammation, the use of an antimicrobial rinse, in conjunction with a rubber tip stimulator, may be recommended.

Floss around each implant twice daily with regular dental floss or use an interdental brush

Oral irrigators

It is highly recommended for patients to use oral irrigators for the reduction of plaque / biofilm, inflammation and hard-to-reach emergence

profiles around implants. Instruct the patient to use a nonmetal tip one to two times daily and if inflammation is present, add a diluted non-alcohol anti- microbial rinse like chlor- hexidine gluconate.

Studies using oral irrigators with implants for oral hygiene reveal that Waterpik water flosser has proven safety and effectiveness with dental implants. Water irrigation in conjunction with diluted non-antimicrobial rinse has proven to be extremely helpful for full-fixed and removable prostheses to remove the biofilm and prevent inflammation, if used on a daily basis.

Stimulators

Stimulators are coming back with implants and regenerative

procedures. Remember healthy keratinized tissue is the key to a healthy perimucosal seal surrounding the implant. Rubber tip stimulators are the finest examples.

Instruct the patient to place the tip of the rubber-tip stimulator so that it lays flat against the gum tissue, not poking in the tissue and with pressure roll to massage and stimulate the tissue. The tissue will blanch or change to a lighter color when the correct pressure is applied.

The following is the summary of recommendations for home care of dental implants to be followed twice daily:

- Use a good quality, soft nylon bristle toothbrush. If necessary before using the brush, rinse it under hot water to soften the bristles.
- Brush with an anti-plaque white toothpaste.
- Floss around each implant twice daily with regular dental floss or use an interdental brush.
- Rinse for at least 15 seconds with an anti-plaque mouthwash.
- If you have an oral irrigation system, use an anti-plaque mouthwash and irrigate around each implant at slow speed. This type of cleaning is highly effective in removing the plaque under your gums which harbor toxic bacteria. Rinsing out the toxins will lessen the chances of inflammation around the implant.
- If you have an electric toothbrush, you can continue to use it as normal. After brushing dip it in mouthwash and gently clean around the implant.

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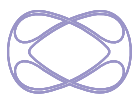
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World Health Day
7 April

World Health Day, celebrated on 7th April every year to mark the anniversary of the founding of World Health Organization (WHO), provides us with a unique opportunity to mobilize action around a specific health topic of concern to people all over the world

The theme of the 2017 World Health Day campaign is Depression

World Health Day, celebrated on 7th April every year to mark the anniversary of the founding of World Health Organization (WHO), provides us with a unique opportunity to mobilize action around a specific health topic of concern to people all over the world.

The theme of the 2017 World Health Day campaign is Depression.

Depression affects people of all ages, from all walks of life, in all countries. It causes mental anguish and impacts on people's ability to carry out even the simplest everyday tasks, with sometimes devastating consequences for relationships with family and friends and the ability to earn a living. At the worst, depression can lead to suicide, now the second leading cause of death among 15-29 year olds.

Yet, depression can be prevented and treated. A better understanding of what depression is and how it can be prevented and treated, will help reduce the stigma associated with the condition and lead to more people seeking help.

History at a glance

World Health Day is a global health awareness day celebrated every year on 7th April, under the sponsorship of the World Health Organization (WHO).

In 1948, the WHO held the First World Health Assembly. The Assembly decided to celebrate 7th April of each year, with effect from 1950, as the World Health Day. The World Health Day is held to mark the founding of WHO and is seen as an opportunity by the organization to draw worldwide attention to a subject of major importance to global health each year.



A better understanding of what depression is and how it can be prevented and treated, will help reduce the stigma associated with the condition and lead to more people seeking help

The WHO organizes international, regional and local events on the Day related to a particular theme. World Health Day is acknowledged by various governments and non-governmental organizations with interests in public health issues, who also organize activities and highlight their support in media reports, such as the Global Health Council.

World Health Day is one of eight official global health campaigns marked by WHO, along with World Tuberculosis Day, World Immunization Week, World Malaria Day, World No Tobacco Day, World AIDS Day, World Blood Donor Day, and World Hepatitis Day.

The WHO focused World Health Day 2016 on Diabetes – a largely preventable and treatable non-communicable disease that is rapidly increasing in numbers in many countries, most dramatically in low- and middle-income countries. Simple lifestyle measures have been shown to be effective in preventing or delaying the onset of type 2 diabetes, including maintaining normal body weight, engaging in



Photo Courtesy: www.cityofhope.org

regular physical activity and eating a healthy diet.

How is World Health Day is celebrated?

World Health Day is celebrated worldwide by the government, non-government, NGOs including various health organizations at many places by organizing programmes relating to the public health issues and awareness.

Participating organizations highlight their activities and support through media reports by means of press release, news etc. Health authorities from different countries take part in the celebration with their pledge to support health issues worldwide.

A variety of activities are done in the conference of health workers to encourage people to maintain their health in the presence of media coverage. Debates on related topics, art exhibitions, essay writing

WISH YOU ALL A PROSPEROUS, WELLNESS INTENTIONED AND SMILING WORLD HEALTH DAY!!!

competitions and award ceremonies are organized to fulfil the aim of World Health Day.

Some of the objectives achieved through this annual celebration are listed below:

- ⊙ To increase public awareness of various causes and prevention of high blood pressure.
- ⊙ To provide detailed knowledge for prevention of various diseases and their complications.
- ⊙ To encourage the most vulnerable group of people to frequently check their blood pressure and follow medications from the professionals.
- ⊙ To promote self care among people.
- ⊙ To motivate worldwide health authorities to make their own efforts in creating the healthy environments in their country.
- ⊙ To protect families living in disease vulnerable areas.
- ⊙ To teach travellers and send them a message about how to get protected from the vector-borne diseases while travelling.

CLEANING OF TEETH



Teeth are the most important part of a beautiful smile. It is very important to keep our teeth clean.

The enamel of our teeth is white in color while the dentin is yellow in color. Due to vigorous brushing, the enamel of the teeth gets removed gradually, thereby exposing the dentin, thus making the teeth appear yellowish.

Consuming coloured foods and beverages also

result in staining of the teeth, thereby changing the color of the teeth. Extrinsic stains can be removed by professional cleaning methods and deeper stains require various treatments which have to be carried out by a dentist.

Cleaning of teeth is of two types

- Professional teeth cleaning, and
- Home care cleaning



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Professional cleaning

Professional cleaning of teeth is done by dentists or dental hygienists. Routine tooth brushing will not help in removing the calculus and food deposits from the interdental areas.

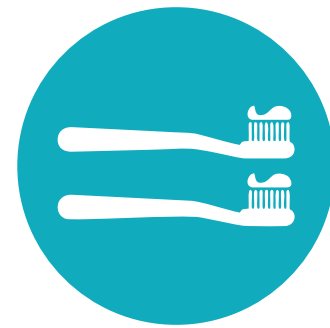
Professional scaling and polishing using ultrasonic scaler will help in cleaning the entire surfaces of the teeth and gums and shines the tooth surfaces. Patients might experience sensitivity of teeth after scaling which usually subsides over a period of 3-4 weeks. Scaling and polishing of teeth should be done once in 6 months.

Home care cleaning

Home care cleaning includes

- Tooth brushing
- Flossing
- Interdental brushes
- Tooth picks
- Tongue cleaner
- Irrigating device

1



Tooth brushing

Toothbrush is a commonly used oral hygiene aid to clean teeth in different countries. Today there are different types of toothbrush available in the market- Extra soft, Soft, Medium and Hard. Extra soft tooth brushes are used in patients with severe abrasion of teeth. In normal patients, a soft toothbrush is indicated. Hard toothbrush is used to clean dentures.

Toothbrushes should be changed once in 3 months. Rinse the toothbrush with tap water after tooth brushing to remove the residual toothpaste and debris present on it. Shake off the water present on the toothbrush and store it in an upright position and in a ventilated room so that it can dry off easily.

Tooth brushes should never be kept in toilets as it can get contaminated. Toothbrushes can be disinfected in chlorhexidine mouth wash for a fortnight. Do not share tooth brushes with any person as it can result in transmission of bacteria and infections.

Fluoride toothpaste should be used to prevent dental caries. In children of age 6 months to 2 years, a smear of tooth paste should be used, children of 2 years to 6 years should use pea size amount of toothpaste and children above 6 years should use toothpaste covering the whole length of bristles of the tooth brush.

After applying the toothpaste onto the toothbrush, the tooth paste should be pressed into the bristles using the finger and this helps spread the toothpaste evenly over the tooth surfaces. Use only a handful of water to rinse the mouth after tooth brushing otherwise all the fluoride from the mouth will be washed off.

Medicated toothpastes are indicated in patients with sensitivity of teeth as per the advice of the dentist for a short period of time. It should be understood that a proper brushing technique is very important for achieving a clean oral cavity rather than the selection of toothpaste. Specially designed orthodontic tooth brushes are indicated for patients undergoing orthodontic treatment.



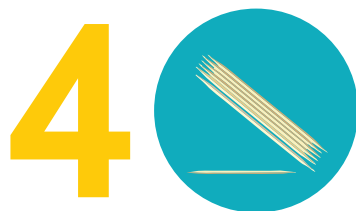
Dental floss

Dental floss is a cord of thin filaments used to clean the interdental areas which are not cleaned by routine tooth brushing. Dental floss can be used with a floss holder or with the hand. Disposable dental floss is available in markets which can be kept in the pockets and used as and when required. Flossing should be done at least once in a day in front of a mirror in the proper manner. Improper flossing can result in injury to the gums and cause bleeding from the gums. Dental flossing helps in preventing gum disease and dental decay.



Interdental brushes

An interdental brush is a small brush either supplied with a reusable angled plastic handle or an integral handle, used for cleaning between teeth and between the wire of dental braces and the teeth. These brushes help in cleaning open interdental spaces in patients. The bristles of such brushes can be replaced as and when required.



Tooth pick

A toothpick is a small stick of wood or plastic substance used to remove food particles from the teeth, usually after a meal. A toothpick usually has one or two sharp ends to insert between teeth. Plastic toothpicks are also known as dental picks as they efficiently remove food particles without damaging the gums when compared to wooden toothpicks.



Tongue cleaner

A tongue cleaner will help in cleaning the top part of the tongue. Usually food deposits get accumulated over the top surface of the tongue which leads to malodour. A tongue cleaner, preferably in plastic, can help keep the tongue free of any debris. Metal tongue cleaners should not be used as it can cause damage to the taste buds present on the tongue.



Irrigating device

An irrigating device is available in markets which are used for removing the food debris from around the teeth and gums using a pulsating pressure of water or antiplaque agents. The device comprises of a handle with a tip through which water jets at pressure which when directed towards the teeth or gums helps in displacing the food debris away. Water or mouth wash can be used as the irrigating agent in the device.

Cleaning the teeth helps our oral cavity to remain hygienic and prevents infections from being transmitted from oral cavity to other parts of body. Self-oral hygiene measures along with professional cleaning will help in maintaining adequate oral hygiene.

Visit your dentist at least once in 6 months and get your teeth cleaned for good oral health.



AUTOIMMUNE RHEUMATIC DISEASES



Photo Courtesy: www.startthegoodlife.info



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Our immune system protects us from diseases. The immune system is comprised of abilities to mount a “non-specific” and a “specific” response to challenges of infection, inflammation or tumours.

