



INSIGHTS

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- **WHAT IS BLACK FUNGUS?**

It is an infection caused by a group of moulds known as "mucormycetes" present naturally in the environment. It is usually found in soil, plants, manure and decaying fruits and vegetables. Patients generally get affected after they inhale fungal spores from the air.

- **WHAT ARE THE SYMPTOMS?**

Pain and redness around eyes and/or nose, fever, headache, coughing, shortness of breath, bloody vomits, and altered mental status. Blackish discoloration over bridge of nose/palate. Chest pain, pleural effusion, worsening of respiratory symptoms. Warning signs can include toothache, loosening of teeth, blurred or double

- **WHO IS MORE VULNERABLE?**

Vulnerable groups include people with health trouble or take medicines that affect the body's immune response.. These include those with **diabetes**, cancer, or those who have had an organ transplant.

- **WHAT IS THE DIAGNOSIS OF THE DISEASE?**

It depends on the location of the suspected infection. A sample of fluid from your respiratory system may be collected for testing in the lab; otherwise a tissue biopsy or a CT scan of your lungs, sinuses may be conducted.

- **WHAT IS THE TREATMENT?**

Mucormycosis needs to be treated with prescribed **anti-fungal medicine**. In some cases, it can require surgery; it can lead to eventual loss of the upper jaw and sometimes even an eye.

- **HOW CAN IT BE PREVENTED?**

Experts advise that you should use masks if you are visiting dusty construction sites. Wear shoes, long trousers, long-sleeved shirts and gloves while handling soil (gardening), moss or manure. Maintain personal hygiene including a thorough scrub bath.

- **HOW TO MANAGE THE DISEASE?**

Start by controlling diabetes. Reduce steroids, maintain adequate systematic hydration, infuse normal saline before amphotericin B infusion and go for anti-fungal therapy at least for 4-6 weeks.

If we follow all the guidelines provided by the government properly, we can fight COVID as well as BLACK FUNGUS.

STAY POSITIVE, STAY SAFE!!!

ZOOLOGY HIGHLIGHTS

BLACK FUNGUS

Mucormycosis: The "Black Fungus" maiming COVID patients. (Headlines in BBC).

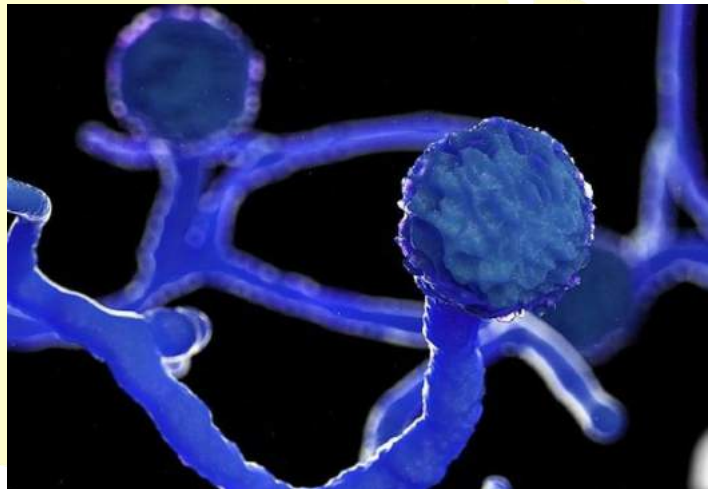
Life threatening Fungal infection. (Heading of an article in Economic Times).

COVID's deadly companion. (Times of India).

We are well aware of the escalating cases of Black Fungus in India.

At this point, COVID guidelines are grasped by everyone. But do we know enough about "Black Fungus" ?

It is just as dangerous as Coronavirus, in fact scarier. Many states are on high alert as *mucormycosis* infections are increasing. So it is very important for us to understand the guidelines for this new infection.



-Avantika Sharma (B.Sc. III Year)

FROM THE EDITOR'S DESK : COVID-19

Nature is sending us a message with the coronavirus pandemic and the ongoing climate crises. Destruction of wildlife and the climate crises is hurting humanity, with COVID-19 'a clear warning slot'.

INTRODUCTION: Novel Coronaviruses are enveloped non-segmented positive sense RNA viruses.

Family : Coronaviridae

CoV causes illness ranging from common cold to more severe infections such as MERS-CoV and SARS-CoV. nCoV is a new strain which has not been reported earlier in humans.

BACKGROUND: Coronavirus disease officially called COVID-19 which was noticed during December 2019 in WUHAN, CHINA, later become a major public health problem leading to pandemic affecting worldwide and causing morbidity and mortality, despite control measures.

SYMPTOMS:

- Fever or chills, Cough
- Shortness of breath or difficulty in breathing
- Fatigue and Headache
- Loss of taste and smell
- Sore throat and Nasal congestion
- Nausea or vomiting and Diarrhoea



TESTING OF COVID-19:

1. **DIAGNOSTIC TESTS:** Molecular tests (RT-PCR & NAAT) and antigen tests (RAPID ANTIGEN TEST) are types of diagnostic tests.
2. **ANTIBODY TESTS:** detect antibodies in your immune system produced in response to SARS-CoV-2 (serological test, serology, blood test)

INDIA'S COVID-19 VACCINATION DRIVE:

India has begun administration of COVID-19 vaccine on January 16, 2021. As of June 18, 2021, India has administered 272,388,783 doses overall, including first and second doses of currently approved vaccines. Indigenous vaccines , **COVAXIN** and **COVISHIELD** are being administered to priority groups in first phase. COVAXIN has been developed by BHARAT BIOTECH in collaboration with National Institute of Virology & COVISHIELD is the Indian variant of AZD1222, (the vaccine developed by AstraZeneca and University of Oxford). It was developed by Pune based Serum Institute of India. The government has also created a dedicated helpline number 1075 to address queries related to the vaccine rollout and Co-WIN software.

