

Committed To Defence And Security Worldwide

www.dsalert.org | info@dsalert.org

# DEFENCE & SECURITY

SAARC COUNTRIES : US \$20  
REST OF THE WORLD: US \$25 | INDIA: ₹150

The First and Only ISO 9001:2015 Certified Defence and Security Magazine in India  
The Only Magazine Available On The Intranets Of IAF & BSF

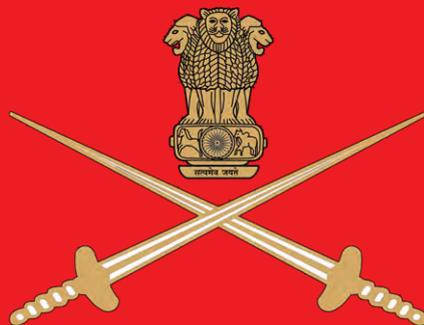
# ALERT

AUGUST 2018  
VOLUME 9 ISSUE 11

# MILITARY



# MEDICINE





# MISSION

We endeavour to sound **ALERTS** and create **AWARENESS** about the myriad dimensions and manifestations of **DEFENCE** and **SECURITY** in India and around the world.



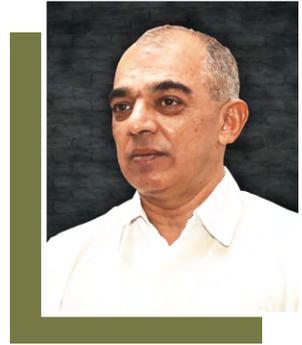
**The power of a King lies in his mighty arms...**

Security of the citizens at peace time is very important because State is the only saviour of the men and women who get affected only because of the negligence of the State.

- Chanakya



# DSA IS AS MUCH YOURS, AS IT IS OURS!



**T**he military serves in all possible human spheres of habitation and beyond. So the military person, belonging to any remote village anywhere in the country, is liable to serve, and mostly does so to, at the opposite end of origin. So, for example, if he or she is from the deep desert of Rajasthan, they will most certainly be found on duty at high altitude posts in remote Arunachal Pradesh. This has happened in the past and is certain to happen in the future. This spectrum of deployment puts enormous stresses on the body and the military logistics.

For the long time, logistics in the military was limited to analysis of equipment under use in that particular post or zone of service. For the first time, Team DSA looks at the human aspect of logistics, and in this case, the field of medical service in the military. The only time military medicine personnel come into limelight is when there is an incident that makes it a breaking news. A VIP who gets admitted to a military hospital or a soldier in an extreme scenario,

i.e., late Hanumanthappa and his rescue from an avalanche in the Siachen sector.

Military medicine is a far more complex field than merely attending to news making emergencies. Every day of the year, round the clock, the medical corps personnel are taking care of combat, support services, and their families, across the country and in all circumstances. So, while some will be delivering babies of military wives, others will be on duty in a submarine on a long range patrol. And, their service people will be patrolling the high Himalayan peaks with a combat ready platoon, while some will be manning posts in the highest known battle zone, Siachen.

All these duty fulfilling deployments happen without the slightest hint of publicity, or self-pity. It is simply taken as what it is, duty under oath. And, the military medical corps takes the Hippocrates oath very seriously. So seriously that they are willing to serve for it under any physical or psychological circumstances. Their primary task or mission is to save lives,

serving in an institution that is actually authorised to take lives. It is one of the unknown truths that medical personnel have been known to save enemy lives too, for they are under oath to save lives.

Which really is a remarkable commitment to duty and service. To mark the truly unique nature of their service, Team DSA produces this current issue as an ode to Army Medical Corps. Most countrymen are not aware of their nature of service, or the complexity of their deployment, and in some cases, even the extreme dangers they face. Some have made the supreme sacrifice, whilst many carry battle wounds. Another unique aspect of the AMC is that its personnel can actually change the colour of their uniform if they so choose within the three services. Given their spectrum of deployment it is only fair they get the final call on which colour they'd prefer to wear.