Sometimes, in response to a trigger, the “specific” response system develops a problem and the body starts making “antibodies” that attack its own tissues; this process is called auto-immunity. These triggers are largely unknown. However, links with certain environment, smoking, infections and genes have been found.

Several members of the same family can be affected. These self-attacks can affect joints, skin, muscles, blood vessels, skin and several other body parts. The diseases resulting from this process are called **auto-immune diseases**. Type-1 diabetes, certain thyroid problems and ulcerative colitis are some of the examples of auto-immune diseases.

In this article, autoimmune rheumatic diseases are covered in question and answer format for easy reading.

What are the common autoimmune rheumatic diseases?

Several inflammatory arthritis (in arthritis the affected joints become painful, stiff, swollen and often hot to touch) and certain rare but serious diseases are examples of auto-immune rheumatic diseases.

Rheumatoid Arthritis

Rheumatoid arthritis is a chronic, progressive inflammatory arthritis. The condition usually starts between the ages of 30 and 55 but can also occur in even younger or older people. Pain in hands, wrists, toes along with stiffness and swelling are common.

Inflammation can also affect other body parts such as heart, lungs and kidneys. Disease attacks, called flare-

ups, occur periodically or can be continuous in some people. Untreated disease leads to the damage of the affected joints.

Ankylosing Spondylitis

In this condition, inflammation affects the spine and sometimes other joints such as hips, knees and wrists too. Males of younger age group are most commonly affected. The spine becomes painful and stiff. Inflammation of eyes (red eyes; uveitis) and heels (achilles tendinitis, plantar fasciitis) can also occur. If left untreated, progressive fusion of the spine makes the spine rigid leading to loss of spinal movements.

Psoriatic Arthritis

Psoriasis is an inflammatory condition of the skin causing red rash on scalp, back of neck, buttocks, elbows and front of knees etc. About 10% of patients with skin psoriasis can also have inflammatory-arthritis affecting joints such as fingers, wrists, toes, knees

and spine. If left untreated, there is progressive joint damage.

Systemic Lupus Erythematosus (SLE)

In SLE, the patient may have joint pain and swelling, red rash on the face, a rash on the face when exposed to sun (photosensitivity), hair loss with scalp scarring and recurrent mouth ulcers. In severe cases involvement of kidneys (lupus nephritis) and brain (neuropsychiatric lupus) may occur. This condition may also cause collection of fluid (effusions) around heart and lungs. Lupus can also affect blood system causing low haemoglobin (haemolytic anaemia) and platelet count (thrombocytopenia).

Scleroderma (Systemic Sclerosis)

In this condition, the skin becomes thick. Affected individual may have difficulty in swallowing of food (dysphagia) and Raynaud's phenomenon with fingers becoming blue and painful in the cold environment. Painful ulcers can develop on fingertips. Other organs such as lungs, heart and kidneys may be affected.

Auto-immune rheumatic conditions require specific medicines which modify/negate the autoimmune process. Early treatment with 'disease modifying agents' often is able to bring the disease under control

Polymyositis / Dermatomyositis

This condition causes inflammation of the muscles resulting in weakness in the muscles. This might present as difficulty in getting up from chair or climbing stairs. It can also involve muscles of swallowing

(causing difficulty in swallowing food) and of breathing (causing breathing difficulty). In Dermatomyositis, red rash over face and trunk is also seen.

Antiphospholipid Antibody Syndrome

In this condition, the blood becomes "sticky". It can cause recurrent abortions, very high blood pressure during pregnancy, clots (thrombosis) in the veins (Deep vein thrombosis) and arteries leading to gangrene and stroke.

Sjogren's Syndrome

Patient experiences dryness of the eyes and mouth as the glands making saliva and tears are affected. Joint pain, tiredness and muscle pain may also occur.

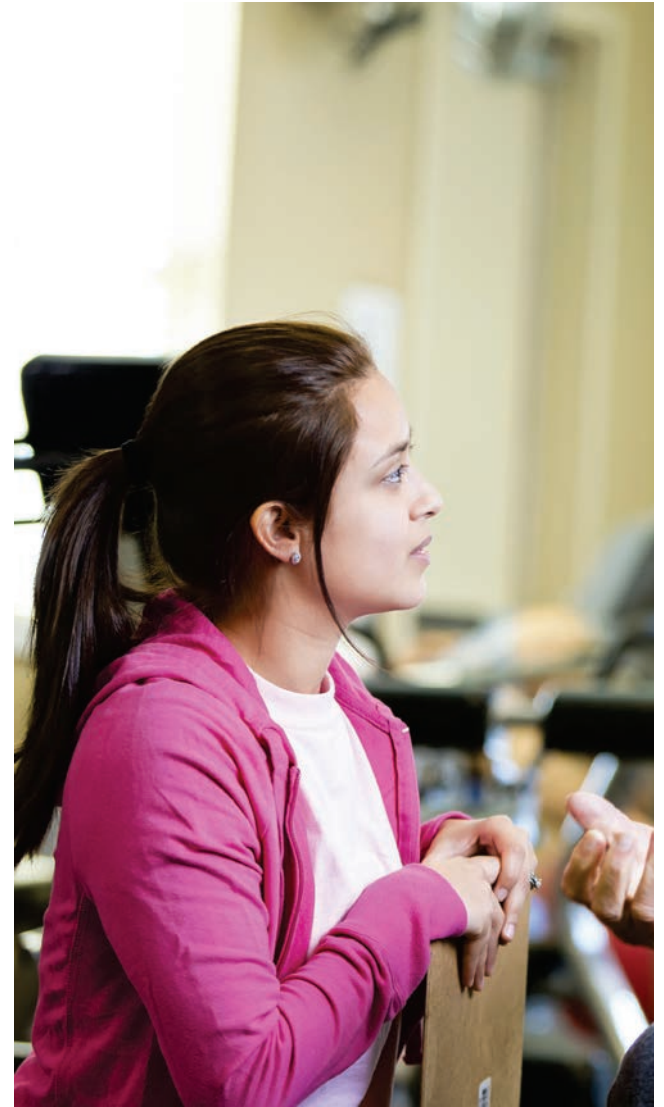
Behcet's Syndrome

This condition causes ulcers in the mouth and genitalia, red eyes and inflammatory arthritis.

Vasculitis

In this condition, wall of blood vessels become inflamed and may get blocked. The vasculitis is grouped together according to the size of the damaged vessel.

Takayasu's arteritis (aortoarteritis) attacks the large blood vessels leaving the heart (the aorta and the vessels coming off the aorta). Manifestations depend on the blood vessels involved – visual changes, syncope, stroke, hypertension, heart failure, pain in the limbs,



ulcers on arms and legs etc.

Polyarteritis nodosa (PAN) causes weight loss, muscle pain, testicular pain, neuropathy and high blood pressure.

Kawasaki disease is seen in children with fever lasting a long time, eye problems (conjunctival odema, corneal ulceration and pain), skin rash, painful swollen hands and feet, red swollen tongue and enlarged lymph nodes.

Wegener's granulomatosis can attack the lungs (lung nodules, cavities and haemorrhage), cause nasal congestions, obstruction, ulceration and bleeding and kidney problems (nephritis).

Churg-Strauss syndrome causes



Photo Courtesy: bethanylutheranvillage.org

asthma in adulthood or later, neuropathy, nephritis and lung problems.

Microscopic polyangiitis causes nephritis, neuropathy and digital gangrene.

When to suspect arthritis and autoimmune rheumatic disease?

As a rule of thumb, autoimmune rheumatic diseases (such as vasculitis or lupus) should be considered in anyone presenting with multisystem involvement. Presence of following features (usually in combination) in history is a strong pointer to a correct diagnosis.

- ★ Joint pain, back pain, joint swelling and redness, joint stiffness
- ★ Unexplained tiredness
- ★ Non blanching skin rash, red rash on face when exposed to sunlight
- ★ Recurrent mouth ulcers, dry mouth and dry painful red eyes
- ★ Recurrent abortions
- ★ Cough, haemoptysis, fever
- ★ Unexplained clot in the leg veins
- ★ Other members also affected in the family

How is an autoimmune rheumatic condition diagnosed?

Assessment and treatment of autoimmune rheumatic diseases including arthritis comes under the medical subspecialty of Rheumatology. Various factors including symptoms and findings on examination are considered.

Specific blood tests may be required for confirming inflammation and in identifying the underlying autoimmune process. Specific tests are done to assess the involvement of other body parts. As the symptoms of autoimmune disease can be non-specific in the beginning, awareness among the public can help in the early diagnosis of these conditions.

How are auto-immune rheumatic diseases treated?

Auto-immune rheumatic conditions require specific medicines which modify/negate the autoimmune process. Early treatment with 'disease modifying agents' often is able to bring the disease under control. When the disease is serious or does not respond to other medicines, a special class of medicines called "biological agents" are used which bring about dramatic improvement and help patients maintain their economic productivity and quality of life.

Like the treatment of high blood pressure and diabetes the treatment of auto-immune rheumatic diseases is also long-term; the rheumatologist closely supervises the therapy and carries out periodic systematic assessments of the disease process.

Stopping the treatment against the advice of rheumatologist may lead to recurrence of disease which might be severe. It is important therefore that the patient complies with the required duration of treatment and has periodic assessments.



WORLD HAEMOPHILIA DAY



Dr. M. K. Gangadharan
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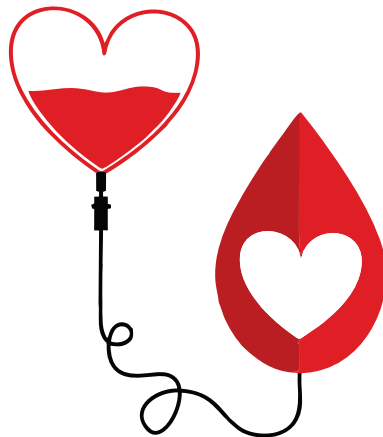
Haemophilia, also spelt as Hemophilia, is a mostly inherited genetic disorder that impairs the body's ability to make clots, a process needed to stop bleeding. This results in people bleeding longer after an injury, easy bruising and an increased risk of bleeding inside joints or the brain.

Those with mild disease may have only symptoms after an accident or during surgery. Bleeding into a joint can result in permanent damage while bleeding inside brain can result in long term headaches, seizures or decreased level of consciousness.

World Haemophilia Day is on April 17th every year when people come together to show their support for the millions of people affected by bleeding disorders.

Haemophilia is of two types

- Haemophilia-A
- Haemophilia-B



You are aware that Haemophilia belongs to coagulation disorders of the body. But the coagulation disorders may be congenital (by birth) or acquired that may affect one or several coagulation factors.

Inherited disorders are almost uniformly related to decreased synthesis of the factors as a result of mutations in the gene. Haemophilia occurs due to the deficiency of two factors, Haemophilia-A has Factor VIII deficiency and Haemophilia-B occurs with Factor IX deficiency.

How do you get Haemophilia?

People are born with Haemophilia. They cannot catch it from someone like a cold. Haemophilia is inherited, meaning that it is passed on through a parent's gene. Genes carry messages about the way the body's cells will develop as a baby grows into an adult. They determine a person's hair and eye colour for example.

