



## TETANUS

Issue 24

16th March, 2012

**T**etanus, also known as lockjaw, is a serious but preventable disease that affects the body's muscles and nerves. It typically arises from a skin wound that becomes contaminated by a bacterium called *Clostridium Tetani* which is often found in soil.

Once the bacteria are in the body, they produce a neurotoxin (a protein that acts as poison affecting body's nervous system) that causes muscle spasms. The toxin can travel throughout body via bloodstream. As it circulates more widely, the toxin leads to generalized muscle spasms. Without treatment, tetanus can be fatal.

Most cases of tetanus follow a contaminated cut or deep puncture injury, such as a wound caused by stepping on a nail. Injuries that involve dead skin (such as burns, frostbite, gangrene, or crush injuries) are likely to cause tetanus. Wounds contaminated with soil, saliva, or feces — if not properly cleaned — and skin punctures from non-sterile needles are also at increased risk.

Another form of tetanus, neonatal tetanus, occurs in newborns who are delivered in unsanitary conditions, especially if the umbilical cord stump becomes contaminated. Routine immunizations for tetanus produce antibodies that mothers pass to their unborn babies. These maternal antibodies and sanitary cord-care techniques have made newborn tetanus very rare in developed countries.

### SYMPTOMS

The hallmark feature of tetanus is muscle rigidity and spasms. In generalized tetanus, the initial complaints may include any of the following:

Irritability, muscle cramps, sore muscles, weakness, or difficulty swallowing are commonly seen. Facial muscles are often affected first. Trismus or lockjaw is most common resulting from spasms of the jaw muscles, responsible for chewing. A sardonic smile -- medically termed risus sardonicus -- is a characteristic feature that results from facial muscle spasms.

Muscle spasms are progressive and may include a characteristic arching of the back known as opisthotonus, may cause bones to break and joints to dislocate. Severe cases can involve spasms of the vocal cords or muscles involved in breathing. If this happens, death is likely, unless medical help (mechanical ventilation with a respirator) is readily available.

In cephalic tetanus, in addition to lockjaw, weakness of at least one other facial muscle occurs. In two-thirds of these cases, generalized tetanus will develop.

In localized tetanus, muscle spasms occur at or near the site of the injury. This condition can progress to generalized tetanus.

In Neonatal tetanus, Neonates may be irritable and have poor sucking ability or difficulty swallowing.

### TREATMENT

Tetanus immune globulin (TIG) is recommended for treatment of tetanus. TIG can only help remove unbound tetanus toxin, but it cannot affect toxin bound to nerve endings. A single intramuscular

dose of 3000-5000 units is generally recommended for children and adults, with part of the dose infiltrated around the wound if it can be identified. The World Health Organization recommends TIG 500 units by intramuscular injection or intravenously (depending on the available preparation) as soon as possible; in addition, administer age-appropriate TT-containing vaccine (Td, Tdap, DT, DPT, DTaP, or TT depending on age or allergies), 0.5 cc by intramuscular injection at separate site.

Tetanus disease does not induce immunity; patients without a history of primary TT vaccination should receive a second dose 1-2 months after the first dose and a third dose 6-12 months later.

### PROGNOSIS

Most patients with tetanus survive and return to previous function. Older people and those who have a rapid progression from time of infection to severe symptoms have a higher risk of death.

#### Prevention

Unlike many infectious diseases, recovery from naturally acquired tetanus does not usually result in immunity to tetanus. This is due to the extreme potency of the tetanospasmin toxin.

Tetanus can be prevented by vaccination with tetanus toxoid. It is recommended that adults receive a booster vaccine every ten years, and standard care practice in many places is to give the booster to any patient with a puncture wound who is uncertain of when he or she was last vaccinated, or if he or she has had fewer than three lifetime doses of the vaccine.



*Mens sana in corpore sano. (Your prayer must be for a sound mind in a sound body.)*

~Juvenal

### Inside this issue:

TETANUS	2
HEALTH BENEFITS OF ORANGE JUICE	2

**V**itiligo is a condition in which white patches develop on the skin. Any location on the body can be affected, and most people with vitiligo have white patches on many areas of the body.

### CAUSES

Melanin is the pigment that gives the skin its characteristic color. Vitiligo is caused by a loss of pigment in the skin, due to destruction of pigment-forming cells known as

melanocytes. The exact cause of the destruction of these cells is not known. One possible explanation might be that the body's immune system destroys the cells, as in other autoimmune conditions. Although vitiligo affects all races equally, it is more noticeable in dark-skinned people.

disorder before age 40. Both men and women are equally likely to develop vitiligo. Vitiligo may run in families; those with a family history of vitiligo or premature graying of the hair are at increased risk for the development of vitiligo. Other risk factors that increase one's chances of developing vitiligo include having autoimmune diseases, such as autoimmune thyroid disease (Hashimoto's Thyroiditis).

