



### Official Desk



#### Cosmetics and Public/Consumer Health

Cosmetics are substances which are defined as "Articles which are meant to be rubbed, poured, sprinkled or sprayed on or introduced into or otherwise applied to the human body for the purpose of cleansing, beautifying, promoting attractiveness or altering the appearance" as per Drugs and Cosmetics Act 1940 and Rules 1945.

India is being targeted by global cosmetic giants due to its favorable demographics. The demand for cosmetic products, particularly in urban population is steadily rising owing to various reasons, for example, mall culture, better purchasing power, concern for looking better by both men and women, nature of the job, development in advertisement technology and in general, availability of a wide range of cosmetic products (tailor made for different skin types, hair types, lip products etc.).

With the growing ecological and health awareness, modern cosmetics are available in the form of organic cosmetics, mineral cosmetics and even environmentally friendly cosmetics to cater to an overwhelming demand for such products.

Cosmetics are luxury articles and for the past few years, use of cosmetics has increased multifold, resulting into an increased production, import, distribution and sale. Although modern make-up has been used mainly by women traditionally, gradually an increasing number of males are using cosmetics usually associated to women to enhance or cover their own facial features.

The safety of cosmetic products is of prime importance for the general consumers. During the past decades, there has been a dramatic increase in the use of natural products in cosmetics. A wide range of active principle of various plants and animals including vitamins, hormones, phytohormones, bioflavonoids, enzymes, tannic acid, fruit acids, amino acids, sugars, glycosides, essential oils and dye stuffs are being considered useful in cosmetic formulations.

However, when purchasing drugs, dietary supplements or cosmetics and personal care products, consumers must always be cautious of their effects and possible side effects, even if the product is labeled "natural".

The list of Cosmetic products that are manufactured in India as per the Schedule 'S' under Drugs and Cosmetic Rules, 1945 are toothpastes, toothpastes, shaving creams, after shave lotions, lipsticks, lotions, skin creams and so on.

Cosmetics generally do not cause serious injuries but sometimes they can be harmful. Generally people are so vulnerable to chemicals in cosmetics. The skin is extremely permeable. Cosmetic ingredients most certainly are absorbed through the skin. Some chemicals may penetrate the skin in significant amounts, especially when left on the skin for long periods, as in the case of facial makeup.

Some of the most common risk of cosmetic use is a sensitivity or allergy to the product's ingredients. This can range from mild irritation or itchiness to painful lesions that damage the skin. Hair dyes are of particular concern, so a patch test should always be done before an application.

Sharing or using cosmetics that have been contaminated can expose you to dangerous skin bacteria. Using products incorrectly can also cause health problems.

To minimize the risks associated with using cosmetics, it is better to follow some basic guidelines

- Always read labeling directions. Labeling is an extremely important and ethical issue to be taken up for all cosmetics.
- Before using a new cosmetic product, try a patch test on a small area of skin. Wait 24 hours. If there is no reaction, it should be safe to use. In the case of hair dyes, it is important to do the test each time you use it, even if you haven't had problems before.
- Never share cosmetics. This could expose you to someone else's bacteria.
- If a product is labelled 'hypoallergenic,' it can still cause allergic reactions. 'Hypo' means less; therefore, the product does not prevent allergic reactions, it is only less likely to cause them.



**D.A. Gundu Rao**  
President  
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- Keep the cosmetics away from high temperatures and sunlight. Heat and light can break down the preservatives that keep the cosmetics bacteria-free.
- Extra care is required in the disposal of pressurized cosmetic sprays. They need to strictly avoid throwing used containers into open fire.
- Most cosmetics don't have expiry dates. If you notice a change in the odour, colour or texture of a cosmetic, stop using it.
- Keep cosmetic products and toiletries out of the reach of children. If a child swallows any of these products, seek immediate medical care.
- If a person experiences any side effects from a cosmetic, stop using the product immediately. Consult a doctor if the reaction is severe or prolonged.

Pharmacist can play a major role in educating their patients/customers by providing information to select the most appropriate cosmetic product and avoid unnecessary skin damage, provided the level of pharmacist's knowledge about the cosmetics is of great importance. In particular, the female pharmacists can play a better role in improving the use and sales of the cosmetics.

The pharmacists should be trained to get knowledge of various cosmetics and its use or efficacy issues, which is the key factor that currently affects patients/consumers.

Hence, the authorities, academicians and pharmacy organizations should keep providing educational and/or training opportunities for the interested pharmacists.

**Source:** 1. <http://www.ncbi.nlm.nih.gov/> 2. <http://www.cfp.ca/> 3. <http://www.hc-sc.gc.ca/> 4. <http://www.cosmetics.co.in/>



## GOI Prohibits 344 Fixed Dose Combinations

The Ministry of Health & Family Welfare, Government of India has prohibited 344 Fixed Dose Combination (FDCs) of drugs for human use under Section 26A of Drugs & Cosmetics Act, 1940 (23 of 1940) for manufacture for sale, sale and distribution in the country through Gazette notifications published on 10th March 2016 with immediate effect.