Sometimes Haemophilia can occur when there is no family history. This is called Sporadic Haemophilia. About 30% people with Haemophilia did not get it through their parent's genes. It was caused by a change in person's own gene (mutation).

How is it inherited?

The Haemophilia gene is passed down from the parent to a child. The genes for Haemophilia A and B are on X chromosomes. For this reason Haemophilia is an X-linked (sex linked) disorder.

Chromosomes

Chromosomes are strands of Deoxyribonucleic acid (DNA). They contain a detailed set of instructions that control a wide range of factors including baby's sex and how body's cells develop.

There are two types of sex chromosomes, X-Chromosome and Y-Chromosome. All humans have a pair of sex chromosome. Men have XY pair and Women have XX pair. Boys inherit X chromosome from their mother and Y chromosome from father, girls inherit X chromosomes from each parent. Haemophilia is inherited as a mutation in X chromosome.

If only mother is affected

If a woman with a mutated chromosome and an unaffected man has a baby then,

1. One in four chance of having an unaffected baby boy.
2. One in four chance of having a baby boy with Haemophilia.
3. One in four chance of unaffected baby girl.
4. One in four chance of having a girl with affected chromosome (carrier state) which means that she can pass on to her children but will not have usually any severe symptoms. However, some may have heavy periods.

If only father is affected

If a man with Haemophilia has a son with an unaffected woman, there is no chance the boy will get Haemophilia as the X chromosome is inherited from the mother. However, if they have any daughters, they will become carriers of mutated gene and pass it on to other children.

If both parents are affected

1. One in 4 chance of an unaffected boy.
2. One in 4 chance of a boy with Haemophilia.

3. One in 4 chance of having baby girl with carrier gene.

4. One in 4 chance of having baby girl with Haemophilia.

This means that a female can have Haemophilia, although it is rare.

How does Haemophilia affect the blood?

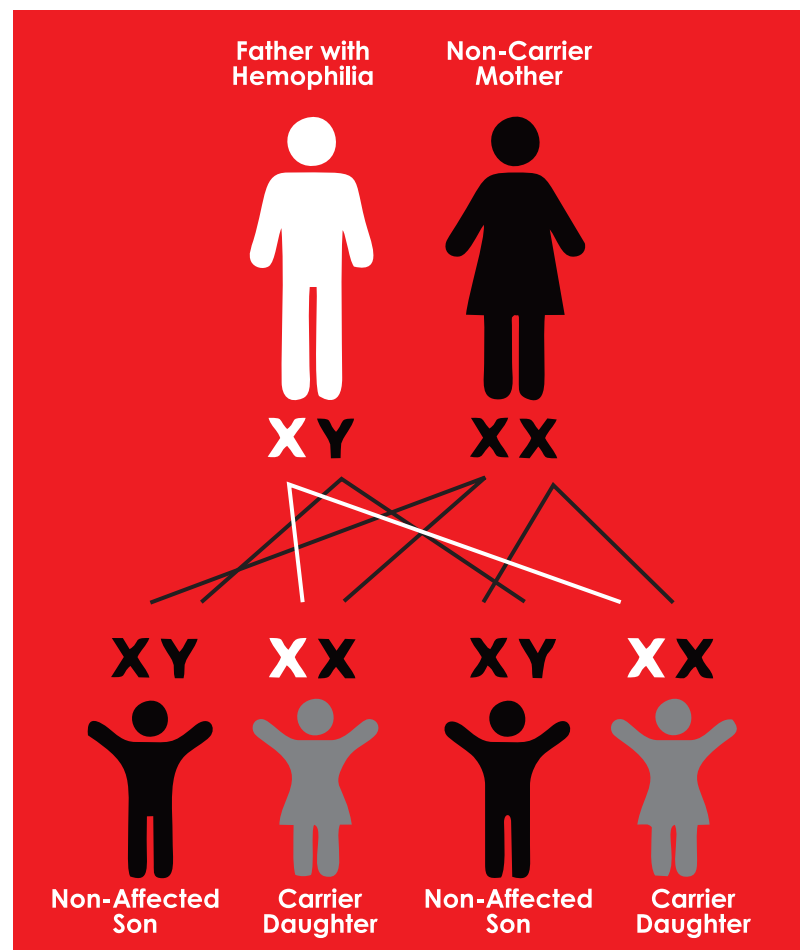
Blood cells called Platelets are important for clotting. They have sticky surface that allows them clump together to stop the flow of blood. But platelets need clotting factors which are proteins that form a web around platelets helping them stay together in place. Humans with Haemophilia A and B have no clotting factors VIII and IX, hence bleeding occurs.

Acquired Haemophilia

In rare cases, a person can develop Haemophilia later in life. The majority of cases involved are middle aged or elderly people or young women who have recently given birth or are in later stages of pregnancy. This condition resolves with appropriate treatment.

World Federation of Haemophilia (WFH)

An extensive network of organizations and individuals share WFH vision of ensuring treatment for all people with Haemophilia and other inherited bleeding disorders world-wide. They include our national member organization, corporate partners, donors and



Hemophilia is an inherited bleeding disorder in which the blood does not clot properly



Approximately 1 in 10,000 people are born with hemophilia

volunteers, international organizations such as World Health Organization (WHO) and other stakeholders.

WFH publishes a news magazine, HAEMOPHILIA WORLD, three times in a year.

World Haemophilia Day has been started celebrating since 2013, to help raise awareness in our community and light it up red for April 17.

Now we shall quickly go through the two types of Haemophilia.

Haemophilia–A

Affecting 1/10000 individuals, it is the most common congenital coagulation factor deficiency. Here it is Factor VIII which is primarily synthesized in the liver and endothelial cells which has a half-life of 12 hrs. It is protected from proteolysis in circulation by binding to another protein Von Willebrand Factor (vWF). The severity of the disease depends on the extent of the deletions in the VIII gene which is located in the X-chromosome, so all daughters of Haemophiliacs are obligate carriers of the disease.

The severity of the disease depends on the blood level of Factor VIII

Severe: < 0.01 U/L – Spontaneous bleeding into skin, muscle, joint, retroperitonium, brain

Moderate: 0.01 – 0.05 U/L – bleeding during trauma and surgery, bleeding to joints

Mild: > 0.05 U/L bleeding during major surgery or injury

Management

In severe cases, IV infusion of Factor VIII – freeze dried stable at 4°C. Blood should be screened for Hepatitis B, C and HIV. Vasopressin receptor agonist, deamino-8-D-arginine vasopressin (DDAVP) raises vWD and Factor VIII by 3-4 folds, so useful in arresting bleeding.

Complications

- HBV, HCV, HIV, viral disease, Creutzfeldt–Jakob disease (CJD).
- Antibody against Factor VIII which inactivates Factor VIII. Alternatively Factor VIIa, factor eight inhibitor bypass activity (FEIBA) may be useful.

Haemophilia–B (Christmas disease)

Occurrence is 1 in 30000 due to Factor IX deficiency. Bleeding episodes clinically indistinguishable from those of Haemophilia–A, but less common.

Treatment is through administration of Factor IX after screening for HBV, HCV and HIV. Antibodies are not usually seen in these cases. Prophylactic doses could be given in both cases to prevent frequent bleeding.





BLAND DIET

DIET FOR AN UPSET STOMACH

If you have recently had an upset stomach or diarrhea, your doctor must have suggested limiting your diet to bland foods which will not upset your stomach. Bland diet is often recommended following stomach or intestinal surgery or for people with ulcers, heart burn, nausea, vomiting and gastritis.

A bland diet is a diet consists of foods that are generally soft, low in dietary fibre, cooked rather than raw and not spicy. It is called bland because it is soothing to the digestive tract. It minimizes irritation of tissues. Bland foods may not be appetizing but they are ideal for an upset stomach.

Foods that are bland, non-acidic and easily digested are mild on your stomach and can help prevent uncomfortable symptoms. If you are on a bland diet, you should not eat spicy, fried or raw foods. Avoid alcohol or drinks with caffeine.

Food that you can eat while on a Bland Diet

- Fruit juices, ripe banana, apple without skin, stewed apple and apple sauce

- Bread, crackers and pasta prepared from refined flour, refined cereal rice
- Refined hot cereals such as cream of wheat
- Creamy peanut butter
- Tender and lean meat, fish and chicken stock (for a bland diet, it is best to stick to cooking methods for meat such as steaming, grilling or baking with no added fat)
- Tofu
- Soup especially broth
- Weak tea

Food to avoid on a Bland Diet

- For those on a Bland Diet for treatment of Diarrhea, they must avoid all dairy products
- Fresh cream, whipped cream, strong cheese like Roquefort
- Vegetables such as green pepper, dried peas, onions, corn, cabbage, cauliflower and cucumber
- Vegetables that can cause gas and bloating such as broccoli,

Ms. Sneha Shanoj
Consultant Nutritionist
Kottayam, Kerala, India

cabbage, cauliflower, cucumber

- Seedy fruits such as berries or figs
- Dried fruits
- Pickles, sauerkraut and similar foods
- Spices such as hot pepper and garlic
- Sugary foods, foods with honey, pastries, candies, syrups
- Tea, coffee and alcoholic beverages

Other dietary tips when you are on a Bland Diet

- Eat small meals and eat more often during the day
- Chew your food slowly, and chew it well
- Stop smoking cigarettes
- Do not eat within two hours of your bed time
- Drink fluids slowly





Paul V. Mathew
Program Manager
Additional Skill Acquisition Program
Department of Education
Government of Kerala

From time immemorial, the hunt for discovering the *elixir of life* is known.

People do not want to die and love to remain immortal. A panacea which can cure all diseases, a capsule which is capable to give you eternal life; *'the elixir'* or *'the philosopher's stone'* has been the most sought after one by the 'Alchemist' in various ages and cultures.

No one has ever succeeded in the mission of identifying or preparing this *'elixir'*.

A Taoist 'Xu Fu' had been sent by the Chinese King, Qin Shi Huang with a team of 1000 young men and women to the eastern seas to find the elixir, but he never came back. The Jiajing – an Emperor in the Ming Dynasty was a victim of



A vertical photograph on the left side of the page shows a person sitting on a wooden floor against a light blue wall. The person is wearing a white top and a blue patterned skirt. Only their legs and arms are visible.

THE ELIXIR OF LIFE

this desire and died by consuming a lethal dosage of mercury conjured by alchemists as "*Elixir of Life*". Alexander Bogdanov – a major player among the Bolsheviks believed that blood transfusions were the key to life. But he too succumbed to death during experiments.

As long as death exists, the fascination of the human being to discover the elixir cannot stop.

Recently, scientists have explored another way of transferring consciousness of a dying person into the body of a healthy donor to make '*immortal humans*' through a medical procedure called shedding.

Artificial Intelligence is progressing at a frightening pace. It appears that the last species to be extinct from the earth would be the human being due to his indifferent character.

Do not Laugh. I am Serious...

People used to laugh at those who jog in the morning as thanatophobiac (those who are afraid of death). While time has moved, people, irrespective of place, age and sex, are health conscious and hence they are engaged in jogging.