### RISK FACTORS

Vitiligo affects up to 2% of the population. In most cases, vitiligo develops early in life, between the ages of 10 and 30 years. Ninety-five percent of those affected will develop the

### SYMPTOMS

Symptoms of vitiligo include an often rapid pigment loss on several areas of the skin. The initial appearance of the white patches can be followed by a stable period without any progression of the condition. Later on, further cycles of pigment loss and stability may be observed. Vitiligo commonly affects areas on the skin that are exposed to sun, body folds (such as armpits), previous sites of injury, areas around moles, or areas around body

openings. It is rare for pigment to return once the white patches have developed. Vitiligo can also affect the eyes, skin, and hair.

### DIAGNOSIS & TREATMENT

Your doctor can usually make the diagnosis of vitiligo during a physical exam. There is no known way to prevent or cure vitiligo. However, several methods, including cosmetics, re-pigmentation using

## VITILIGO

UV light therapy, corticosteroid creams, depigmentation of unaffected skin areas, and skin grafting, can be used to improve the appearance of skin severely affected by vitiligo.



## HEALTH BENEFITS OF ORANGE JUICE

Though it is on many breakfast tables, the benefits of orange juice remain poorly understood.

### Provides Vitamin C

Drinking at least two glasses of orange juice per day increases the vitamin C concentration within the body by 40 to 64%. Vitamin C, an essential vitamin that cannot be synthesized by human body, is an important antioxidant.

### Protects Against Inflammation

The intake of orange juice, together with a high-carbohydrate, high-fat meal, prevents the occurrence of inflammation within the body, making it a good preventive measure against the development of insulin resistance & atherosclerosis.

### Improves Blood Pressure

Regular orange juice consumption may improve diastolic blood pressure. Orange juice contains hesperidin, a healthy water-soluble plant pigment. Hesperidin serves to

improve the activity of small blood vessels, blood pressure and decrease the cardiovascular risk biomarkers in susceptible patients.

### Decreases Cholesterol Levels

Regular orange juice consumption may lead to the decrease the level of low-density lipoprotein cholesterol in patients with high cholesterol level.



“There is no known way to prevent or cure vitiligo”



Orange juice, together with a high-carbohydrate, high fat meal, prevents the occurrence of inflammation within the body

## OUR SERVICES

### SECOND MEDICAL OPINION

We provide a second medical opinion service from independent consultants on our empanelled list of qualified doctors. They provide an unbiased opinion of your current medical condition with treatments that are required to cure the illness. We request you to raise a query with us and upload/ attach your current medical diagnosis for us to get back to you with an opinion and the treatment required. Further, if the patient seeking opinion opts to go for a treatment in our network hospitals, other details can be provided.

### ELECTIVE SURGICAL PROCEDURES

CareAsia brings to you a wide range of elective surgical procedures to choose from at an affordable cost and uncompromised quality. We have in our network the best hospitals and surgeons across country who indulge in best surgical practices keeping the quality and patient safety at forefront. CareAsia would assist you to select a hospital in the preferred location and would arrange for your travel and stay throughout the treatment as selected. We would request you to go through our package details for making the best choice for yourself. We also provide second medical opinion services to enable you to make informed decisions. We also offer customized packages for treatment in India. Apart from the medical treatment we also offer various value add-ons like customized tourism options and visa and immigration assistance. To avail our services please sign up and create your profile.

### WELLNESS PROGRAMME (COMPLETE HEALTH CHECK UP)

Our wellness program offers one of the most comprehensive and thorough medical check up for assessing your health status. The 360 degree screening investigates your health and renders detailed consultations with specialists. The detailed examination will not only identify any ailment you may be suffering from, but also identifies any affliction you might suffer in the future and recommends remedial action for the same. There will be consultations after the tests with renowned consultants and guidance for future course of action if any required.

### ELECTRONIC MEDICAL RECORD MANAGEMENT

The Electronic Medical Record Management system developed by CareAsia is best defined as **Your Virtual Health Manager**. Salient product features of EMRM are:

1. Unlimited Medical Record Storage of all types whether it be prescriptions, discharge summaries, digital scan images, imaging reports, or any pathological investigation report.
2. Digitization of Medical Records. The system picks out data from your scanned medical records and digitizes it so as to process your raw information to give you useful information.
3. Customized Reporting. All the reports submitted by users are processed and a summary/detailed report is generated as per the user's needs.
4. Intelligent Alerts. Once you upload the data, the system processes it using our algorithms and generates alerts, reminders, warnings, etc to assist your healthcare needs through a very user friendly interface. For example, the CareAsia EMRM system immediately updates your records to show the reports that are out of bounds and what are the parameters that are off limits or it could update the user about a lab report that might be very old and would recommend a retest for the same