MENTAL HEALTH & QUARANTINE EFFECTS:

Depression, loneliness, self-harm, suicidal behaviour is expected to rise. We all have a role to play in protecting the physical and mental health of ourselves and others. People diagnosed with COVID-19 deserve compassionate care. Helping them stay connected to their loved ones can provide comfort and can help protect their mental health during isolation. Despite the challenges we are all facing now due to COVID-19, we can still find purpose in our lives and be supportive of one another.

-Divya (B.Sc. III Year)

TEACHER'S ACHIEVEMENTS

Dr. Shweta Thakur:

Six e-tutorials made on Youtube for enhancing the knowledge of students.

- <https://youtu.be/wIJfzV-0ya8>: Life history of *Plasmodium vivax*
- <https://youtu.be/AMyAEW2xPA>: Pre-erythrocytic schizogony
- <https://youtu.be/OichIM0hdEU>: Posterythrocytic schizogony
- <https://youtu.be/qxiJ80t12QU>: Erythrocytic schizogony
- <https://youtu.be/ZSuxQbDFGzs>: Gamogony
- <https://youtu.be/bAmGs5TtRXg>: Sporogony

CONSIDERABLE FACTS ABOUT COVID-19

- We are still on a stage where we are still learning about COVID, its symptoms, causes and treatments.
- Most common symptoms are : cough, fever and shortness of breath. Unusual symptoms are : ANOSMIS (loss of smell) and AGEUSIA (decreased sense of taste). Along with these few patients also experience digestive symptoms like loss of appetite, diarrhoea, vomiting and abdominal pain.
- **SARS-CoV-2** (Severe Acute Respiratory Syndrome) the virus that causes COVID-19 and **SARS-Co-V** virus that cause SAR, both are types of coronavirus but SARS-CoV-2 binds 10 to 20 times more tightly to human cells than SARS-Co-V due to which it is hard to stop.
- Infants (less than 1 year of age) appear more vulnerable to serious illness than older ones. A multisystem inflammatory syndrome (MIS) is affecting some children positive with COVID -19 which is characterized by gastrointestinal symptoms and cardiac inflammation.
- COVID-19 live on surfaces, like upto 24 hours on cardboard, 2-3 days on plastic, and stainless steel.
- People who don't have symptoms (asymptomatic cases) can unintentionally spread the virus to others.
- Even some scientists findings shows that people with type-A blood group are more susceptible to infection and at higher risk of developing COVID-19 respiratory failures.
- Also scientists have developed tests that can detect SARS-CoV-2 antibodies in the blood, which eventually help us to understand the true extent of this pandemic.
- Now question is, if reinfection is possible for COVID-19? And if yes then how long will immunity last? Well answer is yes reinfection can occur and it depends upon the variant from which individual was infected first. In general, natural immunity and protection from reinfection lasts for 6 to 12 months.
- Remdesivir is an antiviral medicine approved by FDA (FOOD AND DRUG ADMINISTRATION, US) to treat COVID-19, but it is reserved for hospitalized patients. To stop more spread of COVID-19 many preventive measures have been introduced and we should follow them properly to stop more spread.

-Swati (B.Sc. III Year)



SPREADING AWARENESS AND POSITIVITY DURING COVID-19

New Initiatives taken by the Zoology Department during the time of COVID-19:

- Awareness raising campaigns were organized on the occasion of Health Literacy Month (October 1 - October 31, 2020)

In the dark times of pandemic a hopeful journey was started by the students of Zoology Department of St. Bede's College, Shimla. Various ideas were implemented to create a lively healthy environment. Each day an activity was performed along with a public outreach program on serious Health subjects like:

COVID-19 Awareness, Boosting Immunity, Diseases like Tuberculosis and Exercises and Fitness for physical and mental well being.

- Productive use of Social media platforms was made for advertisements and endorsements on general Health Awareness and Zoology Updates

Campaigns were conducted on the need of practicing **Apiculture**. Public awareness on Significant Bee products other than honey was created. Products like bee pollen, bee propolis and royal jelly that have a variety of medicinal benefits and cosmetic uses were introduced and their importance was imparted by gathering people in small groups and door to door visits.

A poster making contest was organised within college followed by active participation of students disseminating the importance of Honey Bees and it's products.

Departmental YouTube channel was created for the purpose of spreading awareness by the name **"Everybody's Zooing it"**. Four advertising campaign videos were published on the observance of Health Literacy Month.

Theme for each video was **"Be a Health Literacy Hero"**.

- Inventory on blood analysis of blood groups

With the ongoing crisis of Health and medical necessities Zoology Department took an initiative to analyse and list out blood groups of students who could later be a help to people in need of a blood donor. A total of 552 blood samples were analysed. Majority collection was of blood group **B⁺** (219 students), followed by blood group **A⁺** (131 students), **O⁺** (86 students), **AB⁺** (81 students), **O⁻** (16 students), **B⁻** (09 students), **A⁻** (7 students), and least number of students with **AB⁻** (3 students).