Still the stigma is not fully shredded, especially in rural areas;

a category of community feels ashamed to go out for physical exertion. Hence, after jogging, they will reach home before the sun shines. It is high time to make regular exercise and physical fitness a part of our culture.

A few days ago a neighbour of mine aged 26 passed away. I learnt later that his blood vessels were clogged with fat. It is shocking to realize that we ourselves dig our graveyards. The life style, eating habits, human induced actions, pollution etc. have catastrophic repercussions among people.

Let us see how our community slowly moved to this health crisis.

Limit Ourselves

It is a paradox; India is home to over 40% of the global underweight population and the third most obese country in the world (11 % of adolescents and 20 % of all adults).

The journal, Lancet reports *that we are under siege: junk food, sedentary lifestyle and alcohol consumption are leading us to silent self-destruction, making one in every five Indian men and women either obese or overweight*. Further, according to WHO, India's women are more likely to be obese than their male counterparts.

Prevalence of obesity among adolescents (13-18 years) has

grown from 16% to 29% over the last five years.

A study published in Paediatric Obesity, an international journal warned that by 2025, *India will have over 17 million obese children and stand second among 184 countries where the numbers of obese children are concerned.* The WHO Commission warns that *“childhood obesity tracks into adulthood and is an important risk factor for the development of type 2 diabetes mellitus, metabolic syndrome, subclinical inflammation, polycystic ovarian syndrome, hypertension, dyslipidemia and coronary artery disease, later in life”.*

Take Care of your Heart

World Health Organization (WHO) reported that India has the highest rate of cardiac arrests in the world. It is a sad state of affairs that India is currently witnessing nearly two million heart attacks a year and majority of the victims are youngsters.

Adding more anxiety, it is estimated that one person in India dies every 33 seconds

It is estimated that one person in India dies every 33 seconds owing to heart attack. Men living in cities are three times more prone to heart attacks than rural population

owing to heart attack. Men living in cities are three times more prone to heart attacks than rural population.

A study by Saffola Life projected that over 70 percent of the urban Indian population is at the risk of being diagnosed with heart disease. Further, the Registrar General of India (RGI) and the Indian Council of Medical Research (ICMR) found that about 25 percent of deaths in the age group of 25- 69 years occur because of heart diseases.

If we consider all age groups, heart diseases account for about 19 percent of all deaths. Experts say that Low-density lipoprotein cholesterol (LDL-C) or "bad" cholesterol is the main villain for heart attacks.

Add Taste but No Sugar

Being a country having the highest number of diabetic patients in the world, India is often called as the diabetes capital of the world.

According to World Health Organization, an estimated 3.4 million deaths are caused due to high blood sugar. It has been further estimated that the burden of type-2 diabetes is expected to increase by 58% in India, from 51 million people in 2010 to 87 million in 2030.

The Lancet study alarmed that there is a fourfold rise in the number of diabetics. It is high in states like Kerala, Tamil Nadu and Gujarat. Nearly 8.2 percent of the adult male population are suffering from diabetes whereas 6.8 percent of adult women are diabetic in India.

Growing Cells

Believe or not, considering the estimates between 2010 and 2012, it is forecasted that 39.6 percent of women and men will be diagnosed with cancer at some point during their lifetime.

Take Care of your Heart



14.5 lakh people are living with cancer in India, with over 7 lakh new cases are being registered every year. Approximately, 2,500 deaths every day can be linked to tobacco. In 2010, smoking caused for 9,30,000 deaths; 1 in 5 deaths among men and 1 in 20 among women.

Breast cancer accounts for 27 percent of all cancers in women in India whereas every 8 minutes one woman dies of cervical cancer (22.9 percent of all cancer cases in women). It is not a welcoming sign to learn that 1 in 28 women is likely to develop breast cancer during her lifetime.

What is Next?

There is no magic wagon to get rid of this vicious cycle. As everything is human induced, solutions must come from our side as well. A paradigm shift in attitude and cultivating health consciousness is the need of the hour.

For instance, we still depend on other States for vegetables. Recently, an analysis was done by the Agriculture Department on a sample of forty-four lots of vegetables collected from the markets. Ten samples contained organo-chloro residue. Of these, five samples were unfit for human consumption as it had residue above permissible limits.

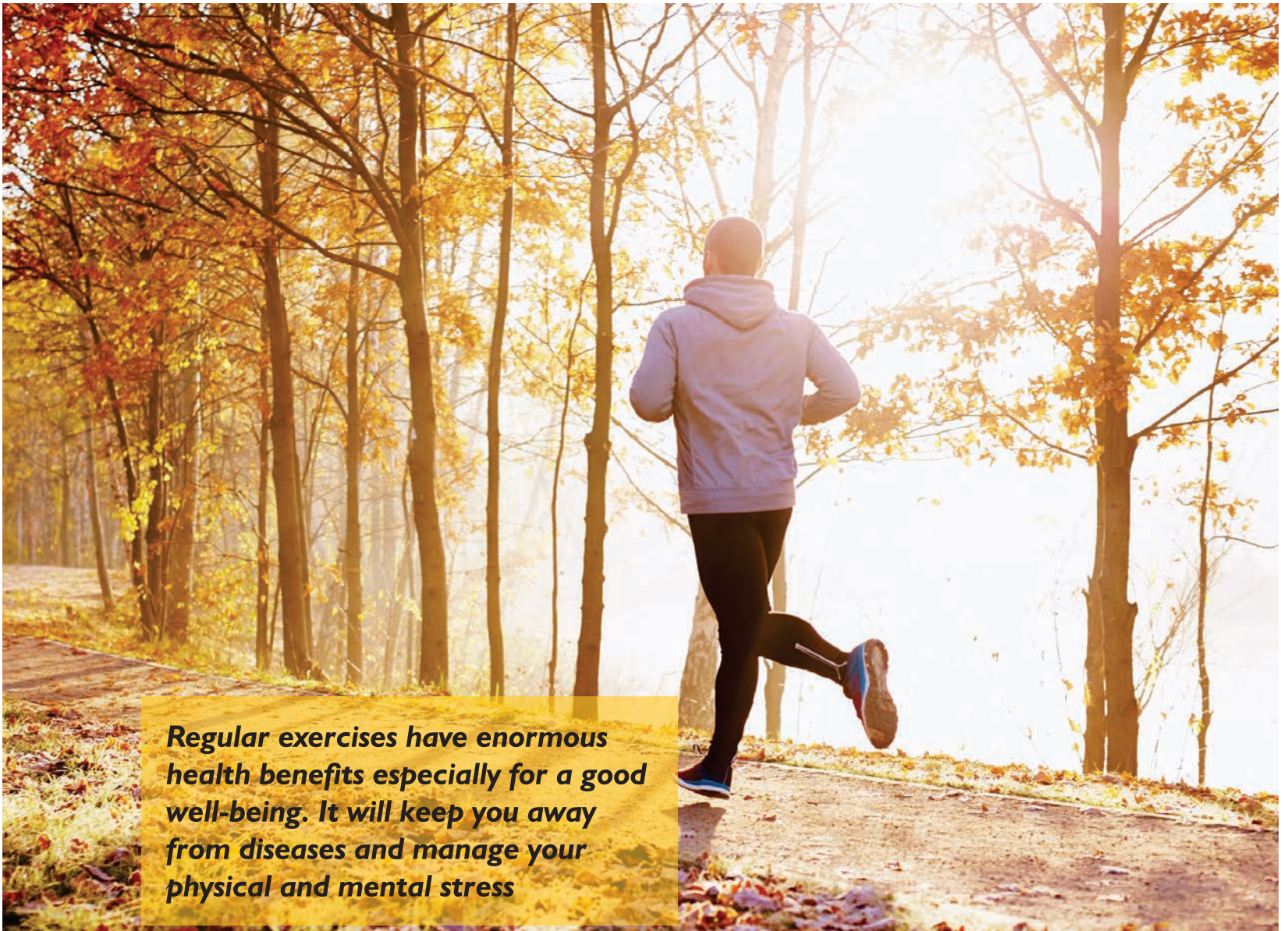
The matter is same in the case of fruits as well – often dipped in chemicals for preservation. While knowing all these facts, we shall find some time and space to develop a homestead farm to cultivate vegetables for our own consumption. Doctors always suggest us to fill half of our plate with vegies at lunch and dinner, and add more fruit to our breakfast.



Photo Courtesy: www.wac.net/wac-wire/nutrition-family-meals

Eat Healthy

- It is advisable not to have food from outside, especially fast foods and junk foods. Always prefer home grown items for consumption. You will live healthy for a long.
- Never avoid breakfast. It is a funny fact that individuals who eat a substantial breakfast lose more weight than those who have a small breakfast. Further, if you want to lose weight, never starve yourself, instead eat well.
- Eat slowly, ask ourselves whether we are really hungry to eat this much and wait for a few minutes before the second turn.
- Having a green tea after meals can improve your health. Green tea is high in antioxidants and can help increase metabolic rate. Antioxidants are crucial to prevent cancer, heart disease and stroke. Avoid red meat to save your heart.
- Drink pure water as much as you can. Avoid soft drinks, especially carbonated ones.
- Eat together as a family wherever possible and teach your children how to make healthy food choices. Always make your mealtimes enjoyable with pleasant conversation and sharing and never for scolding or arguing. Eating fast and eating with stress may leave you with uncomfortable situations.
- Make it a hard and fast rule to eat only at the designated area of your home. Never encourage eating meals or snacks while watching TV which is a major reason for our children to be obese as they are unable to recognize fullness and tempt to over eat.
- Ideally, practice smaller, frequent meals and avoid larger and infrequent ones.
- Say GOOD BYE to SMOKING and DRINKING.



Regular exercises have enormous health benefits especially for a good well-being. It will keep you away from diseases and manage your physical and mental stress

Walk an extra mile

If you really want to live healthy, do 'no compromise' on regular exercise. And very importantly, there is no tomorrow to start exercise. If you are not working out daily, start exercising today onwards. At least walk for 10,000 steps or exercise for an hour each day.

Regular exercises have enormous health benefits especially for a good well-being. It will keep you away from diseases and manage your physical and mental stress. Exercise releases brain hormones like endorphins, which create feelings of happiness. It can

greatly save you from depression, prevents you from aging fast and degenerative diseases like Alzheimer's. Regular physical activity boosts memory and ability to learn new things.

Exercise prevents a wide range of health ailments like metabolic syndrome, type 2 diabetes, depression, cancer, arthritis and falls, heart disease, stroke etc. Studies have shown that exercise lowers your risk of stroke by 27 percent and incidence of high blood pressure by approximately 40 percent.

It reduces the likelihood of becoming physically disabled in older persons and can alleviate spinal pressure, thereby keep you free from back pain. Regular exercise is a way to immunity. Research suggests that women who exercise regularly can expect a 20 to 30 percent reduction in their breast cancer risk compared with women who do not exercise. And frequent physical exercise offers you peaceful sleep.

Let us eat healthy, walk an extra mile and think positively. This is the "real" elixir to life.



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BEFORE A FALL COSTS YOUR LIFE!!

From the moment a heart stops beating, the brain only has around 4 minutes to survive. In such cases, we must immediately start cardiopulmonary resuscitation (CPR) for the victim

The sudden and untimely demise of Shri. Edappakath Ahamed, Member of Parliament as well as that of Mr. Sailas Sebastian, Professor of Kozhikode University was definitely a news of shock and pain. What is more saddening is the disturbing fact that emergency life support care was not easily available at these dignified venues!