**Manvendra Singh**

**Chairman** Shyam Sunder  
**Publisher and CEO** Pawan Agrawal  
**President** Urvashi J Agrawal  
**Director** Shishir Bhushan

**Editor-in-Chief** Manvendra Singh

**Copy Editor**  
 Vandana Bhatia Palli

**Copcom & Ops**  
**OSD** Navjeet Sood

**Graphic Designer**  
 Prem Singh

**Representative (J&K)**  
 Salil Sharma

**Correspondent (Europe)**  
 Dominika Cosic

**Production**  
 Dilshad and Dabeer

**IT Operations**  
 Amber Sharma

**Photographer**  
 Subhash

**Subscriptions**  
 Taniya Sharma

**Legal Advisor**  
 Deepak Gupta

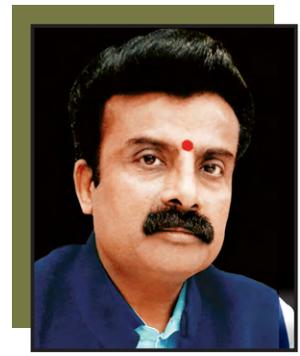
**E-mail: (first name)@dsalert.org**  
 info: info@dsalert.org  
 articles: articles@dsalert.org  
 subscription: subscription@dsalert.org  
 online edition: online@dsalert.org  
 advertisement: advt@dsalert.org

**Editorial and Corporate Office**  
 Prabhat Prakashan Tower  
 4/19, Asaf Ali Road  
 New Delhi-110002 (India)  
 +91-011-23243999, 23287999, 9958382999  
 info@dsalert.org | www.dsalert.org

**Disclaimer**  
 All rights reserved. Reproduction and translation in any language in whole or in part by any means without permission from Defence and Security Alert is prohibited. Opinions expressed are those of the individual writers and do not necessarily reflect those of the publisher and/or editors. All disputes are subject to jurisdiction of Delhi Courts.

**Defence and Security Alert is printed, published and owned by Pawan Agrawal and printed at Bosco Society For Printing, Don Bosco Technical Institute, Okhla Road, New Delhi-110025 and published at 4/19, Asaf Ali Road, New Delhi (India).**  
**Editor: Manvendra Singh**

# MILITARY MEDICINE



**F**or any effective outcome of any activity, a good health is required. It encompasses proper diet, sleep and precautions against diseases for every human being. And when it comes to any military force, it becomes more important that the force personnel's health is perfect in all manners. Be they at the border or at any other ground duty. Their health plays a vital role in keeping the national security upright and tight.

For the military establishment in India, it is all the more important considering the various types of terrain it is required to defend. From altitudes up to 20,000 ft in the Himalayas to the jungles of northeast India and the deserts of Rajasthan where our force personnel are being posted and have to face ever newer threats internally and externally. As the climate has changed drastically in the past few decades, many new threats have arisen for the forces and health is a major concern to each individual. The forces deployed in the -40 degree and 50+ centigrade temperatures have to confront health hazards caused by extremes in climate change. Acclimatisation alone is no more the panacea for all terrains. So, special training is being imparted in which yoga plays an important part to make them fit to face such climate changes in areas of their operation. And to maintain morale at a high level, it is necessary to also ensure that separated families are comfortable and bereft of the contingencies of everyday life.

It has been observed that the force personnel deployed at the high altitude and deserts face lot of deficiencies even when they are shifted to other posts.

As a matter of fact, the research conducted by the military has been very supportive for the entire nation as in the discovery of the bacteria of malaria. There are many other such researches being done by military teams during the natural calamities; it's the military medical paraphernalia which gives support to the disaster management system along with the other medical teams.

In greater or lesser measure, the fact is that military medicine has played a vital role in both the combat situation as well as in support of civil authority. The research and development being done in defence laboratories has spinoffs in the civil sector.

This edition was visualised by our Editor-in-Chief and designed accordingly as you will not find such articles focussed only on the issue of military medicine anywhere. I am thankful to all the contributors who have added content to this edition to make it a collector's edition.