COVID-19 WARRIORS

Chasing through the day, covered under a mask,

Lifting the baggage of hopes and prayers.
Being a warrior, is not an easy task..

From symptomatic to diseased, A whole new path was travelled,

Surrounded by fear and suffering, this new journey was unravelled..

Flanked by pain and difficulties, garnished with cries and chaos,

Accompanied by a bitter truth, they lost themselves in fake hopes..

Amidst quarantine and isolation, they strived hard to recover,

Depressed for some, some said helpless, their thoughts tried to rediscover..

It wasn't their fault Nor were they destined to suffer,

Yet time made us realize - It's a battlefield my friend!

We need to fight in some way or the other..

From the moment it started till the time it is acknowledged,

We saw a new face of destruction led by responsibilities and sympathy

Some massive decisions were taken, some fought this battle on their death bed

Some on the rope of responsibilities, some lost their living

And some chose the path of giving.

"When life got tired and sat down, Some people stood up to fight, To make us feel secure and let the future bright."

They are the WARRIORS. They are the idols. They are the budding stars,

From confidence to support

To smile and hope,

There lies some unknown scars..

Scars yet to be cured

Some clinically , some demands support

Some look for love And some seek "NEGATIVE REPORTS"

Some survived this pandemic

Some lost in the lake of death,

Some are still stuck in between

Some counting their last breath..

This too shall pass; the vibes must be pure,

Those warriors are our shield for our injuries -

They are the cure..

They are our "health care workers"

"NCC and NSS cadet"

Some in the form of "civil workers"

Without any mark of regret..

"ASHA and anganbadi workers" have played their part

"NGOs and social organizations" have made a mark..

The survivors showed the true sense of battle!

They are the epitome of humanity

They are the mark of respect,

They are the form of love

To the million lives they affect..

It's an unforgettable experience

To those who are safe To those fighting high,

Let's not forget our heroes The best is yet to come, **HOPES SHOULD NEVER DIE....**

-KIRTI SHARMA
(B.Sc. III Year)

THE LOCKDOWN INTERFERENCE

By the end of March 2020, citizens of our country knew that there was something massive coming beside the invasion of deadly wave of disease. The Country was put on a "LOCKDOWN". To a standstill. A curfew was implied by the government and country underwent the distress of section 144. Roads were blocked, offices were shut, academic institutes were closed and even daily need stores were time bound. But one thing was certain, insides of homes were safer than anywhere else and people manipulated their livelihood likewise. As information was circulated, people managed to deal with Covid and as its said life has to move on no matter what. It kept on moving. The lockdowns were being lifted and guidelines were regulated but one section of society was left unaffected by all the differential changes and they were Students. Some dealt with the consequences in a well mannered way but some had a difficult time. Going a year without seeing your friends, visiting favorite food joint, a scheduled academic year, tests and sports everything went clumsy. Where school kids enjoyed every moment of their relaxation, students in higher education discovered their amusements and misery parallel to each other. We were intrigued so we asked some of our students and teacher about their experiences and they said :

The outbreak of corona virus and lockdown was a strenuous time span. Lockdown challenged us in a different way. The teacher community was exposed to the tech world, an advancement of the new era, we learnt a lot in the process and tried to enhance the concepts, build student's interest in subjective/objective knowledge in online classes by introducing videos, presentations, animations, representing facts and making brilliant use of accessible information over internet.

- Dr. Shweta Thakur
(Assistant Professor Zoology Department, St. Bede's College Shimla)

Lockdown gave us the gift of time; specially with ourselves. While the cause of lockdown wasn't what one may call "positive" or "growth" but all of us have certainly have growth and positives in us. We have had the time to go back and restart an old project, start a new hobby, work on ourselves.

-Sarah Gupta (B.Sc. II Year)

When I was asked to describe my time during the lockdown I had an irresistible urge to quote Rainer Rilke "this heavy humanness" for that's what it felt like. One would think binge watching movies, reading books, cooking, eating and sleeping would be the dream, and it did start as a dream, but lethargy is a sin. And so I was punished with slow depletion of every talent, I had acquired over the years. But unlike the unfortunate who lost their loved ones, I'm very grateful to have everyone in my family happy and heathy. Having said that, if all days are good no day is good.

- Arsh Thakur (B.Sc II Year)

Doomsday Glacier

Doomsday Glacier for being Antarctica's fastest melting glaciers. Measuring 74000 sq. mi, this glacier is estimated to be the size of Florida in the United States of America. This discovery has raised an alarm about the glacier collapse, which can lead to nearly 3 ft rise in the sea level. The place where the glacier is in contact with the sea has been recorded as 2-degree Celsius above the freezing temperature. The significance of Thwaites lies in the fact that it slows the ice behind it from easily entering into the ocean.

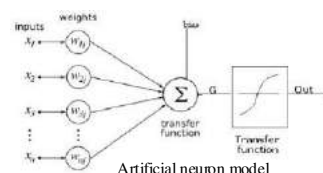
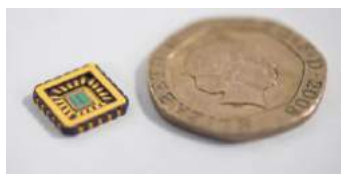
-Divya (B.Sc. III Year)



Artificial neurons could replace lost or damaged brain cells!