**Reference:** <http://www.cdsc.nic.in/>



## Drug of the Quarter

**Drug** : Enzalutamide

**Class** : Anti-neoplastic

**Dosage Form** : Capsule

**DCGI Approval** : 18th December 2015

**USFDA Approval** : 31st August 2012

**Indication** : Treat metastatic prostate cancer.

### Dose Information

**Adult Dosing: Usual dose:** 160 mg orally once daily

**Paediatric Dosing:** Data not available.

### Pharmacokinetics

#### Absorption

- T<sub>max</sub>: 1 hour
- Effect of food: no change in AUC

#### Distribution

- V<sub>d</sub>: 110 L
- Protein binding: 97% to 98% (enzalutamide); 95% (N-desmethyl enzalutamide)

#### Metabolism

- Hepatic: primary route

#### Excretion

- Renal: 71% unchanged
- Fecal: 14% unchanged
- Total body clearance: 0.56 L/hr

**Elimination Half Life:** 5.8 days

### Caution:

- Posterior reversible encephalopathy syndrome has been reported. Discontinue it.
- Seizures have been reported. Permanent discontinuation recommended.

### Mechanism of Action/Pharmacology:

Enzalutamide is an androgen receptor inhibitor that competitively inhibits androgen binding to androgen receptors and inhibits androgen receptor nuclear translocation and interaction with DNA. The major active metabolite, N-desmethyl enzalutamide, has similar activity.

### Adverse Effects

#### Common

- **Cardiovascular:** Peripheral edema
- **Dermatologic:** Flushing
- **Endocrine/metabolic:** Decreased weight
- **Gastrointestinal:** Constipation, diarrhea, loss of appetite, altered taste sense
- **Hematologic:** Neutropenia
- **Musculoskeletal:** Arthralgia, backache, musculoskeletal pain
- **Neurologic:** Asthenia
- **Respiratory:** Dyspnea
- **Other:** Fatigue

#### Serious

- **Hematologic:** Neutropenia
- **Neurologic:** Posterior reversible encephalopathy syndrome, Seizure



### Drug-Drug interactions

Category	Drug/s (Example)	Interaction Effect	Management
Strong CYP3A4 inducers*	Phenytoin, Phenyobarbital, Rifampin, Oxcarbazepine, St John's wort	Decreases enzalutamide plasma concentrations.	Use caution if concomitant use is required.
Strong CYP2C8 inhibitors*	Gemfibrozil	Increases enzalutamide plasma concentrations.	Avoid concomitant use
Strong CYP3A4 inhibitors*	Ketoconazole, Posaconazole, Saquinavir, Ritonavir, Indinavir, Nelfinavir, Voriconazole, Lopinavir, Clarithromycin	Increases enzalutamide plasma concentrations.	Use caution if concomitant use is required.

**Severity:** \*The interaction may be life-threatening and/or require medical intervention to minimize or prevent serious adverse effects.

#### Effects in Pregnancy and Lactation:

**Pregnancy:** Study report or clinical data during pregnancy are not available. Enzalutamide is contraindicated in women who are pregnant or may become pregnant. **Breast-feeding:** Study report or clinical data on weaning children are not available.

#### Patient Education

- Please counsel the patient and his attendants to report seizures or loss of consciousness and to avoid activities requiring mental alertness, if symptoms occur.
- Encourage patient to report rapidly worsening symptoms like headache, confusion, seizures and visual loss.
- Please inform patient to take dose at the same time each day.

**References:** 1. <http://www.micromedexsolutions.com/> 2. <http://www.rxlist.com/>

**Meaning: Posterior reversible encephalopathy syndrome-** headache, confusion, seizures and visual loss. □

## Drug News – Around the Globe



### 1. Drug: Brivaracetam\*

**Country: USA**

Brivaracetam is an anticonvulsant drug.

**Approved Indications:** Brivaracetam is approved as an add-on treatment to other medications to treat partial onset seizures in patient's above 16 years of age in patients with epilepsy.

**Dosing Information:** 100 mg/day orally or IV in 2 divided doses.

**Side-effects:** Drowsiness, dizziness, fatigue, nausea and vomiting<sup>1</sup>.

### 2. Drug: Obiltoximab\*

**Country: USA**

Obiltoximab is a monoclonal antibody, for the treatment of exposure to Bacillus anthracis spores (etiologic agent of anthrax).

**Approved Indications:** Obiltoximab injection is approved to treat inhalational (or respiratory) anthrax in combination with appropriate antibacterial drugs.

**Side-effects:** Headache, itching (pruritus), upper respiratory tract infections, cough, nasal congestion, hives and bruising, swelling and pain at the infusion site<sup>1</sup>.

### 3. Drug: Oxiconazole nitrate\*

**Country: USA**

Oxiconazole nitrate is an imidazole derivative antifungal agent.

**Approved Indications:** Oxiconazole nitrate cream 1% is approved for the treatment of athlete's foot (tinea pedis), jock itch (tinea cruris), ringworm (tinea corporis).