In the event of an unexpected collapse of a person, there are a few simple maneuvers that can be easily done by anyone present on that occasion. This set of procedures is commonly known as “Basic Life Support”.

From the moment a heart stops

beating, the brain only has around 4 minutes to survive. In such cases, we must immediately start cardiopulmonary resuscitation (CPR) for the victim. This mainly consists of continuous chest compressions and rescue breaths at a constant ratio of 30 compressions to 2 breaths. Ensuring that this procedure is continued until advanced care arrives can greatly increase the chance of survival.

Out-of-hospital cardiac arrest if rightly intervened has a 15-20% survival rate!

According to American Heart Association (AHA), there are five links



Photo Courtesy: www.verywell.com/pain-and-cprd-914954



Dr. Danish Salim
Academic Director and Head
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or factors necessary in ensuring maximum survival.



1. Early **recognition** of signs of cardiac arrest such as lack of pulse, breathing etc. in an unconscious victim and **activation** of the emergency services.
2. Early **cardiopulmonary resuscitation (CPR)** – 30 chest compressions and 2 rescue breath cycles.
3. Early **defibrillation (shock)**, if needed with automated external defibrillator (AED).
4. Early **transport** in advanced care ambulance.
5. Early **advanced life support** at specialized hospital.

How to ensure High Quality CPR?

1. Minimize interruptions while giving chest compressions.
2. Push fast and hard on chest.
3. At least give 100 – 120 chest compressions per minute.
4. Allow full recoil of chest wall during compressions.
5. Watch for chest rise while giving the 2 rescue breaths.

About Automated External Defibrillator (AED)

Although it sounds complicated, this is an easy to use portable and safe shock administering device. It is

specially designed for the usage for any person even without previous healthcare knowledge.

The machine once opened will give clear set of instruction to the user and guide them to give effective and safe shock to those cardiac arrest victims who need it. During cardiac arrest, some victims develop abnormal rhythms of the heart that can be easily corrected by shock.

In such cases, this AED once connected will automatically recognize the shockable rhythm and correctly guides the rescuer in administering safe shocks, thus, massively improving the survival rate as every second counts in cardiac arrest.

Facilitation of programs like Basic Life support and training along with wide implementation of life saving equipment such as AED at major venues especially within parliament, airports, restaurants, schools, government institutions etc. can markedly change the survival chance for each victim of cardiac arrest.

What we should all remember is that once a person collapses and has no overt signs of life, it does not mean it is the end! There is big hope in the time called “**Platinum minutes**” during which the victim has a huge chance of returning to a completely normal life!



ORAL CANCER AND THE HPV CONNECTION

HPV is the leading cause of oropharyngeal cancers and a few of oral cavity cancers, particularly occurring at the base of tongue and the tonsillar region

Cancer is an unrestricted growth of cells, which march into other tissues and cause destruction. Every hour, a person dies of oral cancer in the United States and approximately 14 deaths per hour are reported in India.

Various risk factors for oral cancer are well known. Factors like tobacco chewing, smoking, alcohol consumption and actinic radiation have been extensively studied and clinically validated.

However, with growing awareness, these traditional factors are declining. Sadly, this does not taper off the incidence of oral cancer, which has led to emergence of new risk factors, one of them being Human Papilloma Virus (HPV).

In addition to its role in carcinogenesis in cervical cancer, HPV has been shown to be a significant risk factor for oral and oropharyngeal cancers.

Know the Molecular Biology

The Human Papilloma Virus (HPV) belongs to the family of double-stranded DNA viruses. It infects the epithelial cells of skin and mucosa. The HPV family contains around 200 strains but it is important to note that only nine out of them are high risk and associated with cancers.

Amongst them, HPV16 is the most strongly related. A recent National Health and Nutrition Examination Survey (NHANES) suggests, roughly 2.1 million Americans on a given day have an oral HPV16 infection.

HPV being epitheliotropic in nature infects basal layer of the squamous epithelium. It integrates with the DNA of the host cell, thereby dysregulating the expression of oncoproteins E6 and E7. This results in the functional inactivation of human tumor-suppressor proteins p^{16} , p^{53} and p^{Rb} , which culminates to cell immortalization.

However, it has been documented that the development of cancer in HPV infected cell may take over 10 years and essentially requires multiple additive crucial epigenetic alterations.



Photo Courtesy: www.drkocak.com



Dr. Savita Sharma

Department of Prosthodontics
BRS Dental College and Hospital
Panchkula, Haryana, India

HPV and Oral Cancer

HPV is the leading cause of oropharyngeal cancers and a few of oral cavity cancers, particularly occurring at the base of tongue and the tonsillar region. Albeit it affects both males and females but middle-aged males (30-55yrs) are 4 times more susceptible. In contrast with HPV negative oral cancers, HPV positive cancers occur in healthy, non-smokers and non-drinkers.

Risk Factors

- Increased number of sexual partners predisposes to the risk of being infected with HPV.
- HIV infected patients and those with immunosuppressant drug therapy are more vulnerable for HPV infection.

Clinical aspects

Besides the conventional signs and symptoms of oral cancer, HPV associated cancers differ in the following facets:

- Some authors have demonstrated a high prevalence of HPV in erosive and atrophic lesions.
- HPV associated cancers are more likely to be present with an early stage (T1/T2) tumor, which can be comparatively smaller.

- There is a more advanced nodal involvement (N2/N3) and the appearance of affected lymph nodes is often cystic.
- These are more aggressive in nature.
- HPV associated cancers are less likely to have a second malignancy.

Diagnosis

Oral Squamous Cell Carcinoma (OSCC) cannot be diagnosed radiographically, so histopathological methods and serological tests are used. Histologically, its presence denotes a subset of basaloid squamous carcinoma with a more indolent behavior.

There are various serological tests for detection of HPV, but they differ in their analytical sensitivity. Immunohistochemistry for p¹⁶ (a tumor suppressor protein over-expressed in HPV associated cancers) is said to be highly sensitive for HPV and can be used routinely as a surrogate for HPV status.

Confirmation is done using standard methods based on Polymerase Chain Reaction (PCR) assays, in-situ Hybridization and Southern Blot Hybridization for detection of HPV DNA.

Staging

Emerging evidence suggests that the contemporary Tumor, Node and Metastases (TNM) staging for oral cancer designed empirically for non-HPV associated oral cancer seems unsuited for HPV-related OSCC. The basis of which is suggested to be the improved prognosis of



Oral Squamous Cell Carcinoma (OSCC) cannot be diagnosed radiographically, so histopathological methods and serological tests are used

HPV associated OSCC, despite presenting at advanced stages.

Provisionally, an alternative staging system for HPV-related OSCC has been developed by the International Collaboration on Oropharyngeal Cancer Network for Staging (ICON-S).

Treatment

Treatment of oral cancers requires a multidisciplinary approach. The therapeutic treatment modalities are generally surgery and radiation with or without concomitant chemotherapy.

Although, the treatment for HPV associated oral cancers is currently the same as for those with HPV negative cancers, literature suggests that there is an increased sensitivity of HPV positive oral cancers to chemo-radiotherapy as compared to their negative counterparts. HPV positive oral cancers, thus, have a better prognosis and survival rate as compared to HPV negative ones.

We can conclude that knowledge of HPV status of an oral cancer patient is vital and imperative as it can both guide and predict the outcome of therapy.

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DEPRESSION

A Real Concern in India

The prevalence of depression across the world has increased to such an extent that it is the theme for the World Health Organisation's World Health Day on April 7

Indians popped more antidepressants in 2016 than ever before, indicating perhaps that they are now more open to the idea of seeking help for mental health problems.

Around 10.6 lakh more prescriptions for antidepressants were written in 2016 than in 2015 shows data collated by health information agencies. While 3.35 crore prescriptions (for new patients) were written in 2015, doctors wrote 3.46 crore new prescriptions in 2016. The number of prescriptions written out only by psychiatrists in 2016 represented a 14% rise over 2015.

Depression, though widely spread in India, is rarely given importance in the public health system, which is burdened by infectious diseases such as tuberculosis and dengue as well as non-communicable diseases such as diabetes and hypertension.

Psychiatrists treat patients with major depressive disorders while doctors from multiple specialties treat patients with mild or disease-related depression.

In October 2016, the National Institute of Mental Health and Neurosciences in Bengaluru released a mental health survey that said one in every 20 Indians suffered from some form of depression. The prevalence of depression across the world has increased to such an extent that it is the theme for the World Health Organisation's (WHO) World Health Day on April 7.

Over 5 crore Indians suffered from depression, a major contributor to global suicides which occurred mainly in low- and middle-income countries like India in 2015, a WHO study has said. The World Health Organisation in its new global health estimates on depression for 2015 said while over 5 crore Indians

suffered from depression, over 3 crore others suffered from anxiety disorders.

The report titled 'Depression and Other Common Mental Disorders — Global Health Estimates' said over two-thirds of global suicides were in low- and middle-income countries like India in 2015. The WHO document said that 322 million people are living with depression worldwide and nearly half of them live in South East Asian and Western Pacific region, reflecting relatively large populations of India and China.

The total estimated number of people living with depression increased by 18.4% between 2005 and 2015, it said. According to WHO figures, the total cases of depressive disorders in 2015 in India were 5,66,75,969 which was 4.5% of population in 2015 while total cases of anxiety disorders were 3,84,25,093 which was 3% of the population in the same year period.

For depressive disorders, WHO said total Years Lived with Disability (YLD) in India was 1,00,50,411 which was 7.1% of total YLD. For anxiety disorders, total years for YLD was 35,19,527 which






Photo Courtesy: <http://blogisabelmartinsicologa.es/tag/psicologia/>



Compared to men, women are more prone to mental disorders due to factors such as gender discrimination, early marriage, domestic violence and rapid social change

was 2.5% of total YLD.

The document noted that in 2015, an estimated 7,88,000 people died due to suicide while many more than this number attempted but did not die. It said suicide accounted for close to 1.5% of all deaths worldwide, bringing it into the top 20 leading causes of death in 2015. "Suicide occurs throughout the lifespan and was the second leading cause of death among 15-29 year olds globally in 2015," it said.

The suicide rate varies by WHO Region and by sex, ranging from below 5 per 100,000 of the population among females in low- and middle-income countries of the Eastern Mediterranean and American Regions to 20 or more among males in high-income countries and also in the low- and middle-income countries of the African, European and South-East Asian Regions.

78% of global suicides occurred in low- and middle-income countries in 2015," it said. India accounted for the highest estimated number of suicides in the world in 2012, according to a WHO report published in 2014 which found that one person commits suicide every 40 seconds globally.

Depression is the leading cause of disability worldwide and is a major contributor to the overall global burden of disease, WHO said and asserted that more women are affected by depression than men and at its worst depression can lead to suicide.

Mental illnesses are commonly prevalent in children, females, elderly, disaster survivors, industrial workers, adolescents and those people who are having chronic medical conditions.

Compared to men, women are more prone to mental disorders due to factors such as gender discrimination, early marriage, domestic violence

and rapid social change.