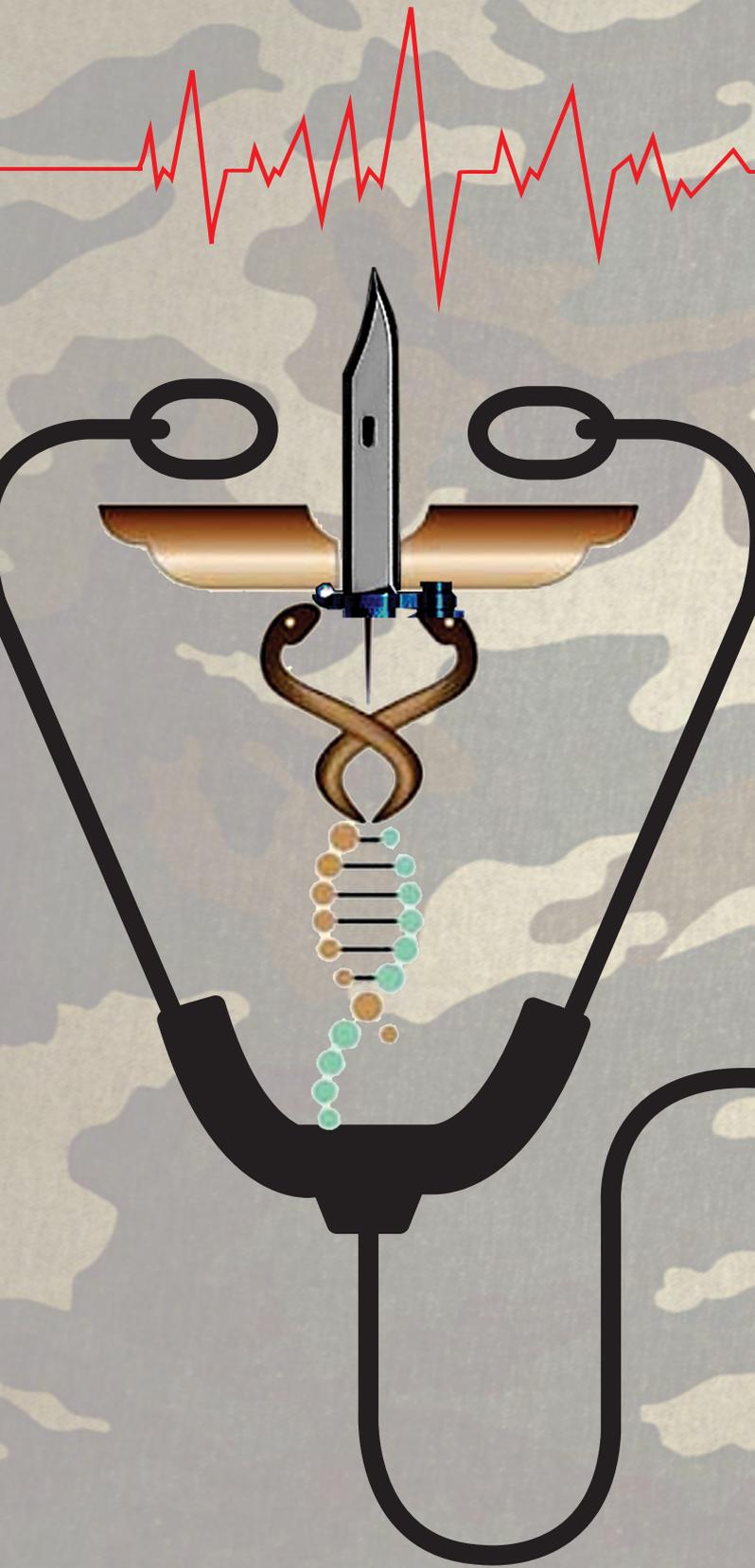
Happy reading!

**Pawan Agrawal**



# DSA™

An ISO 9001:2015 Certified Magazine



## COMBATING HIGH ALTITUDE PULMONARY EDEMA

DR BHUVNESH KUMAR  
AND DR RAJENDRA K GUPTA

04

## SPINAL ARTHRITIS – BIOLOGIC THERAPY

LT GEN VED CHATURVEDI  
PVSM, VSM (VETERAN) EX DGMS (ARMY)  
& PROF RHEUMATOLOGY

09

## MEDICARE AT LOW COST

AVM (DR) PANKAJ TYAGI  
VSM (RETD)

12

## ECO-FRIENDLY SUBMARINES

CMDE ANIL JAI SINGH (RETD)

18

## PREVENTIVE MILITARY MEDICINE

DR RAKESH KUMAR SHARMA

22

## MILITARY MENTAL HEALTH: FIT TO FIGHT?

AIR MSHL (DR) PAWAN KAPOOR  
AVSM, VSM AND BAR FORMER DGMS  
(AIR) (RETD) AND  
GP CAPT SUNIL AGRAWAL  
DMS (H) & SR ADVISOR (CM)

26

## MILITARY MEDICAL CHALLENGES

LT GEN BHUSHAN KUMAR CHOPRA  
PVSM, AVSM (RETD)

30

## KNOW YOUR AFMS: HEALERS ALL THE WAY

Team DSA

36

## THERAPEUTIC MEDICAL STRATEGY

DR MANJU BALA POPLI and  
DR ASEEM BHATNAGAR

38

## LIVE TO FIGHT ANOTHER DAY

AIR MSHL ANIL BEHL  
AVSM (RETD)

43

## HIPPOCRATIC CODE IN PRACTICE

CECIL VICTOR

48