**Dosing Information:** Apply cream to the affected area once or twice daily.

### 4. Drug: Selexipag\*

**Country: USA**

Selexipag is an oral prostacyclin receptor (IP) agonist, structurally distinct from prostacyclin.

**Approved Indications:** Selexipag tablet is approved for treatment of pulmonary arterial hypertension (PAH) in adults.

**Dosing Information:** Initial, 200 mcg orally twice daily; increase to the highest tolerated dose in 200-mcg twice-daily increments at weekly intervals, up to 1600 mcg twice daily. If dose is not tolerated, reduce to the previously tolerated dose.

**Side-effects:** Vomiting, flushing, jaw pain, headache, diarrhea, nausea, pain in the extremities and myalgia<sup>1</sup>.

### 5. Drug: Lesinurad\*

**Country: USA**

Lesinurad is a urate transporter inhibitor.

**Approved Indications:** Lesinurad is approved to treat high levels of uric acid in the blood (hyperuricemia) associated with gout, when used in combination with a xanthine oxidase inhibitor (a type of drug approved to reduce the production of uric acid in the body).

**Dosing Information:** 200 mg orally once daily in the morning with food and increase the intake of fluids.

**Side-effects:** Headache, increased blood creatinine and gastroesophageal reflux disease<sup>1</sup>.

### 6. Drug: Albiglutide\*

**Country: USA**

Albiglutide is a recombinant protein called glucagon-like peptide-1 (GLP-1) receptor agonist

**Approved Indications:** Albiglutide is approved for the treatment of type II diabetes in adults as monotherapy or in combination with other antidiabetic agents. It is not indicated for patients with type 1 diabetes or diabetic ketoacidosis or as first-line therapy for patients who can't be managed with diet and exercise.

**Dosing Information:** Initial, 30 mg subQ once weekly; may increase to 50 mg subQ once weekly.

**Side-effects:** Diarrhea, nausea and injection-site reactions<sup>2</sup>.

#### References:

1. [www.fda.gov/](http://www.fda.gov/) 2. [www.drugs.com](http://www.drugs.com)

**Note -** \*Not available in India

**Meanings: Inhalation (or respiratory)** anthrax- An infectious disease brought on by breathing in the spores of the bacteria Bacillus anthracis, **Urate transporter-A** protein that regulates the level of urate in the blood. **Hyperuricemia-** High levels of uric acid in the blood. □

# Safety Alerts

## 1. Drugs: Piperacillin & Tazobactam\*\*

Country: India

May cause hypokalemia and bronchospasm

Piperacillin/tazobactam is a combination antibiotic injection containing the extended-spectrum penicillin antibiotic piperacillin and the  $\beta$ -lactamase inhibitor tazobactam. This fixed dose combination (FDC) is used for treating moderate to severe infections caused by certain bacteria.

**Alert:** The Drugs Controller General of India (DCGI) has warned that this FDC of Piperacillin and Tazobactam has a potential to cause hypokalemia and bronchospasm.

**Hence, KSPC-DIRC alerts the healthcare professionals about the new safety changes for labeling Piperacillin and Tazobactam a fixed dose combination drug<sup>1</sup>.**

## 2. Drugs: Saxagliptin\*\* & Alogliptin\*

Country: USA

May cause risk of heart failure

Saxagliptin and alogliptin are part of the class of dipeptidyl peptidase-4 (DPP-4) inhibitor drugs, which are used with diet and exercise to lower blood sugar in adults with type 2 diabetes.

**Alert:** The USFDA warns that saxagliptin and alogliptin may increase the risk of heart failure, particularly in patients who already have heart or kidney disease.

**Hence, KSPC-DIRC alerts the healthcare professionals to be cautious while prescribing Saxagliptin and Alogliptin<sup>2</sup>.**

**References:** 1. [www.drugscontrol.org/](http://www.drugscontrol.org/) 2. [www.fda.gov/](http://www.fda.gov/)

**Note** - \*\*Available in India \*Not available in India



## Continuing Pharmacy Education (CPE)

# Dispensing Instructions to the Pharmacists

Continued from October – December 2015 issue on Inflammatory Bowel Diseases (IBD)