An international team of researchers has developed artificial neurons that could be implanted in the brain to repair the damage caused by Alzheimer's disease and other neurodegenerative conditions. The silicon chips, which behave like biological neurons, only need 140 Nano Watts of power. That's one billionth of the power required by the microprocessors that have been used in other attempts to make synthetic neurons, making the silicon chips well-suited to being used as medical implants or inside other bioelectronic devices. The artificial neurons are designed to respond to electrical signals from the nervous system, something which has been a major goal in medicine for decades. The devices could be used to repair diseased bio circuits by replicating their healthy function through responding to biological feedback. This could make it possible to cure conditions where neurons are either not working properly, have had their processes severed or have died.

-Divya (B.Sc. III Year)



ORGAN TRANSPLANT

Organ donation has proved to be a miracle for the society. Organs such as kidney, heart, lungs, liver, eyes, small intestine, bone tissue, skin tissue and veins are donated for the purpose of transplantation.

The Government of different countries are taking steps to raise the supply of organs and in certain parts the number of donors has increased. However the requirement of organ has simultaneously increased at a much rapid speed. Organ donation takes place when an organ of a person's body is removed with his consent while he/she is alive or with family's consent of his family member after his death for the purpose of research or transplant, kidney, liver, lungs, bone marrow, heart are transplanted to give new life to the receiver. A special way, where donor provides a direct consent through registration and carrying out other required formalities based on the country in which the following person is living is known as explicit consent, otherwise it is presumed consent from the donor or the next of kin. As the name suggests, it is assured that the donation would have been allowed by the potential donor in case consent was pursued.

Organ and tissues mainly transplanted are: heart, lungs, liver, kidney, pancreas, intestine, stomach, testis, penis, hand, cornea, skin, islets of Langerhans, bone marrow, blood transfusion, blood vessels, heart valve, bone.

Organ donor: An organ donor can be alive, brain dead or dead by circulatory death up to 24 hrs of cessation of heartbeat. Unlike cornea tissues can be preserved and stored up to 5 years. How someone can be a donor and find one?

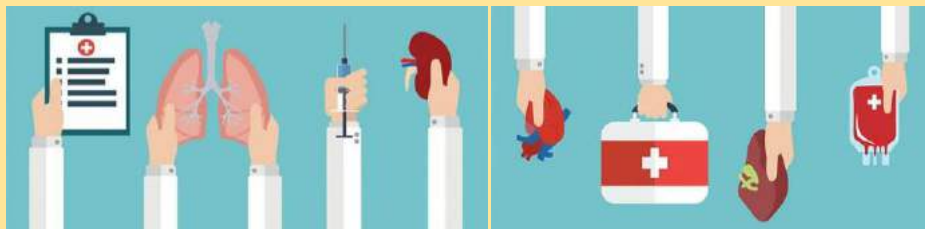
1. You might join a donor registry. In which you need to get the national waiting list.
2. You can visit transplant hospital, visit UNOS (United Network of Organ Sharing).

The hospital's transplant team will examine if you are a good donor and then they will add you on to the list. UNOS maintains the national organ procurement and transplantation network OPTN, through which UNOS organ centre donors are matched to the waiting candidates 24 hours, 365 days.

Approximate price of various transplants across the world: In China kidney transplant costs around \$70,000, liver about \$160,000, heart \$120,000. Still this price is unattainable to the poor as compared to the US, where it is \$100,000 for kidney, \$250,000 for liver and \$850,000 for heart.

Chinese prices made China a major and the biggest provider of organs to others. Whereas in India kidney transplant costs 5-25 lakhs, liver around 35 lakhs and heart up to 27 lakhs.

-Divya (B.Sc. III Year)



Liver: The Coolest Organ

1. Jack of All Trades: Our liver does three main jobs: filtration of blood, fuel storage, and makes liquid called bile that helps us digest food. The liver performs several other functions.

2. Big Organ on Campus: Our biggest organ noticeably is skin but take a notice, average adult liver weighs around 3 pounds and holds 1 pint or about 13% of your blood at any given time. Cone-shaped and deep reddish-brown, it sits sandwiched between diaphragm and stomach.

3. Self-sufficient: If injury or disease damages the liver, surgeons can sometimes take out as much as three-quarters of it without destroying it. It often grows back to its former size within a few weeks. And if one needs a new liver, doctors can sometimes use just a piece of someone else with matching blood group and it will grow to fit the body.

4. Nutrient Centre: Small intestine absorbs nutrients from food, like carbohydrates, amino acids, glycerol, vitamins, minerals, salts and passes them into blood through cells. After absorption the nutrients are sent to the liver for further transport to body, then stores several of them, including iron, folate, and Vitamins A, D, and B₁₂, and delivers them where and when your body needs them.