Common reasons for mental illnesses:

- 1) Deprivation and poverty
- 2) Illiteracy or limited education
- 3) Low household income
- 4) Lifetime disorders such as panic, phobia, generalized anxiety disorder
- 5) Alcohol dependence
- 6) Drug Abuse

Common symptoms include:

- 1) Confused thinking
- 2) Prolonged depression
- 3) Feeling of extreme highs and lows
- 4) Changes in sleeping and eating habits
- 5) Suicidal tendency
- 6) Intense fear

The prevalence of mental disorders in different groups are:

- 0-3 yr old children-13.8 %
- 4-16 yr old children-12 %
- Industrial workers-14-37 %

The risk of mental illness can be reduced by following simple steps:

- Taking a healthy diet
- Getting regular exercise
- Avoid stress
- Discuss your problems with others
- Avoid taking alcohol and drugs
- Take enough rest
- Spread awareness among people to initiate the early treatment

Source: PTI & Live Mint



My Experience with Dentcare



Capt. (Dr.) Pramod P. S.
Dental Practitioner



Dr. Preetha Pramod
Dental Practitioner

Thiruvananthapuram, Kerala, India

We as Dental Surgeons in Kerala are very lucky to have a Dental Lab in the Centre of our own State with world class facilities. The DentCare Dental Lab and its whole team of Lab technicians and their supporting staff are a very dedicated group of professionals. As Dental Surgeons we do not have to worry about the quality of the products as it is well assured in the case of DentCare Dental Lab.

It is the perseverance of individuals like Mr. John Kuriakose who has to be applauded for beginning this world class institution. Especially in Kerala where there are very few job opportunities he has given jobs to thousands of young men and women. The best thing of this Lab is that it is well updated and it helps bring all new innovations in technology to everyone. Prayers to the Almighty to help take this Lab to more glorious heights.

The Renfert logo is a white oval shape with the word "Renfert" in a bold, sans-serif font inside.

making work easy

A photograph of a dental laboratory. In the foreground, a white Renfert dental mill is visible, with a control panel on the right side. The panel features a digital display showing "1:00" and "rpm 350", along with various buttons and a large blue knob. In the background, there are other pieces of dental equipment, including a dental chair and a sink, in a clean, well-lit environment.

Use all analog and digital possibilities

We invite you to see the bigger picture. Our new guest author Jürgen Pohling shares his thoughts with us for the first time.

Analog and Digital Dental Technologies belong Together



Analog and digital dental technologies belong together – It has become very apparent in recent discussions. There were many examples of how traditional manual instruments and equipment were successfully combined with modular and system applications. Whether prosthetic planning or model fabrication, restorative, framework, monolithic structure, full denture fabrication or ceramic veneering: digitally fabricated objects are often transformed into full-fledged functional and esthetic restorations when complemented by manual craftsmanship.

Different as in the past, not every restoration today is forcibly done digitally if it can be produced more quickly using analog technology. MDT Andreas Kunz from Berlin is a good example of this approach. Before beginning work on technology, Kunz checks which technology

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enables him to do the work the most efficiently. Efficiency is the intelligent combination of time and commercial factors without having to compromise on product quality. Assistant professor Dr. Jan-Erik Güth and MDT Josef Schweiger (both from Munich) describe it as follows:

“We should not try to copy analog techniques digitally, but learn to use the additional benefits offered by digital technologies!”

And that is exactly how dental technology works today: The desired restoration as agreed upon among patient, dentist and dental lab is achieved using the most relevant – or combination of – available techniques and materials. During the analog times, it might have been clear how restoration fabrication worked, today with the additional digital possibilities it is important to plan the process thoroughly. Regardless of the fact whether the work is produced completely by a CAD/CAM system or whether only a single component such as a scanner is used – and whether the framework fabrication is produced industrially or through a partner lab.



Of course for the fabrication process for some restoration materials like Zirconia or Hybrid-Ceramic, mainly digital, is clearly defined. However, if for example lithium disilicate glass ceramic or zirconia reinforced lithium silicate ceramic is chosen, both digital milling / grinding and analog press technology come into question. By the way: ceramic press-on technology for (ceramic) frameworks can sometimes be a suitable option.

Currently there are more material, design and production options available for individual patient restorations than ever before. Even more choices are available when you add the current trends in composite materials complemented by new developments in software and 3D printing. Dental technicians who master analog, as well as digital dental technologies will be capable of combining classic as well as modern materials and processes to get the best results.



Jürgen Pohling

Jürgen Pohling is consultant for dental communication & marketing. He is very experienced in the processes of the dental industry and the dental marketing. As a freelancer, he supports companies of the dental branch in questions of marketing, dental PR and lab or trade show organisation.



Food for Summer

In India, summers are very hot especially in the northern parts of the country. But now due to human intervention, even the southern part of India is in race with the North during the period from March to June when it comes to heat and its related consequences on human lives and nature.

With increasing global temperatures and unbearable heat, one needs to take extremely good care during this time. Besides of course,

drinking lots of water and other fluids to keep hydrated, it is just as most important to have the right kind of food too.

Proper diet in summer will help in keeping the body cool and ward off symptoms like dehydration, vomiting and diarrhoea at bay. This article suggests food to keep you cool in summers. So include these food items in your daily diet and beat the Indian summer.

FLUID-FILLED VEGETABLES LIKE CUCUMBERS AND TOMATOES WHICH HAVE HIGH WATER CONTENT IN THEM KEEP ONE HYDRATED DURING SUMMERS

Fruits with high water content

Fruits like water melon, oranges, papayas and melons which have a lot of fluid or water content in them are a must have for summer. Drink lots of juices, while having generous amounts of fruit salads and custards. Try to eat fruits raw as the water content in the fruit is the most effective. This will keep you full and hydrated for long.

Juices

Talking about fruit juices alone is inadequate. Include vegetable juices, aam panna, lemonades, buttermilk and Jaljeera among others as well. These 'Indian origin' drinks are fresh, healthy and absolutely safe to consume. They also keep one hydrated and the digestive system fit.

Yogurt

By dairy products, we do not only mean ice-creams!!! Curd and Buttermilk are very effective for consumption too. Make sure you have a nice bowl of yoghurt with fruits, a sweet-spicy glass of buttermilk post meal or a glass of sweetened creamy milk (lassi). One can also make some delicious raitha as a side-dish. Curd can also be consumed during meals and they keep one cool and hydrated during summers.

One popular food item for summer season in India is curd. Life without



curd is simply – Impossible. Curd can be consumed in various forms like raithas, chhach (buttermilk), shrikand, lassi etc. In South India, people eat curd rice in summers. Curd contains proteins which keep allergies and ulcers away. Any curd based dish is effective to keep you cool in summers.

Mint

It has a cooling taste to it which makes it an attractive ingredient. It is inexpensive and easily available. One can use pudina to make chutney and use as dips too. It has a delicious and refreshing taste, just right for the summers.

Vegetables

Fluid-filled vegetables like cucumbers and tomatoes which have high water content in them keep one hydrated during summers. Tomatoes can be consumed raw as well as eaten in the form of vegetables and chutneys too. Onions have amazing cooling properties as well. One can add it to their salads, chutneys, vegetables, dips and curries. Cucumbers are crunchy and tasty. It contains fibre and keeps constipation at bay.

Mangoes

Summers are a time to indulge with the king of fruits. Make sure you indulge in everything mango. Mango milkshakes, pudding, ice cream, Aamras and the good old, Kairi (raw mango) with a tinge of chaat, red



Mint has a cooling taste to it which makes it an attractive ingredient. It has a delicious and refreshing taste, just right for the summers



Photo Courtesy: www.cuidatequeyotecuidare.com

chilli powder and salt on it.

Ice creams

Ice creams have no season but summers are a special reason to gorge on ice creams without the risk of cough and cold. So throw the diet chart out of the window and indulge in some ice cream sin and enjoy.

Watermelon

Water melon, litchis and musk melons contain high levels of water. Hence they should be consumed in bulk. Watermelon is 91% water by weight and litchi is 80 % water. You can find watermelon and litchi vendors at almost every nook and corner in India. These foods will help you beat Indian summers with ease.

Coconut Water

Coconut water is a super drink. It has the same electrolyte concentration as our blood and so it gets absorbed very fast. It contains a lot of beneficial vitamins and minerals. It helps in weight loss and also in maintaining healthy metabolism.

Kokum

It is found in India only and looks like small, dark purple plum. It

tastes sour like tamarind. A glass of kokum juice a day prevents dehydration, loss of nutrients and improves appetite. It also cleans blood.

Sattu

Sattu in India is generally consumed by poor people but it has extremely good properties for your health. It is extracted from barely, wheat or gram. Mix sattu, little lemon juice drops, salt and roasted cumin powder to get a very healthy drink.

Food Tips to Beat Indian Summers

- **Drink plenty of water** and fluids so that loss of water can be compensated. Fluids like lemonade and coconut water should be consumed in more quantity as they have electrolytes and hence it takes care of the mineral requirement of the body.
- **Always go for light diet** which can be easily digested by our body without much effort. Oily and junk food should be avoided.
- **Avoid too much of tea and coffee** as it contains caffeine which results in dehydration.

Restrict tea and coffee to two cups a day. You can switch to green tea as it contains antioxidants which are great help to the body during summer seasons.

- **Do not eat spicy, hot and extremely salty food** as they are hard to digest and will have ill effects on the skin.

Conclusion

It is a kind of myth that summer means more exercise and healthier food choices for everyone. One eye-opening study found that kids gain weight three times faster over summer than they do the rest of the school year, thanks to a steady diet of junk food and video games.

Food is the only instrument which helps you protect and manage the summer with less hazardous consequences.



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DentCare exhibiting its wonderful achievements, at the 37th International Dental Show (IDS), 21 - 25 March, 2017 at Cologne International Expocentre, Cologne, Germany.

— summer and — Skin Care

Skin care in summer calls for special attention because during the summer season the skin's natural oils start flowing freely which makes the skin appear dull, oily and blemished



Photo Courtesy: cloudspa.co.uk

Do you think this summer will eat away your healthy glowing skin? Well, looking at the scorching sun and burning flames, I think this is the right time to protect your skin from tan and darkness.

Skin care in summer calls for special attention because during the summer season the skin's natural oils start flowing freely which makes the

skin appear dull, oily and blemished. In addition, the increased susceptibility to the UV rays of the sun not only results in skin tanning, but also increases the problems of dark patches and wrinkles.



Natural remedies are the best way to remove sunburn and skin tan. Many people go out on summer vacations without proper protection. Doing this can harm your skin, as it is the most sensitive part of your body.

Tanning is one of the major problems during summer and most people try to find a quick solution to it by using chemical laden bleach or opting for cosmetic peeling procedures. But, these quick solutions have several side effects and cause severe damage to the skin. Therefore, you should know how to protect your skin from the burning summer sun with simple home remedies that also function as natural remedy for pimple and acne removal.

The Mechanism of Skin Tanning

Sun burn or sun tan is a common problem faced by all of us and the skin can get tanned any time if it is not protected by sunscreen or clothes. The main reason behind skin tanning is a compound called melanin that is present in the skin. Our skin gets its colour thanks to melanin and people with darker skin have more melanin compared to people with lighter skin tone.