Drugs	Use	Warnings*	Less serious side effects	Advice
<b>Corticosteroids:</b> Prednisolone, Methylprednisolone	Treats acute exacerbations of Crohn disease and ulcerative colitis.	Prescription to be reconfirmed in case of patients with a history of liver or kidney disease, heart failure, high blood pressure, a recent heart attack, diabetes, glaucoma, osteoporosis or thyroid problems.	Body fluid retention, abnormal level of lipids, muscle weakness, headache, raised intraocular pressure, skin infections, increased appetite, weight gain.	Advice patient to report signs/symptoms of a new or worsening infection, including an eye infection.  Advice not to discontinue this drug without the advice of the doctor, due to potential for adrenocortical insufficiency.
<b>Immunosuppressants:</b> Azathioprine, Mercaptopurine	Treats inflammatory and fistulizing Crohn's disease. Also useful for maintenance of remission.	Prescription to be reconfirmed in case of patients with a history of kidney disease, blood or bone marrow disorder (such as anemia, low white blood cells or low platelets in the blood) or any type of infection.	Rash, nausea and vomiting, anorexia, hyper pigmentation, alopecia.	Instruct patient to report any unusual bleeding or bruising.  Advice patient to report signs/symptoms of infection.  Patient may take drug with food or in divided doses to decrease gastrointestinal intolerance.  Take the drug as prescribed.
<b>Proton pump inhibitors:</b> Omeprazole, Pantoprazole, Lansoprazole	Treats heartburn, acid indigestion sour stomach, duodenal and gastric ulcers due to IBD.	Prescription to be reconfirmed in case of patients with a history of liver disease, heart disease, osteoporosis, seizures or a history of low magnesium levels.	Abdominal pain, diarrhea, flatulence, nausea, vomiting, headache	Advice to take this medicine at least 1 hour before a meal.  Use this medication for the full prescribed length of time.
<b>H2 receptor Antagonist:</b> Ranitidine, Cimetidine, Famotidine	Treats and prevents heartburn due to IBD.	Prescription to be reconfirmed in case of patients with a history of liver or kidney disease, heart rhythm disorders or a history of acute porphyria.	Abdominal discomfort, constipation, diarrhoea, headache.	Instruct patient to avoid smoking during drug therapy.  Advice to give antacids at least 1 hour apart from H2 receptor antagonist.

**Notes:** \* Make sure that the patient has informed the doctor the pregnancy and lactating status.

**References:**

- Handbook of Pharma SOS, Educational Series-III, 6th Edition 2014, published by Karnataka State Pharmacy Council, Bangalore.
- [www.micromedexsolutions.com](http://www.micromedexsolutions.com), Micromedex (R) 2.0, 2002-2016, Truven Health Analytics Inc.
- <http://emedicine.medscape.com/>



## Drug Usage in Special Population - Pediatrics and Geriatrics

(From our publications)

### Cardiovascular System Drugs (oral)

Drug (Oral)	Use in Children (Paediatrics)	Use in Elderly (Geriatric)
Digoxin	Safety and effectiveness have been established.	Dosage adjustment necessary in patients with renal failure.
Losartan	Safety and effectiveness in children have not been established.	No dosage adjustment required.
Losartan/ Hydrochlorothiazide	Safety and effectiveness in children have not been established.	No dosage adjustment required.
Nifedipine	Safety and effectiveness in children have not been established.	No dosage adjustment required.
Metoprolol	Safety and effectiveness in children have not been established.	Dosage adjustment may be required in patients with liver disease.
Spironolactone	Safety and effectiveness have been established.	Dosage adjustment may be required in patients with renal and liver disease.

(to be continued.....)

**Reference:** Drug Usage in special Population-Pediatrics and Geriatrics, Educational Series-II, 5th Edition 2014, published by Karnataka State Pharmacy Council, Bangalore. □

## Drug Usage in Special Population - Pregnancy and Lactation

(From our publications)

### Cardiovascular System Drugs (oral)

Drug (Oral)	Use in Pregnancy (Teratogenicity)	Use in Breastfeeding (Lactation)
Digoxin	USFDA Category C. Limited data on Digoxin during pregnancy. Appears to be safe in pregnancy. May need dose adjustment.	Safe to use.
Losartan	USFDA Category D. Teratogenicity with this drug is confirmed. To be used when benefit outweighs risk.	Data not available. Medical advice is necessary.
Losartan/ Hydrochlorothiazide	USFDA Category D. Teratogenicity with this drug is confirmed. To be used when benefit outweighs risk.	Data not available. Medical advice is necessary.
Nifedipine	USFDA Category C. Limited data on Nifedipine use during pregnancy. Use only if the potential benefit outweighs the potential risk to the fetus.	Excreted in milk. Medical advice is necessary
Metoprolol	USFDA Category B. Limited data on Hydrochlorothiazide during pregnancy. Caution while use.	Excreted in milk. Medical advice is necessary.
Spironolactone	USFDA Category C. Contraindicated in a pregnancy because of its progestational and antiandrogenic effects. Use only if the potential benefit outweighs the potential risk to the fetus.	Excreted in milk. Safe to use.

(to be continued.....)

**USFDA Category B:** Either animal-reproduction studies have not demonstrated a fetal risk but there are no controlled studies in pregnant women or animal-reproduction studies have shown adverse effect (other than a decrease in fertility) that was not confirmed in controlled studies in women in the first trimester (and there is no evidence of a risk in later trimesters).

**USFDA Category C:** Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans. Drug should be given only if the potential benefit justifies the potential risk to the fetus.

**USFDA Category D:** There is positive evidence of human fetal risk, but the benefits from use in pregnant women may be acceptable despite the risk (e.g., if the drug is needed in a life-threatening situation or for a serious disease for which safer drugs cannot be used or are ineffective).