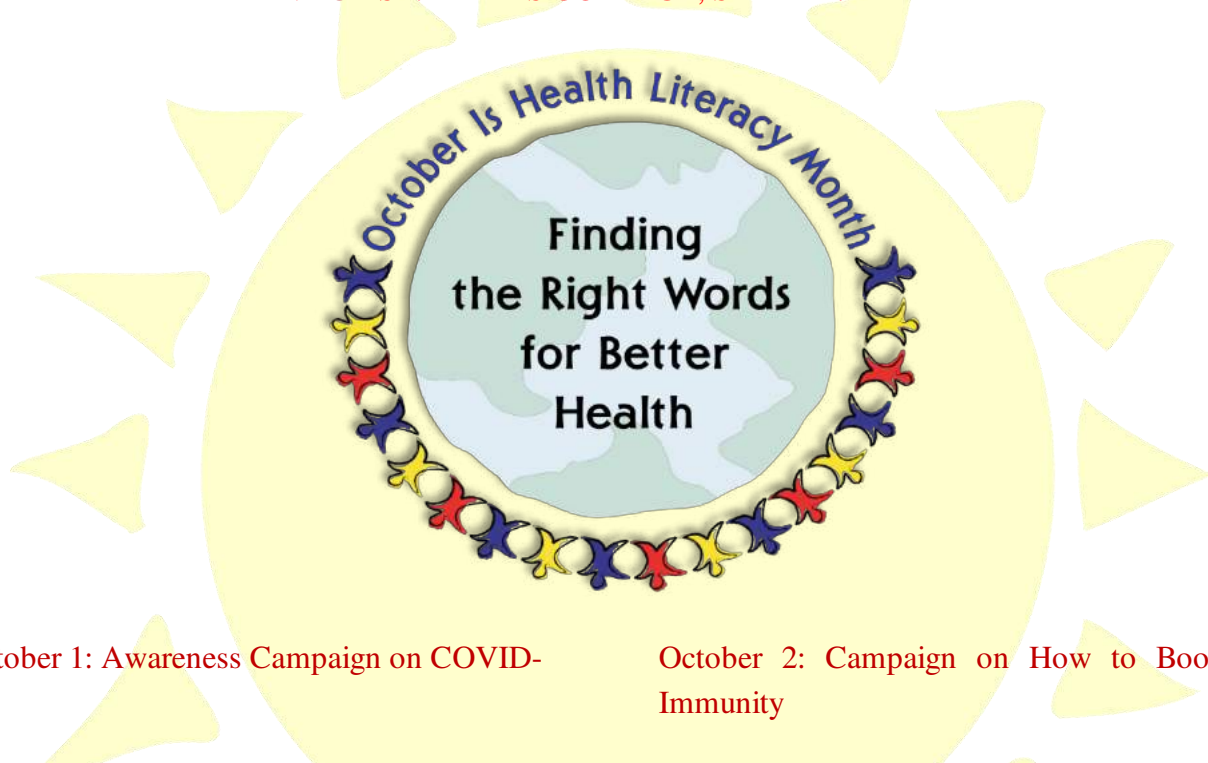
5. Brain Sharpener: Liver keeps us thinking right by getting rid of toxins in the blood. When liver doesn't work properly, these chemicals can build up and change the mood, sleeping habits, and the way you act. Over time, one might also have shaky hands, jerking muscles, and sluggish speech.

-Shruti Chauhan (B.Sc. II Year)

DEPARTMENTAL ACCOMPLISHMENTS

October is celebrated worldwide as Health Literacy Month.

- Health Literacy Month is a time for organizations and individuals to promote the importance of understandable Health information.
- This annual, worldwide, awareness-raising event has been going strong ever since [Helen Osborne](#) founded it in 1999.
- Health Literacy Month is celebrating its 20th anniversary this year.
- Different activities were performed all over the month by students of **ZOOLOGY DEPARTMENT OF ST. BEDE'S COLLEGE, SHIMLA.**



October 1: Awareness Campaign on COVID-19



With the rapid spread of coronavirus, spreading awareness about this pandemic has become necessary. A campaign was organized to spread awareness about **COVID-19** on the first day. People were made aware of its background, risks, warning signs, symptoms and preventive measures.

October 2: Campaign on How to Boost Immunity



Keeping into view the importance of strong immunity in today's difficult times, a campaign was organized on the topic: **how to boost your immunity**. Details of various useful products were shared and common misconceptions related to several beliefs were cleared.

October 3: Awareness on Tuberculosis



On the third day, awareness about a very serious infectious bacterial disease **Tuberculosis (TB)** was spread. People were made aware of its cause, symptoms, treatment (DOTS) and prevention.

October 4: Awareness on Mental Health and Drug Abuse



With increasing isolations and distanced social life, mental health and stability has become a topic of concern. On the fourth day, students tried to counsel people and acquaintances about their **mental health and effects of drug abuse**.

October 5: Awareness on Typhoid disease



On this day, awareness about a common bacterial disease **typhoid** was spread among people. People were made aware of its causes, symptoms, treatment and prevention.

October 6: Awareness on Physical Fitness



COVID and lockdown made us realize the importance of health. Fitness programs were organized by students where several people participated actively and various physical exercises were performed.

October 7: Awareness on Women's Gynaecologic Health



Students spread information about **women's gynecologic health**, including health promotion, maintenance and treatment.

October 8: BEE and WE - Significance of Honey Bees (Poster Making Activity)



A poster making competition was organized on the theme "**BEE AND WE**-The Significance of Honey Bees".

October 9: Campaign on Business Aspect of Apiculture



Door to door informative campaign was done to inform all age groups about the business aspect of **Apiculture**.

October 10: Analysis and Importance of Honey Bee Products



An analysis for the presence of various bee products in cosmetics, medicines and supplements we use at our homes on daily basis. Thereby emphasizing the importance of bees and apiculture.