Natural remedies are the best way to remove sunburn and skin tan. Many people go out on summer vacations without proper protection

The body normally creates melanin as a response to sun exposure in order to protect the inner layers of the skin from damage. This is the reason why skin changes colour after prolonged exposure to sunlight.

Other than tanning or burning, some people also get freckles and uneven patches on the skin. In severe cases, excessive exposure to UV rays of the sun or getting a fake tan using tanning lamps or tanning beds can lead to Melanoma, the



most serious form of skin cancer caused by DNA damage.

Four Simple Homemade Remedies to Protect Your Skin from Summer Tan

If you do not take enough care from UV rays, you will end up with different shades of darkness at the end of the summer. Most of us live in an illusion that we need to burn our pockets to buy expensive spa products that help you in lightening the tan. Not necessary at all!!

Here are some quick homemade remedies that can be easily prepared but with a little patience.

Lemon and Aloe vera Face Pack

Lemon is one of the best citrus fruits that have rich medicinal and cosmetic benefits. No doubt, it is widely used in various skin and hair care remedies as well as skin care products. Lemon is a natural bleaching agent and an antioxidant which combats the free radicals that accumulate on skin surfaces. It is rich in vitamin C and the intake of lemon juice would fetch you a glowing skin. *Aloe vera* on the other side is a short stemmed succulent plant that produces six antiseptics. These natural antiseptics have the super power to kill any kind of bacteria, fungi and viruses that settle on the skin due to pollution, dust and other reasons.

Benefits of Lemon and Aloe vera Face Pack

This is one of the most effective home remedies to remove tan. Lemon can be used as a bleaching agent to lighten your skin tone naturally without causing any harm to it. All you need to do is juice a lemon and alongside, mash the *aloe vera* leaves. Mix them properly until an aromatic paste is formed. Apply this onto the tanned area of the skin and allow it to dry. You need to apply this paste twice or thrice a day to cleanse and prevent your skin from getting tanned from time-to-time. This is also an effective cure for dark circles around eyes.

Curd and Gram Flour Face Pack

Curd is basically a dairy product which plays a major role in the growth of bones. It is very rich in calcium, magnesium and other nutrients that help in strengthening your bones. Besides this, the unknown fact is that it can be used as a great exfoliating agent that removes dead skin cells and also moisturizes the skin deeply. It helps in cooling the skin that is continuously exposed to sunlight for hours. Gram flour is



widely used in whitening your skin and it really helps in giving an instant glow to your skin.

Benefits of Curd and Gram Flour Face Pack

This face pack is one of the time-tested home remedies for tanning that can also be used as a scrub or exfoliator that is the most effective natural solution to the question of how to get rid of dead skin cells from the skin surface.

Take curd and gram flour in equal quantities and mix well by adding lemon juice in proportions. Apply this paste to

Curd can be used as a great exfoliating agent that removes dead skin cells and also moisturizes the skin deeply. It helps in cooling the skin that is continuously exposed to sunlight for hours

face, neck and other body parts such as hands and feet. Pat it dry and wash it with warm water. This can be applied twice a week which ultimately results in soft glowing skin.

Turmeric Powder, Yogurt and Honey Face Pack

Turmeric powder is a common ingredient in every kitchen and is the best known antiseptic / anti- bacterial agent. It is used in relieving pain and as a disinfectant for use in cuts and burns. Turmeric is also an age old home remedy that has been used in Ayurveda to treat various skin diseases. Yogurt is a dairy product just as curd and it has a gel like texture. Honey, a sweetening agent can be considered as one of the best natural moisturizing agents



Photo Courtesy: www.femina.ch/beaute/



Rose water is one of the best beauty products and is used in aroma therapies. It can be used as a cleanser, toner and leaves you with a refreshing feeling

that will help the skin retain its supple and elastic nature. It is used in various cosmetic preparations and is an antioxidant that helps in healing wounds.

Benefits of Turmeric Powder, Yogurt and Honey Face Pack

Turmeric or holy powder used in this face pack makes it a potent homemade remedy for tan removal and as a moisturizing agent for treating dry skin in summer. In summer, it is really required to keep your skin moist because the body is very much subjected to dehydration. This results in dry skin which loses its lustre in the process. Make a thick paste by mixing all the three ingredients well. Apply this pack on dry skin and leave it for 15-20 minutes. Later, rinse it off with cold water. This pack helps in moisturizing

and adding radiance to your skin under these dire circumstances.

Sandal wood and Rosewater Face Pack

Sandalwood has rich benefits especially when it comes to accomplishing a fairer skin. It is used in the treatment of acne and skin aging. The soothing and cooling properties of sandalwood make it the perfect remedy for relieving sun tan and severe sunburn. Rose water is one of the best beauty products and is used in aroma therapies. It can be used as a cleanser, toner and leaves you with a refreshing feeling. The combination of sandalwood and rose water makes this pack the perfect natural remedy for sun tan removal in a gentle and nourishing way.

Benefits of Sandal wood and Rosewater Face Pack

This face pack can be used as a cleanser. Make a thick paste of white or red sandalwood powder and rosewater and apply it to face. Wait for 20 minutes and allow it to dry. After this wash it with cold water and always use a soft towel to clean up your washed face. This paste relieves you from sun burns and other sun tan effects.

The above-mentioned face packs are completely natural and will help you in removing the tan gradually. These face packs will help in summer and all other seasons accordingly. It is suggested to clean your face before applying such packs so as to remove the dust and other small particles. Remember that you should never apply these face packs on an unclean face. Always use a soft cloth to clean your face after washing.



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Dr. Mayur Davda
Founder – The Dental Education

SOCIAL MEDIA & DENTISTRY



A recent Survey Report reveals that dental practitioners are reluctant to adopt social media for professional use. More than 100 dentists in India were surveyed on their social media usage. The result was interesting; 90% of dental practitioners said that they used social media for personal use; 63% indicated that they used it for professional purposes such as connecting with peers (70%), raising awareness of their practice (61%) and educating patients (51%).

With the Government of India's Healthcare Policy emphasizing on preventive healthcare, medical practitioners and hospitals have to find new ways to reach and educate patients to stay healthy. In this context, we believe that social media can be a game changer, especially for specialist care providers such as dental surgeons, ophthalmologists, dermatologists and ENT specialists.

The survey report, which is possibly the first of its kind in India, outlines possible reasons for low social media adoption; due to limited understanding of social media; lack of skills needed to create compelling content on social media; uncertainty around how Regulatory Bodies such as the Indian Dental Association perceive social media use; and absence of well-known peers

using social media.

The survey also reveals that dental practitioners are interested in using social media for professional purposes. But the rigors of running a practice mean that they seldom have the time to invest in familiarizing themselves with this medium.

Salient findings of the report include the following:

- The top social media platforms used by dentists for professional work include Twitter, LinkedIn and Blogs (in that order).
- 42% of dentists spent an average of one to five hours a week on social media pertaining to work. About 33% spent less than an hour a week.
- Only 28% of dentists had a budget for investing in social media activities.

The study report discloses that social media can be used to educate, promote, interact and advise patients.

42% of dentists spent an average of one to five hours a week on social media pertaining to work. About 33% spent less than an hour a week

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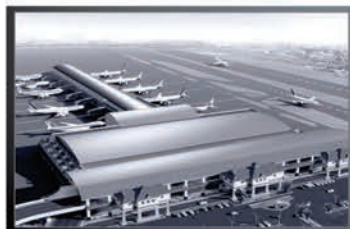
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Solution for a
Beautiful Smile**

DentCare has on board a panel of expert Orthodontists who are proficient to guide us through the toughest of cases. The panel would verify and ensure correctness during the plan formulation stages itself and thus ensure that the required result is achieved

at the clinic negotiating conventional brackets and wire adjustments.

Patients and dental clinicians stand to gain numerous valuable hours. Consequently, the dental clinician also gets spent quality, value-added time with each patient.

During treatment, each DentCare Clear Aligner is replaced following the prescribed sequence as the teeth move – little by little, week by week – until they have gradually straightened to their final position.

With DentCare Clear Aligners, the final outcome of the treatment may be visualized with the aid of 3D virtual simulation and a treatment plan can be formulated accordingly.

DentCare has on board a panel of expert Orthodontists who are proficient to guide us through the toughest of cases. The panel would verify and ensure correctness during the plan formulation stages itself and thus ensure that the required result is achieved.

The product also comes with clear cut instructions for both the clinician as well as the patient.

Advantages for the patient

- No metal brackets or wires which may cause irritation or friction inside the mouth
- Almost invisible and transparent splints
- Hygienic as it can be taken off easily to clean
- Easily removable – does not affect eating habits
- Simple and precise planning process
- Highly biocompatible
- Hassle free speech and smile
- Blends with lips and cheeks

- Final result can be visualized in 3D before treatment starts
- Fewer and shorter appointments are required
- Time saving correction of misplaced teeth
- Replacement aligners at minimal cost

Indications

- For diastema closure
- For correction of minor to moderate front teeth crowding
- To correct deep bite
- To correct overjet
- To correct open bite

Prior to beginning the process of planning and designing a DentCare Clear Aligner, a perfect understanding of the patient's chief complaint and the proposed treatment plan is absolutely necessary.

For better treatment planning and optimal clinical result, detailed information is critical. Complete evaluation is provided by DentCare to help achieve better execution of cases.

Acceptable Impressions

To proceed with the CAD / CAM procedure for processing an order of a custom made DentCare Clear Aligner, both upper and lower models of the patient's dental arches along with bite registration are required.

Intraoral scans of upper and lower teeth may be emailed to **aligner@dentcaredental.com** with details of the patient and name of the doctor.

You may also choose to send impressions with Polyether but impressions with Polyvinyl Siloxane (PVS) are preferred. A one-step heavy / light body



impression is the most efficient option for a DentCare Clear Aligner case.

Acceptable Bite Registration

Bite registration is absolutely necessary to reproduce the inter-arch relationship. This would help establish the patient's occlusion in the laboratory and ensures that the treatment is carried out within the parameters of the initial occlusion.

A bite registration silicone is the material of choice for bite registration as it gives excellent details of the occlusal contacts without rebound effect.

Digital Case Records

In order to proceed with the designing, it is mandatory to send us digital records of the patient. Ideally, a CBCT or CT is preferred. However, an Orthopantomogram (OPG) along with Lateral Cephalograph would suffice.

Photographs

Photographs as mentioned below are mandatory.

Intraoral

1. Upper occlusal view

2. Lower occlusal view
3. Left Lateral view
4. Right Lateral view
5. Anterior view

Extraoral

1. Lateral view
2. Anterior view

How does it work?

The treatment consists of a revolutionary system which integrates the latest software and 3D CAD / CAM technology.

The patient models are scanned with a high-tech 3D digital scanner. The software assists in analyzing the treatment requirements and thus supports in planning and mapping out all intermediate stages necessary to reach the predetermined goal.

The number of aligners required is ascertained. At each transitional stage, only minor tooth movement is effected and assists to progressively reposition the teeth. After two weeks, the next set of aligners should be used. The treatment process thus advances accordingly.

Each DentCare Clear Aligner must be put on for at least 20 hours a day for two weeks. This slowly pushes the teeth into positions planned by the dentist. Treatment time varies based on the complexity of the tooth movement planned.