**Reference:** Drug Usage in special Population-Pregnancy and Lactation, Educational Series-I, 5th Edition 2014, published by Karnataka State Pharmacy Council, Bangalore. □

## DCGI Approved Drugs from January to December 2015

S.No.	Drug	Indication	Date
1.	Sofosbuvir Tablet 400 mg	Treatment of chronic hepatitis C viral (HCV) infection in adults along with other antiretrovirals.	13.01.2015
2.	Bedaquiline Tablet 100 mg	Treatment of multidrug-resistant pulmonary tuberculosis given in combination with at least 3 other effective antimycobacterial drugs in adult patients.	14.01.2015
3.	Lixisenatide pre-filled solution for injection 10µg/20 µg	Treatment of type 2 diabetes mellitus given in combination with oral glucose-lowering drugs and/or basal insulin in adults with inadequate glycemic control.	15.01.2015
4.	Dapagliflozin Tablet 5mg/10mg	Treatment to improve glycemic control in adult patients with type 2 diabetes as an adjunct to diet and exercise.	25.02.2015
5.	Pasireotide solution for injection 0.3mg/0.6mg/0.9mg	Treatment of adult patients with Cushing's disease for whom pituitary surgery is not an option or has not been curative.	18.03.2015
6.	Emphagliflozin Tablet 10mg/10mg	Treatment to improve glycemic control in adult patients with type 2 diabetes as an adjunct to diet and exercise.	07.05.2015
7.	Gadobutrol solution for injection	Used in adult, adolescence and children aged 2 years and older for magnetic resonance imaging of cranial or Spinal, liver, kidneys, breast etc.	07.05.2015
8.	Teneligliptin Tablet 20mg	Treatment to improve glycemic control in adult patients with type 2 diabetes as an adjunct to diet and exercise.	18.05.2015
9.	Ceritinib 150 mg Hard Gelatin Capsules	Treatment of patients with metastatic non- small cell lung cancer (NSCLC).	13.01.2015
10.	Vilazodone Hydrochloride 20mg/40mg and Bulk	Treatment of major depressive disorders in adults.	19.08.15
11.	Gemigliptin 50mg tablets	Treatment to improve glycemic control in adult patients with type 2 diabetes as an adjunct to diet and exercise.	21.08.15
12.	Atosiban Acetate Injection 6.75mg / 0.9ml and Bulk	Treatment of preterm labor.	16.09.15
13.	Ibrutinib Hard gelatin Capsule 140mg	Treatment of adult patients with mantle cell lymphoma and chronic lymphocytic leukemia.	07.10.2015
14.	Ledipasvir (90mg)+ Sofosbuvir (400mg) Tablet	Treatment of chronic hepatitis C infection.	08.12.2015
15.	Daclatasvir Dihydrochloride bulk & Tablet 30mg/60mg	Treatment of chronic hepatitis C viral (HCV) infection in adults along with other antiretrovirals.	14.12.2015
16.	Enzalutamide 40 mg soft Capsule	Treatment of metastatic castration-resistant prostate cancer.	18.12 .2015

Reference: <http://cdsco.nic.in/listofdrugapprovedmain.html>



## ‘ಜಿಕಾ’ ವೈರಸ್ ರೋಗ (Zika Virus Disease)

‘ಜಿಕಾ ವೈರಸ್’ ರೋಗವು ಸೊಳ್ಳೆಗಳಿಂದ ಹರಡುವ ವೈರಸ್ ಸೋಂಕು ರೋಗವಾಗಿದೆ.

‘ಜಿಕಾ ವೈರಸ್’ ಅನ್ನು ಮೊದಲಬಾರಿಗೆ 1947 ರಲ್ಲಿ ಕಂಡು ಹಿಡಿಯಲಾಯಿತು ಮತ್ತು ಉಗಾಂಡದಲ್ಲಿರುವ ಜಿಕಾ ಕಾಡಿನ ಹೆಸರನ್ನು ಹೊಂದಿದೆ. 1952 ರಲ್ಲಿ ಜಿಕಾ ದ ಮೊದಲ ಮಾನವ ಪ್ರಕರಣಗಳನ್ನು ಪತ್ತೆ ಹಚ್ಚಲಾಯಿತು ಮತ್ತು ಅಂದಿನಿಂದ, ಜಿಕಾ ರೋಗದ ಪ್ರಕರಣಗಳು ಉಷ್ಣವಲಯದ ಆಫ್ರಿಕಾದಲ್ಲಿ, ಆಗ್ನೇಯ ಏಷ್ಯಾ ಮತ್ತು ಪೆಸಿಫಿಕ್ ದ್ವೀಪಗಳಲ್ಲಿ ವರದಿಯಾಗಿವೆ.

ಜಿಕಾ ವೈರಸ್ ಈಡಿಸ್ ಪ್ರಬೇಧದ ಸೊಳ್ಳೆಗಳಿಂದ ಹರಡುತ್ತದೆ (ಎ. ಈಜಿಪ್ಟಿ ಮತ್ತು ಎ. ಅಲ್ಬೋಪಿಕ್ಟಸ್). ಇವು ಜೆಂಗ್ಯು ಮತ್ತು ಚಿಕುನ್ ಗುನ್ಯ ವೈರಸ್‌ಗಳನ್ನು ಹರಡುವ ರೀತಿಯ ಸೊಳ್ಳೆಗಳಾಗಿವೆ.