Social media platforms have played a very crucial role in disseminating news at various levels during lockdown, we also chose this method to create awareness and keep people informed about various ongoing occurrences in the world of Zoology. Firstly students from B.Sc. II Year created two informative videos and published them on the behalf of Zoology Department of College on a personal YouTube channel owned by Shruti Chauhan, and later an official channel was created by the name of Zoology Department (**Everybody's Zooing it**) for future purpose. Finally, students uploaded their videos on the given channel and received a good response. Theme for these awareness videos was **"Be a Health Literacy Hero"**:

October 11: NON-COMMUNICABLE DISEASES (Advertising Campaign Video published on YouTube)



Video 1: Non- Communicable Disease More than 35 comments and 550+ views in just 24 hours.

The video comprises of an introduction to NCDs, its various types [Cardiovascular diseases (heart attack and stroke), Cancer, COPD, Diabetes] their description, symptoms and treatments along with some facts and prevention.

<https://youtube.be/LYMoO2Q8sIE>

October 12: INTERNATIONAL INFECTION PREVENTION WEEK (Advertising Campaign Video published on YouTube)



Video 2 : International Infection Prevention Week. More than 250+ views within 24 hours.

The video shared some important points about infectious diseases, their transmission along with their prevention and control. <https://youtu.be/94nUrjwqVwc>

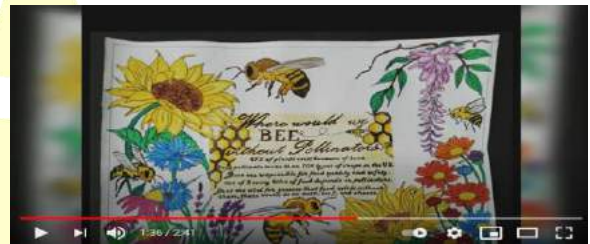
October 13: GLOBAL HANDWASHING DAY (Advertising Campaign Video published on YouTube)



Video 3: Global hand-washing day posted on the channel: “Everybody’s Zooing it”. More than 200 views.

A short video on Global Handwashing Day, imparting knowledge about how to wash hands and sanitize hands in detail with steps. Theme-Hand Hygiene for all-The importance of Washing hands. <https://youtu.be/8Ce7dUDmbQk>

October 14: BEE AND WE- Significance of Honey Bee (Advertising Campaign Video published on YouTube)



Video 4: Significance of Honey Bee. More than 200 views.

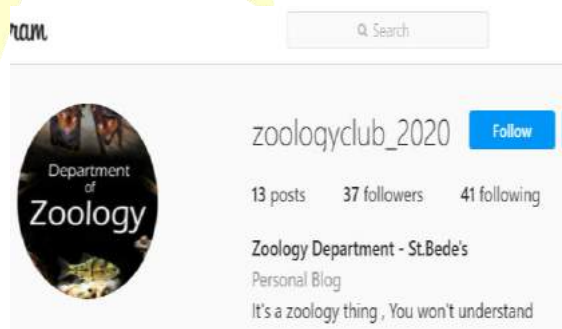
This video is a compilation of various posters and e-posters made by B.Sc. II year students with a motto of awareness on Honey Bees.

Introduction to Video - Health benefits of bee products and bee pollination Content

1. Health benefits of various bee products
2. Bee pollination importance
3. Practising apiculture

October 15: Advertising Awareness on updates of Zoology through various Social Media platforms

A Facebook and Instagram page was created for further updates of Zoology Department. Instagram username: **zoologyclub_2020**. Facebook Page: **Zoology Club- St. Bede’s College**.



October 16: Significance of Honey (Advertising campaign/Field Visit)



Students went around villages to enlighten people on the health benefits of honey and encouraged them to add it to their regular diet.

Apiculture farms were visited and students were lucky enough to get some samples of pure wild honey from this campaign.

October 17: Significance of Bee Propolis (Education Campaign)



Propolis is a resin like material made by bees from the buds of different plants. It is used by bees to build their hives.



Students made charts depicting the importance of propolis. There are many ways in which propolis can be used and the main aim was to make people aware about these unknown uses.

October 18: Importance of Royal Jelly (Education Campaign)



Royal jelly known as BEE MILK is a honey bee secretion used in the nutrition of larvae and adult queens.

Students decided to gather people in small groups taking in consideration the social distancing and educate them about Royal Jelly. They were told about how Royal jelly can be used as a medicine and how it should be considered as a dietary supplement.

October 19: Awareness on Importance of Bee Pollen



Students went around their neighborhood to spread awareness regarding the uses of Bee Pollen and how they can include it in their diet as supplement.



It's major uses were discussed along with medicinal properties, its role in increasing the strength and stamina of the body. To assure that people can grasp most of it and put this into practice, students explained with the help of **presentations, videos** and **pictures**.

October 20: Awareness raising Campaign on Bee Venom



It is a colorless liquid, excreted through the stings, into a target when they feel threatened. It is primarily responsible for the pain associated with bee stings.

But how can venom be beneficial for our health? Students met different people and tried to gather their thoughts and spread awareness about this. They mentioned about its uses and health benefits so that people can adopt it.



October 21: Visit to a former Apiculturist and learning the benefits of Bee Hive Air



Bee hive air contains all the components of hive i.e. propolis, royal jelly, pollen and wax. The bee hive air treatment is known as Apitherapy. The students organized a visit to a former apiculturist. They decided to share the information of benefits of bee hive air with acquaintances. These included healing properties and how it helps fight major diseases.

