

# WIGS-3

EXPLORING THE MIND

An illustration of a person with dark hair and a serene expression, eyes closed, in a meditative pose. They are wearing a white t-shirt. Above their head is a large, dark blue, cloud-like shape filled with numerous small white stars, resembling a night sky. The background is a light beige color.

**GUEST FACULTY**

**SURG CMDE KAUSHIK CHATTERJEE**

**GP CAPT TVSVGK TILAK**

ORGANISED BY: M/CDT ASHVIN VARADHARAJAN  
E3 BATCH

# DAY DREAMING, MIND WANDERING AND MINDFULNESS

M/Cdt HETVI, G3 BATCH

It takes just a fraction of a second for our thoughts to drift from listening to a monologues lecture to a dear memory, or conjecturing an imaginative impending threat, or reframing a conversation gone wrong, or visualizing the tantalizing Belgian chocolate that we've been longing to eat, or getting our eyes feezed and mind stuck on an object, or ruminating on random events, or criticizing someone ( or less frequently self loathing)...and what not, which is frequently followed with soft snores. 20 % of the body's nutrition disallowed the brain to shut off that easily even for a while...it gallops from one thought to another. Enormous amount of literature is out there to determine how the mind functions, focuses and wanders. The factors which stimulates it and dictates it's path then forms the basis of exploiting mind wandering to our advantage and constrain it when we require periods of undivided attention. Newer workers have shed light upon the creative problem solving benefits mind wandering which was previously viewed as a culprit by practicing unrelenting mindfulness and meditation.

## References

<https://www.nature.com/articles/s41598-022-11594-x>

<https://pubmed.ncbi.nlm.nih.gov/35348846/>



# METRONOME THERAPY

M/Cdt ADITI MAHAJAN, G3 BATCH

All of us are well aware of the fact that people are living with hypertension, diabetes and modern medicine now, has made it possible to live with cancer! Yes it's called Metronomic therapy - progression free survival. People who suffer multiple relapses are started on metronomic therapy, which is a combination of common drugs like metformin, celecoxib etc. and have shown great results. A group of 13 head and neck squamous cell carcinoma patients in stage of progressive disease, were started on celecoxib, erlotinib and methotrexate and 10 have shown complete or partial remission or having stable disease. There are many more cancers where metronomic therapy is working wonders. Today it is used as second line but not upfront against most of the cancers. Further development in metronomic therapy may establish it as first line treatment. And the most amazing thing is that for a resource limited country such as ours , it could definitely be the road ahead because of its low cost!

# BOREDOM- NOT SO BORING!

M/Cdt GAURAV JALAL, G3 BATCH

What if I say you can feel irritated and sleepy at the same time? Boredom might motivate someone in pursuit of new goals when the previous goal feels no longer beneficial. Boredom in several studies has been associated with high skin conductance rate and heart rate which might seem counterintuitive, based on conventional lethargic conceptualization of boredom. While some studies suggest boredom to be a high arousal state while other says it to be associated with low and high arousal both. Studies also showed increased level of cortisol in boredom state when compared to sadness and also showed that people felt sleepy while getting bored. These studies might explain boredom to be a state which motivates desire for change from the current state and increase opportunities to attain social, cognitive, emotional and experiential stimulation. Also, people who are more prone to boredom are associated with higher risk of getting depressed, getting violent/aggressive and may involve in short-term rewarding activities, of all, substance abuse is of the greatest concern. Though a few physiological and psychological parameters have been studied, more research is required to understand this not so boring state c/d boredom.

## References

<https://www.mdpi.com/2076-328X/3/3/459>



# PAINKILLER - KILLER OF EMPATHY?

M/Cdt ADITYA JAYAPALAN, G3 BATCH

Acetaminophen (paracetamol) is one of the popular Drug of Choice analgesic. Given the millions of people who consume acetaminophen on a regular, the social consequences of acetaminophen could be far more needed to be evaluated than assumed. However, much is not known about how clinically approved drug therapies such as analgesics influence social cognition, affect or behavior.

The finding that the physical painkiller acetaminophen reduces empathy for pain has several theoretical and practical implications.

First, these findings emphasize the necessity for further research on the neurochemical bases of empathy for pain. Second, a pharmacological approach may be useful in research on the neurophysiology of empathy, for which there are multiple theories.

Finally, these findings raise important questions about the societal impact of acetaminophen.

Clearly, more research on the social side effects of these medicines is needed. This is a need to be emphasized.

## References

<https://www.science.org/doi/10.1126/science.abe3040>

<https://www.pnas.org/doi/full/10.1073/pnas.1511269112>

# ENHANCEMENT IN ENERGY PRODUCTION FROM SOLAR PANEL

M/Cdt SATYAM RAJ, H3 BATCH

In future we will have to shift to renewable sources of energy and solar energy is one of the main renewable sources. So, if we can increase the energy production from a solar panel, then it will be a great preparation for the coming future.

The energy production in a solar panel depends on the intensity of light and not the amount of heat energy. Basically, intensity of light is related to the number of photons. So if we will use converging lens to converge light rays and let it fall on the solar cells then we can easily increase the energy production. To verify it two set ups can be made one with converging apparatus and the other without the converging apparatus. On measuring with ammeter higher value of current will be detected in the panel with converging apparatus.

Further research can result in tremendous increase in energy production from a simple solar panel.



# THANK YOU



## WIGS-4 Coming Soon...