ಜಿಕಾ ವೈರಸ್ ಸೋಂಕು ತಗುಲಿದ ಸೊಳ್ಳೆಗಳ ಕಡಿತದಿಂದ ಮನುಷ್ಯರಿಗೆ ಹರಡುತ್ತದೆ. ಈಗಾಗಲೇ ವೈರಸ್ ನಿಂದ ಸೋಂಕಿಗೊಳಗಾಗಿರುವ ಮನುಷ್ಯನಿಗೆ ಕಚ್ಚಿದಾಗ ಸೊಳ್ಳೆಗಳು ಸೋಂಕಿಗೊಳಗಾಗುತ್ತವೆ. ಈಡಿಸ್ ಈಜಿಪ್ಟಿ ಬೇರೆ ಸೊಳ್ಳೆಗಳ ಪ್ರಭೇದದಂತಲ್ಲದೆ ಹಗಲು ಆಹಾರ ಸೇವಿಸುವ ಸೊಳ್ಳೆಗಳಾಗಿವೆ; ಅದು ಹೆಚ್ಚಾಗಿ ಮುಂಜಾನೆ ಮತ್ತು ಸಂಜೆ ಕಚ್ಚುತ್ತದೆ.

## ಲಕ್ಷಣಗಳು

ರೋಗ ಹೊರಹೊಮ್ಮುವ ಅವಧಿಯು (ಸೋಂಕಿಗೊಳಗಾದ ಕಾಲದಿಂದ ಲಕ್ಷಣಗಳು ಕಾಣುವವರೆಗೆ) ಸೋಂಕಿಗೊಳಗಾದ ಸೊಳ್ಳೆಯು ಮನುಷ್ಯನನ್ನು ಕಚ್ಚಿದ 3 ರಿಂದ 12 ದಿನಗಳ ನಡುವೆ ಇರುತ್ತದೆ. ಜಿಕಾದ ಲಕ್ಷಣಗಳು ಡೆಂಗ್ಯು ಮತ್ತು ಚಿಕುನ್‌ಗುನ್ಯ ರೋಗದ ರೀತಿಯಲ್ಲೇ ಇರುತ್ತದೆ.

- ಸಣ್ಣ-ಪ್ರಮಾಣದ ಜ್ವರ
- ಚರ್ಮದ ಮೇಲೆ ದದ್ದುಗಳು
- ಕಂಜಕ್ಟಿವೈಟಿಸ್ (ಕಣ್ಣು ಕೆಂಪಾಗುವುದು)
- ಅರ್ತಾಲ್ವಿಯ (ಕೀಲು ನೋವು)-ಕೈಗಳ ಸಣ್ಣ ಕೀಲುಗಳು ಮತ್ತು ಕಾಲಿನ ಕೀಲುಗಳ ಊತ
- ಮಯಾಲ್ವಿಯ (ಸ್ನಾಯು ನೋವು)
- ಮಲ್ಯಿಸ್ (ಅಸೌಖ್ಯ, ಕಾಯಿಲೆ)
- ತಲೆನೋವು

ಹೆಚ್ಚು ಅಪರೂಪಕ್ಕೆ ಗಮನಿಸಲಾದ ಲಕ್ಷಣಗಳಲ್ಲಿ ಜೀರ್ಣಾಂಗ ಸಮಸ್ಯೆಗಳು (ಹೊಟ್ಟೆ ನೋವು, ಬೇಧಿ, ಮಲಬದ್ಧತೆ), ಲೋಳೆ ಪದರಗಳ ಹುಣ್ಣುಗಳು ಮತ್ತು ಪುರಿಟಿಸ್. ಈ ರೀತಿಯ ಲಕ್ಷಣಗಳು ಸಾಮಾನ್ಯವಾಗಿ ಮಂದವಾಗಿದ್ದು 2-7 ದಿನಗಳು ಇರುತ್ತವೆ.

## ರೋಗ ಪರಿಣಿ

ಇತ್ತೀಚಿನ ಇತಿಹಾಸ ಮತ್ತು ಲಕ್ಷಣಗಳ ಆಧಾರದ ಮೇಲೆ ಜಿಕಾ ವೈರಸ್ ಸೋಂಕಿನ ಅನುಮಾನ ಪಡಬಹುದು (ಉದಾಹರಣೆಗೆ ಜಿಕಾ ವೈರಸ್ ಇದೆ ಎಂದು ಗೊತ್ತಾದ ಸ್ಥಳದಲ್ಲಿ ವಾಸ್ತವ್ಯ ಅಥವಾ ಪ್ರಯಾಣ). ರಕ್ತದಲ್ಲಿ ಅಥವಾ ಇತರ ದೇಹದ ದ್ರವಗಳಾದ ಮೂತ್ರ ಅಥವಾ ಜೊಲ್ಲನ್ನು ಪ್ರಯೋಗಶಾಲೆಯಲ್ಲಿ ಪರಿಣಿ ಮಾಡಿ ಜಿಕಾ ವೈರಸ್‌ನ ಆರ್‌ಎನ್‌ಎ ಇರುವಿಕೆಯನ್ನು ಪತ್ತೆಹಚ್ಚುವ ಮೂಲಕ ಮಾತ್ರವೇ ಜಿಕಾ ಪರಿಣಿಯನ್ನು ಖಚಿತಪಡಿಸಲು ಸಾಧ್ಯ.