October 22: Collection of Bees wax and Awareness on its importance



Bee Wax is a product made from the honey comb of the honey bees. Students organized an awareness program where several uses of beeswax were explained to public. Students were amazed to see the participation and the curiosity people had regarding this particular awareness program.

October 23: Awareness on Significance of Bee bread



Bee bread is a mixture of pollen nectar and honey. It a food used by worker bees and larvae. Students mentioned its uses such as it can be used as a diet supplement as it boosts immunity along with. Bee bread is a product which most people are unaware about. So this proved to be beneficial and exciting session for both, students and the people.

October 24: Outreach Awareness on Significance of Pollination

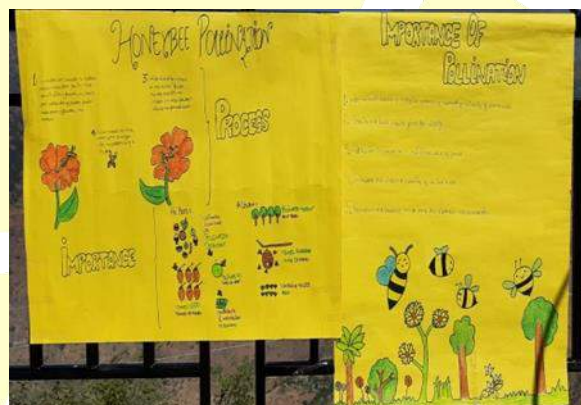


“NO BEES NO HONEY, NO WORK, NO MONEY”

On the last day of the apiculture awareness program students decided to educate people regarding the role of bees in pollination and various aspects of entrepreneurship. Pollination refers to the transfer of pollen grains (male gamete) to the stigma of the flower for the process of fertilization. Students tried to gather people in small groups and make them understand the value, the impeccable contribution of the bees towards the ecosystem, with the help of different charts and pictures. All these aspects including the role which bees offer in entrepreneurship was also discussed.



“IF BEES DISAPPEAR FROM THE SURFACE OF THE EARTH, HUMAN LIFE WILL FOLLOW IN 4 YEARS”





Overall motive of the program was to make people aware about how they can include different bee products in their dietary supplement, use the products for medicinal purpose, and adopt apiculture as a mean for entrepreneurship and much more which was accomplished very well.

October 25: Outreach Awareness on Importance of Labs and how to choose right lab?



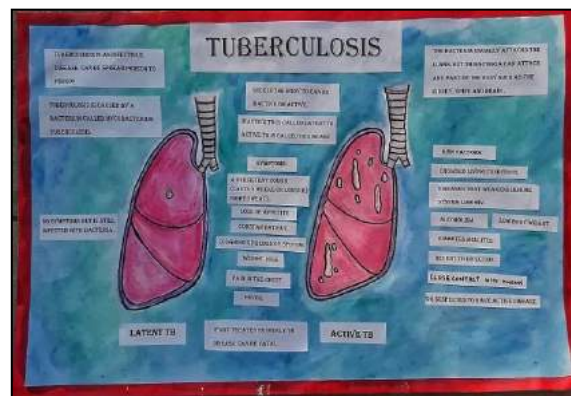
Students spread awareness regarding the “NABL Certified” Labs. Only the “NABL” certified labs should be our preferences when performing diagnostic tests. Taking into consideration the area in which the program was conducted, SRL labs and Lal Path labs were considered the best options. This awareness program helped people understand the importance of the right labs.

October 26: Outreach campaigns on Importance of diagnostic tests



Diagnosis can improve the effectiveness of treatments and avoid long-term complications for the infected patient. Diagnostic tests are the best course of action when we want to determine the disease. So the students tried spreading awareness regarding Diagnostic tests. A few details regarding certain Diagnostic Tests were shared with the people. They were assured that these tests might alert them beforehand and can also help them prevent some major diseases.

October 27: Tuberculosis Prevention Campaign





Tuberculosis (TB) is a potentially serious infectious disease that mainly affects the lungs.

It is the second biggest killer, globally. Awareness regarding TB was spread with the help of posters, pamphlets and talking sessions. Awareness regarding the causes, symptoms, spread, diagnosis and treatment of TB was done.

Every breath counts, let's stop TB now!!!

The spread of TB is easy so methods for preventing its spread were the highlights of the talking sessions. The students along with the people pledged to help complete the vision of the Indian Health Ministry by eradicating TB from India by 2025.

October 28: Hepatitis Prevention Campaign



Hepatitis refers to an inflammatory condition of the liver. There are 5 types of hepatitis A, B, C, D and E. There are many ways in which Hepatitis can spread so it was made very important by the students that everyone understood about the transmission of the disease.

Say yes to hepatitis free generation!!

Educating people regarding the diagnosis of Hepatitis was made the main subject of the awareness program. The students also focused a lot on how treatments differ with respect to the type of Hepatitis the patient is suffering from. Not all types of Hepatitis have medications available. While there is no cure for the disease the only positive thing about the condition is that it is highly preventable. Make the most of it and get yourself and your family immunized with hepatitis vaccine.

Type I diabetes occurs when immune system destroys insulin forming beta cells in pancreas. Type II diabetes occurs when body cells lose the ability to use the formed insulin. Diabetes is a very common disease that people suffer from.

October 29: Awareness Campaign on Diabetes



Diabetes is a condition that impairs the body's ability to process blood glucose, otherwise known as blood sugar level. Students explained how the symptoms of both the diabetes differ from one another with the help of pamphlets. They educated people regarding the diagnosis of the diseases and ended the session by giving few details about the cure and treatment of diabetes. They also did sample testing of few people in order to explain the topic in a better way while taking necessary precautions.