When should you wear it?

We recommend wearing of a DentCare Clear Aligner everyday as per the dental clinician's instructions or as instructed in the



WITH DENTCARE CLEAR ALIGNERS, YOU HAVE ON BOARD WITH YOU, AN INNOVATIVE PRODUCT FROM THE LAB PARTNER MOST TRUSTED BY THOUSANDS OF DENTAL CLINICIANS WORLDWIDE

DentCare Clear Aligner schedule. Remove it only when you eat, drink or brush / clean your teeth. When you are not wearing the Aligner, place them in the case provided.

Wear schedule

Each set of DentCare Clear Aligner is to be used for two weeks. You should not wear the next Aligner before the stipulated time.

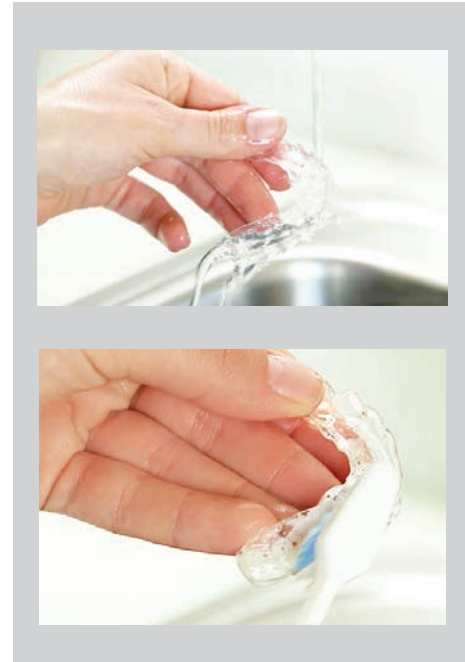
You may feel that the Aligner you are already wearing has become loose and is no longer moving your teeth. Roots may take longer to catch up with the crown of the tooth. Change your Aligner as per your dentist's instructions or as instructed in the Aligner's wear schedule.

How do you wear them?

- Soap-wash your hands thoroughly before handling the Aligners.
- Handle only one Aligner at a time.
- Never bite the appliance into place. Bites can distort or break your Aligner. Always use fingers to place the Aligners in your mouth.
- When inserting, gently push the Aligners over your front teeth. Then apply pressure with your fingers, on top of the left and right molars until they snap into place.
- Make sure each Aligner is fully seated. There should not be any space between the edge of the tooth and that of the Aligner. If the Aligner is not settled in place, teeth will not move properly and the next Aligner will be even further off. This can waste many weeks of treatment.

How do you remove them?

To remove DentCare Clear Aligners, pull them off simultaneously on both sides of the back teeth first and then gently lift from



the front teeth.

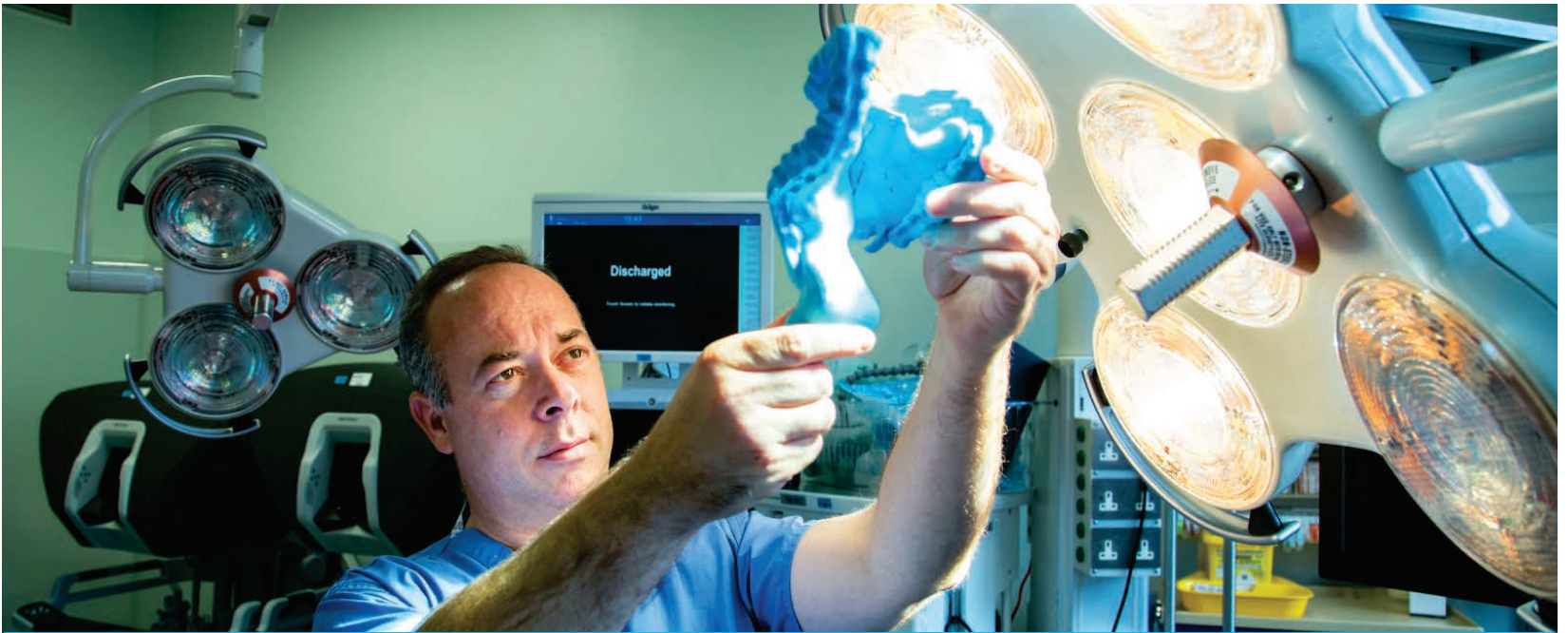
How do you clean them?

Clean the Aligners prior to each insertion using the soft brush provided and rinse them with water.

Things to remember

- Never expose the Aligners to heat; they will get distorted and become loose fitting.
- Never forcefully bend or twist the Aligners to adjust or get them off.
- Never boil to clean or sterilize the Aligners.
- Never remove the Aligners unless it is very necessary.
- Never use any sharp object to remove the Aligners.
- Never use denture cleaners to clean your Aligners.
- Never soak the Aligners in mouthwash.

With DentCare Clear Aligners, you have on board with you, an innovative product from the lab partner most trusted by thousands of dental clinicians worldwide.



MESENTERY: THE MYSTERY UNFOLDS

Scientists have only just identified a new human organ that has been hiding in the digestive system for hundreds of years

Scientists have only just identified a new human organ that has been hiding in the digestive system for hundreds of years. Named as the mesentery, the organ connects the intestine to the abdomen and had for hundreds of years been considered a fragmented structure made up of multiple separate parts.

The evidence for the organ's reclassification is now published in *The Lancet Gastroenterology and Hepatology*.

"In the paper, which has been peer reviewed and assessed, we are now saying we have an organ in the body which has not been acknowledged as such to date," said Professor J. Calvin Coffey, a researcher from the University Hospital Limerick in Ireland, who first discovered that the mesentery was an organ.

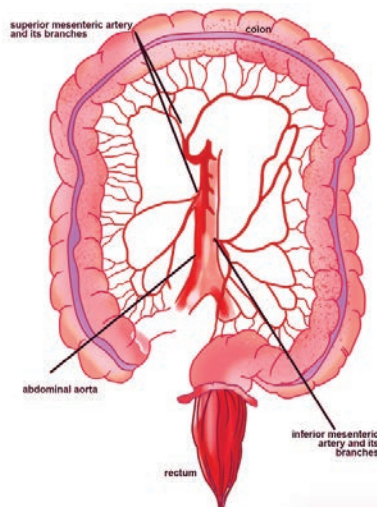
Mesentery is a fold of the peritoneum which attaches the stomach, small intestine, pancreas, spleen, and other organs to the posterior wall of the abdomen. During the initial research, the researchers found that the mesentery, which connects the gut to the body, was one continuous organ.

Better understanding and further scientific study of the mesentery could lead to less invasive surgeries, fewer complications, faster patient recovery and lower overall costs. According to Coffey, mesenteric science is a separate field of medical study in the same way as gastroenterology and others.

One of the earliest explanations of the mesentery was made by Leonardo da Vinci and for centuries it was unnoticed as a type of irrelevant information. Over the past century, doctors who studied the mesentery assumed it was a fragmented structure made of separate sections, which made it pretty unimportant.

But in 2012, Coffey and his colleagues showed through detailed microscopic examinations that the mesentery is actually a continuous structure. Over the past four years, they have collected further evidence that the mesentery should actually be classified as its own distinct organ and the latest paper makes it official.

Column courtesy:
<http://www.sciencealert.com>



EVENT CALENDAR

2017 THIS APRIL - MAY

03 - 05 April

Dubai, UAE

- International Conference on Dentistry
- Crowne Plaza Dubai
- ☎ + 1 302 231 6959
- www.madridge.com

17 - 19 April

Dubai, UAE

- 24th International Conference on Dentistry and Oral Care
- JW Marriott Hotel
- ☎ + 1 888 843 8169
- ☎ +1 650 618 1417
- www.dentistry.conferenceseries.com

05 - 06 May

Dubai, UAE

- 12th CAD/CAM and Digital Dentistry Conference
- Intercontinental Hotel
- ☎ + 971 4 361 6174
- ☎ + 971 4 368 6883
- www.cappmea.com

06 - 08 April

New Orleans, USA

- New Orleans Dental Conference and LDA Annual Session
- New Orleans Ernest Morial Convention Center
- ☎ + 504 834 6449
- ☎ + 504 838 6909
- www.nodc.org

21 - 25 April

San Diego, USA

- 117th Annual Session of American Association of Orthodontists
- San Diego Convention Center
- ☎ + 1 314 993 1700
- ☎ + 1 314 997 1745
- www.aaomembers.org

22 - 23 May

Las Vegas, USA

- 30th International Conference on Dental Science and Advanced Dentistry
- Hampton Inn Tropicana and Event Center
- ☎ + 1 888 843 8169
- ☎ +1 650 618 1417
- www.conferenceseries.com

06 - 08 April

Portland, USA

- Oregon Dental Conference
- Oregon Convention Center
- ☎ + 1 503 218 2010
- ☎ + 1 503 218 2009
- www.oregondental.org

01 - 02 May

Toronto, Canada

- International Conference on Oral Biology and Restorative Dentistry
- Sandman Signature Mississauga Hotel
- ☎ + 1 888 843 8169
- ☎ + 1 650 618 1417
- www.conferenceseries.com

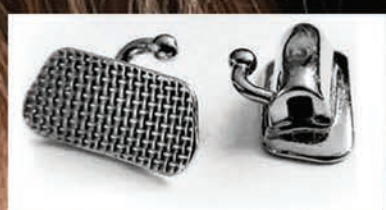
25 - 27 May

Manchester, UK

- British Dental Conference and Exhibition
- Manchester Central
- ☎ + 020 7563 4175
- ☎ + 020 7563 4590
- www.bda.org



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