## ಚಿಕಿತ್ಸೆ

ಸದ್ಯದಲ್ಲಿ ಜಿಕಾ ಸೋಂಕನ್ನು ತಡೆಗಟ್ಟುವ ಲಸಿಕೆ ಅಥವಾ ನಿರ್ದಿಷ್ಟ ಔಷಧಿ ಇಲ್ಲ.

- ಲಕ್ಷಣಗಳ ಚಿಕಿತ್ಸೆ
  - ಸಾಕಷ್ಟು ವಿಶ್ರಾಂತಿ

- ನಿರ್ಜಲೀಕರಣವನ್ನು ತಡೆಗಟ್ಟಲು ಹೆಚ್ಚು ದ್ರವಾಹಾರ ಸೇವನೆ
- ನೋವುನಿವಾರಕಗಳು, ಜ್ವರನಿವಾರಕಗಳು ಮತ್ತು ಅಲರ್ಜಿನಿವಾರಕಗಳನ್ನು ನೀಡಿ ಲಕ್ಷಣಗಳನ್ನು ಹೋಗಲಾಡಿಸಬಹುದು.
- ಆಸ್ಪಿರಿನ್ ಮತ್ತು ಇತರ ಸ್ಟಿರಾಯ್ಡ್ ಹಾಗೂ ಉರಿಯೂತ ನಿವಾರಕ ಔಷಧಿಗಳನ್ನು ಖಂಡಿತವಾಗಿಯೂ ಕೊಡಬಾರದು. ಇದರಿಂದ ರಕ್ತಸ್ರಾವದ ಅಪಾಯವು ಹೆಚ್ಚಬಹುದು.

## ತಡೆಗಟ್ಟುವಿಕೆ ಮತ್ತು ನಿಯಂತ್ರಣ

ಸದ್ಯದಲ್ಲಿ ಸೋಂಕಿನಿಂದ ರಕ್ಷಿಸಿಕೊಳ್ಳುವ ಒಂದೇ ಮಾರ್ಗವೆಂದರೆ ಸೋಂಕಿಗೊಳಗಾಗಿರುವ ಈಡಿಸ್ ಸೊಳ್ಳೆಯ ಕಡಿತದ ಸಾಧ್ಯತೆಗಳನ್ನು ಕಮ್ಮಿಮಾಡಿಕೊಳ್ಳುವುದು.

ಇಂಥ ಸಂದರ್ಭಗಳಲ್ಲಿ ಈ ಕೆಳಗಿನ ಮುನ್ನೆಚ್ಚರಿಕೆಗಳನ್ನು ತೆಗೆದುಕೊಳ್ಳಬೇಕು:

- ▶ ಈಡಿಸ್ ಸೊಳ್ಳೆಯು ಮರಿ ಮಾಡುವುದನ್ನು ತಡೆಯಲು ನಿಂತ ನೀರಿನ ಮೂಲಗಳನ್ನು ತೆಗೆಯುವುದು.
- ▶ ಹೂಜಿಗಳು ಅಥವಾ ಹೂಕುಂಡಗಳಲ್ಲಿನ ನೀರನ್ನು ಎರಡು ದಿನಕ್ಕೊಮ್ಮೆ ಬದಲಿಸಿ.
- ▶ ಮಳೆನೀರು ಸಂಗ್ರಹಿಸಲು ಅಥವಾ ನೀರು ಸಂಗ್ರಹಿಸಲು ಬಳಸುವ ಬಕೆಟ್‌ಗಳು, ಡ್ರಮ್‌ಗಳು, ಮಡಕೆಗಳು ಇತ್ಯಾದಿಗಳನ್ನು ಮುಚ್ಚಬೇಕು ಅಥವಾ ಸಮರ್ಪಕವಾಗಿ ವಾರಕ್ಕೊಮ್ಮೆ ಚೆಲ್ಲಬೇಕು.
- ▶ ಘನ ಹಾಗೂ ಹಸಿ ತ್ಯಾಜ್ಯಗಳನ್ನು ಸಮರ್ಪಕವಾಗಿ ವಿಲೇವಾರಿ ಮಾಡುವುದು.
- ▶ ವೈಯಕ್ತಿಕ ಗೃಹ ಸಂರಕ್ಷಕಗಳಾದ ಕಿಟಕಿ ಪರದೆಗಳು, ಸೊಳ್ಳೆ ನಿವಾರಕಗಳು, ಉದ್ದನೆ ತೋಳುಗಳ ಬಟ್ಟೆಗಳನ್ನು ಬಳಸುವುದು.
- ▶ ನಿಯಂತ್ರಣ ಹಾಗೂ ಪರಿಣಾಮಗಳನ್ನು ನಿರ್ಧರಿಸಲು ವಾಹಕಗಳ ಕ್ರಿಯಾತ್ಮಕ ಉಸ್ತುವಾರಿ ಮತ್ತು ಕಣ್ಗಾವಲು ಮಾಡಬೇಕು.