October 30: Spreading Awareness on Diagnosis and Prevention of Hypertension and Hypotension



Hypertension is a medical condition in which blood pressure in arteries is persistently high.



Students went around their neighborhood and talked regarding this disease.

They discussed in detail about the diagnosis of both high and low B.P. They found it to be very common among people so they educated them regarding various treatments of the disease. They did a few sample testing and explained how changes in the lifestyle can help cure the disease. Complications of blood pressure are major source of mortality as campaigns like these will help people avoid BP Issues.

October 31: Cancer Awareness Campaign



Cancer is a group of diseases involving abnormal cell growth with the potential to invade or spread to other parts of the body.



Following the footsteps of the Indian Cancer Society the campaign was named “**RAHO CANCER SE DO KADAM AAGE**”. Mainly three types of cancers were discussed which were Oral, Lung and Breast Cancer. Students talked about the causes, symptoms and especially treatment of the disease.

Students created cancer awareness in order to remove the stigma and fear attached to it. They talked in detail about different types of cancers and started with educating people regarding the signs and symptoms so they can recognize them early, thus enabling them to seek treatment at an early age.



Research Activity

An inventory on blood analysis of blood groups was made. An initiative was taken by the Department of Zoology to have the database of the blood groups of few college students. For this the blood sample of students were taken in order to check their blood group and then accordingly a database was made with different types of blood groups. The data generated shall be given to the NGO Almighty Blessings and the person in need of specific blood group can be helped out as these students would donate the blood as and when required. The same data shall also be shared by IGMC, Department of Immunohaematology and Blood transfusion Shimla. A total of 552 blood samples were analyzed out of which maximum blood group was **B⁺** (219 students), followed by blood group **A⁺** (131 students), **O⁺** (86 students), **AB⁺** (81 students), **O⁻** (16 students), **B⁻** (09 students), **A⁻** (7 students), and least number of students with **AB⁻** (3 students). This activity done by the Zoology Department would be an extra help to the people in need.



STUDENTS' ACHIEVEMENTS

- Shruti Chauhan** of B.Sc. II Year was nominated as Youth Health Advocate for the **4th Global Youth Meet on Health 2021** (virtual) to represent Himachal Pradesh on Health Promotion. Jointly co-organized by HRIDAY and World Health Organization Regional Office for South East-Asia #GYM takes place in every 5 years in which more than 32 countries participate. Theme for #GYM2021 was **Meaningful Youth Engagement for Leading Action on Universal Health Coverage and Sustainable Development Goals**. 16 workshops were organized with 03 plenary sessions for two days. Participants could participate in one Workshop per day.

The two day webinar consisted of:

April 20, 2021: 1. Pre-GYM workshop on Meaningful **Engagement of Youth to “Build Back Better”**.

2. Zoom interactive room where she talked about priorities to promote health and well-being during COVID-19.

3. Workshop on Evidence based prevention for Youth Leaders

April 21, 2021: Workshop on NCD Alliance.

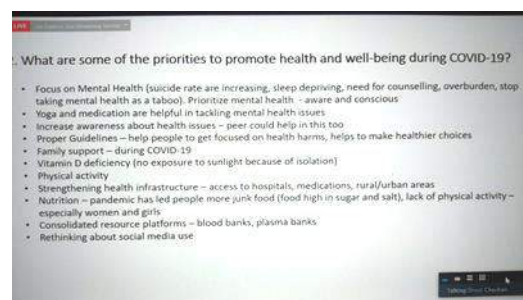
She participated actively in all interactive sessions to share her perspective on the affect of COVID-19 on youngsters and their Health enhancement.

The webinar opened many scopes for future in the sector of Health.

She was the youngest to represent the state among five faculty level Youth delegates from Himachal Pradesh.

- Shruti Chauhan** of B.Sc. II Year participated in a National Online Quiz on **Healthy Food & Eating Habits Against COVID-19** organized by GP College, Alour-Khanna and received an e-certificate of appreciation.

- Sarah Gupta** of B.Sc. II Year represented the College in a webinar organized by the EBSB club of St. Bede's College, Shimla, Himachal Pradesh in collaboration with Kahm Unity Women's College Manjeri, Kerela. She presented a PowerPoint presentation on **“Himachali Attire”**. This interaction introduced the regional literature and ensured cultural exchange.



- **Shruti and Sarah** volunteered in a Cleanliness program organized by @earthaidindia, a Shimla based NGO with motto of Cleaner and greener Planet. Litter was collected between the areas of Sanjauli-Navbahar and was properly disposed off with the help of MC, Shimla.



- **Shreya Dubey** of B.Sc. II Year was awarded 1st prize for poster making competition organized on World AIDS Day.



- **Sritisha Kumari** of B.Sc. II Year got 1st prize in a poster making competition organized by Departmental Club of Zoology, **ZOO QUEST** on the occasion of Health Literacy Month, on the topic “**BE AND WE**- Significance of Honey Bees”.



- **Shaiphali Kaushal** of B.Sc. II Year was adjudged 2nd in the poster making competition on the topic “**BE AND WE**- Significance of Honey Bees” organized by Departmental Club of Zoology, **ZOO QUEST** on the occasion of Health Literacy Month.

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