**DO YOU HAVE  
REVIEWS?  
WANT TO SUBMIT  
ARTICLES?  
DO YOU HAVE  
QUERIES?**

**Do write to us with  
feedback, queries,  
articles on health be  
it humor or  
educative and we  
will make sure they  
become a part of our  
Newsletter..**

**info@vipulmedcare.com**



## CORPORATE OFFICE

VIPUL MEDCARE PRIVATE LIMITED  
534, UDYOG VIHAR, PHASE V  
GURGAON,  
HARYANA-122016

Phone: +91-124-4629830  
Fax: +91-124-4699611  
E-mail: info@vipulmedcare.com

*health services across the globe*

WWW.CAREASIA.NET



**FOR QUERIES**

**HELPLINE NUMBERS**

**+91-124-4629830**

**EMAIL**

**info@vipulmedcare.com**

**CareAsia**, a brand of Vipul MedCare Pvt. Ltd., promoted by Vipul Group of India is focused on providing supreme healthcare services to patients searching for quality healthcare options at affordable prices across the globe. It serves as the bridge between patients seeking consultation, treatments, surgeries and top quality hospitals that facilitate efficient healthcare for visiting patients from abroad.

CareAsia intends to serve by providing value added services to its clients. It would serve patients beginning from the time the patient enquires from us to the time the patient gets his/her treatment performed and satisfactorily returns to the country of origin.

CareAsia has a strong presence within India (tie ups with major internationally accredited, top quality hospitals), which is one of the top destinations for medical tourism. Also, it has an international presence with offices in the Middle East and South East Asia to be a truly global organization in this industry.

We at Vipul MedCare strongly encourage patients to sign up with us over the web site or contact us to avail the best **medical tourism** options across the globe. With our 24/7 online support platform, helpdesk, dedicated trained staff, a strong network in the healthcare industry, and our excellent IT systems which would act as your life long electronic medical record keeper, we are confident to provide the best services to serve our clients.

## LOCATIONS

### OMAN

Vipul BetterCare  
Management Services  
P.O. Box No. 1031, Muttrah,  
Sultanate of Oman  
Tel: +9682481846

### MALAYSIA

Compumed Services Sdn Bhd  
No. 50, 50-03-13A, Level  
Wisma UOA Damansara  
No. 50 Jalan Dungun,  
Damansara Heights-50490  
Kuala Lumpur, Malaysia

### UAE-DUBAI

MaxCare Middle East  
202, Al Habbai Building  
Opposite Deira City Centre  
Deira, Dubai, UAE  
Tel: +971-4-2367575

### DELHI (Registered Office)

B-416 Ansal Chamber 1, Bhikaji Cama  
Place,  
New Delhi, Pin Code: 110 066  
Contact Person: Mr. Chanden Prasad  
Tel: 011-46074578-81, 9313333270  
Fax No: 011-41659833

### MUMBAI

C/1, 2nd Floor Harganga Mahal, Khodadad Circle  
Dr. Ambedkar Road  
Dadar T.T., Dadar(East) Mumbai, Pin  
Code : 400014  
Contact Person: Mr. A.k.Sachdeva  
Tel: 022-24157048-9, 022-  
65951945, 9969137073  
Fax No: 022-24160821

### CHENNAI

Old No 12/2, New No 29, Seshachalam  
Street  
Saidapet, Chennai- 600 015  
Contact Person: Mr. K. Rajshekaran  
(9841030629)  
Tel: 044-24335717/19, 420 10092  
Fax No: 044-24335716/18

### KOLKATA

16/2, 2nd Floor Lord Sinha Road,  
Kolkata Pin Code: 700 071  
Contact Person: Mr. Dr.Arup Banerjee  
Tel: 033-22820224, 9331825012  
Fax No: 033-22820224

### COCHIN

Mariam Tower Door No36/3120-b-3,  
Kaloor Kadavantham Road, Kathrikadavu,  
Cochin-17  
Contact Person: Mr. Rajesh R  
(9744497212)  
Tel: 0484-2102021, 2330079  
Fax No: 0484-2330080

### BANGALORE

# 154, 2nd Floor, Mallige Complex, KHB  
Colony, 5th Block,  
Kormangala, Bangalore -5600950  
Contact Person: Mr. NCS Rao  
Tel: 080-64512965, 64522965-6,  
Tele Fax No: 080-41464765

### HYDERABAD

408, 4th Floor, Navkethan complex,  
Opp to Clock Tower., S D RD,  
Secunderabad - 500 003  
Contact Person: Dr. Srikanth  
Tel: 040 - 27803247  
Fax No: 39121957

### JAIPUR

S-10, Shyam Nagar Ajmer Road,  
Jaipur Rajasthan Pin Code: 302 019  
Contact Person: Mr. Uma Shankar  
Tel: 0141-5182035, 2297569-  
70, 9829422303  
Tele Fax No: 0141-2297335