## ಪರಾಮರ್ಶನಗಳು:

1. <http://www.cdc.gov/zika/>
2. <http://www.who.int/mediacentre/factsheets/zika/en/>
3. <http://www.health.gov.au/>

**ಅನುವಾದಕರು:** ಗಣೇಶ ಬಟ್, ಫಿಲಾನ್ಸ್ ಬರಹಗಾರರು, ಯಲ್ಲಪುರ, ಉತ್ತರ ಕನ್ನಡ.

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# KSPC News



## 1. Srinivas College of Pharmacy, Mangalore

The Srinivas College of Pharmacy, Valachil, Mangalore in Association with Rajiv Gandhi University of Health Sciences, Bangalore & Indian Pharmaceutical Association, D.K District Local Branch, Mangalore organized a National Conference on 'Herbal Drug Research-Opportunities and Challenges' on 8th March 2016. Dr. J.Ganapathi Bhat, Managing Director, Jeddu Ayurvedics and Dr. Ravi Rao, Professor, Alva's Ayurvedic Medical College, Moodbidri was the invited guests.



Dr. U. Srinivasa, Professor, Srinivas College of Pharmacy and Dr. A.R. Shabaraya Principal and Director, Srinivas College of Pharmacy and President, IPA, D.K.District Local Branch were also present.

Dr. E.V.S Subrahmanyam, Professor, Srinivas College of Pharmacy & Vice President, IPA, Dakshina Kannada, Local Branch Mangalore and Member, Karnataka State Pharmacy Council, Bangalore proposed vote of thanks. Around 120 delegates from Medical and Paramedical sciences attended the programme and presented their research work in oral and poster scientific sessions.

## 2. Srinivas College of Pharmacy, Mangalore

Dr. E.V.S Subrahmanyam, Professor, Srinivas College of Pharmacy & Vice President, IPA, Dakshina Kannada, Local Branch Mangalore and Member, Karnataka State Pharmacy Council, Bangalore attended the blood donation camp "AROGYA SAPTHAHA" organized by Indian Pharmaceutical Association, Dakshina Kannada District, Local Branch, Mangalore in association with Srinivas College of Pharmacy, Valachil, Mangalore and Srinivas Hospital & Research Centre, Mukka, Surathkal on 16th January 2016 at Srinivas Hospital & Research Centre, Mukka, Surathkal.



## KSPC Publications

Mr. Samson P George, Drug Information Pharmacist, Drug Information & Research Center, Karnataka State Pharmacy Council, Bengaluru visited Manipal Hospital, Apollo Hospital, Lotus Diagnostic Centre, Motherhood Hospital to meet Dr. Satish Amarnath, Dr. Chitra Ramamurthy, Dr. Mala Prakash, Dr. Preeti Prabhakar Shetty, Dr. Hema Sacchidanand and Dr. Beena Jeysingh respectively to discuss the services provided by the Drug Information and Research Center.

Mr. Samson was well received and all of them showed keen interest to know the activities of KSPC and appreciated the service.



Dr. Satish Amarnath, Head, Quality Compliance & Outreach Services, Manipal Hospitals, Bengaluru



Dr. Chitra Ramamurthy, Senior Consultant, Obstetrics & Gynecology and Dr. Thanuja, Gynecologist, Apollo Hospitals, Bengaluru



Dr. Mala Prakash, Senior Consultant, Obstetrics & Gynecology, Apollo Hospitals, Bengaluru



Dr. Hema Sacchidanand, Gynecologist, Lotus Diagnostic Centre, Bengaluru

## Visitors of Honour

Dr. B.P.S Murthy, Registrar, Karnataka Medical Council, Bangalore visited the council to study and discuss the functional methods of this council and Drug Information and Research Center.

Sri. D.A. Gundu Rao, President, Karnataka State Pharmacy Council welcomed and presented a set of KSPC publications and DIRC Newsletter to Dr. B.P.S. Murthy.

He appreciated the activity and development of Karnataka State Pharmacy Council and Drug Information and Research Center.



### Editorial Board

Mr. Banavi V. S., Mr. Bhagavan P.S., Mr. Gangadhar V. Yavagal, Mr. Gundu Rao D.A., Prof. Hariprasanna, Prof. Dr. Lakshmi P.K., Mr. Nagaraj M. S., Dr. Sirse Krantikumar, Dr. Srinath M. S., Mr. Samson P. George

Additional Information on any article is available on request

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### BOOK-POST