

FOREWORD

MediTimes from the desk of Medical Services brings the latest trending healthcare news

The *In focus* latest medical news comprises of articles on **Study finds Wrist Worn Devices Can Predict and Alert Seizures** and **A needle free technology used to measure blood glucose level in people with diabetes**. The COVID-19 infohub focuses on knowing about **"How is Omicron variant detected?"**

The Health benefits of Oils, in this issue provides an insight about the **health benefits of Linseed Oil**.

Hope this November 2021 issue of Meditimes would be an informative reading

Happy Reading!!!

Best Regards,
Dr. Manjul S
Senior VP- Medical Services

LATEST MEDICAL NEWS



Study finds Wrist Worn Devices Can Predict and Alert Seizures



A needle-free technology used to measure blood glucose level in people with diabetes.

COVID-19 INFOHUB



How is Omicron Variant Detected?

Health Benefits of Oil



Linseed Oil



FUN CORNER



DIMAG KI BATTI JALOA

Study Finds Wrist Worn Devices Can Predict and Alert Seizures

Seizure is a sudden abnormal electrical activity in the brain causing unconsciousness and changes in the behaviour, movements of the body. For example, frontal lobe seizures causes head movement, unresponsiveness, screaming or laughter, and repetitive movements, while Seizures in the temporal lobe, toward the middle of the brain, leads to a rush of emotions like fear or joy, smelling or tasting something that is actually not present.

If seizures could be predicted, patient could alter their activities, take a fast acting medication or visit nearby doctor to prevent or minimize its effects.

According to the study published in the journal *Scientific Reports* by Mayo Clinic researchers and International collaborators, a special wrist worn monitoring device can identify the patterns of seizure in patients who wear it for 6 to 12 months, allowing about 30 minutes of warning before a seizure occurs. The wrist watch collects data by checking electrical characteristics of the patient's skin, blood flow, temperature, heart rate, and movement and predicts when a seizure would happen. As, many patients avoid surgical procedure, this wearable device can be an alternative to manage seizure and can be worn like a standard watch.

This Novel wearable device can predict seizure and helps patients in preventing and minimizing its effects either by taking a fast acting medication or visiting nearby doctor.

Reference: Nasser M, et al. Amulatory seizure recurrence with a wrist-worn device using long short-term memory deep learning. *Scientific reports*. 2021 Nov 9;11(1):1-9

A needle-free technology used to measure blood glucose level in people with diabetes



Diabetes is a disease that occurs when glucose/sugar level is too high in the blood. To avoid getting long term Diabetes related complications, it is recommended for the Patient to measure their blood glucose several times a day, which they do by pricking their fingers with a needle to release a drop of blood.

Because of the high density of blood vessels, fingertips are considered as the preferred site for blood sampling. At the same time, fingertips are sensitive and causes pain, skin damage, bruising and increase the risk of infection from regular pricking. Because of which, the need to develop needle free methods increases.

A study published in the *Journal Diabetes Science and Technology*, explained that a jet injector could also be used to collect blood samples that could release enough blood for glucose sampling. Jet injector works by piercing the skin using a small volume of saline solution, and releasing enough blood for glucose level measurement. This study suggests that Jet injection is beneficial to release sufficient blood to conduct a glucose measurement with less pain compared to pricking fingertips.

Jet injection is a simple and easy way for releasing blood and is another step towards needle free sampling for diabetes management.

Reference: Xu J, McKeage JW, Ruddy BP, Niala PM, Tbaner A. ...nduced Blood Release from Human Fingertips: A Single-Blind, Randomized, Crossover Trial. *Journal of Diabetes Science and Technology*. 2021 Oct 28;19(3):293-298. doi:10.3181/0739-7330.2021.19.3.293-298.

COVID-19 : Infohub

How is the Omicron variant detected?

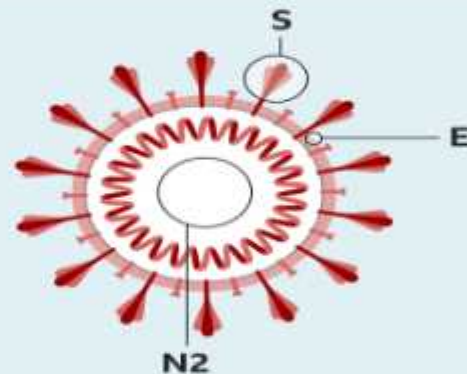


1

PCR test conducted

2

Test looks for three genes relating to parts of the virus: spike (S), nucleocapsid or inner area (N2) and envelope or outer shell (E)



3

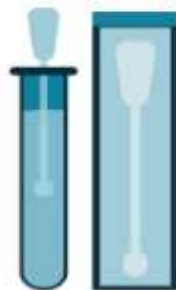
Is S gene detected?

Yes

No

Unlikely to be Omicron

Could be Omicron



4

Full gene analysis used to confirm test



Source: BBC research

BBC

Health Benefits of Oil- Linseed Oil

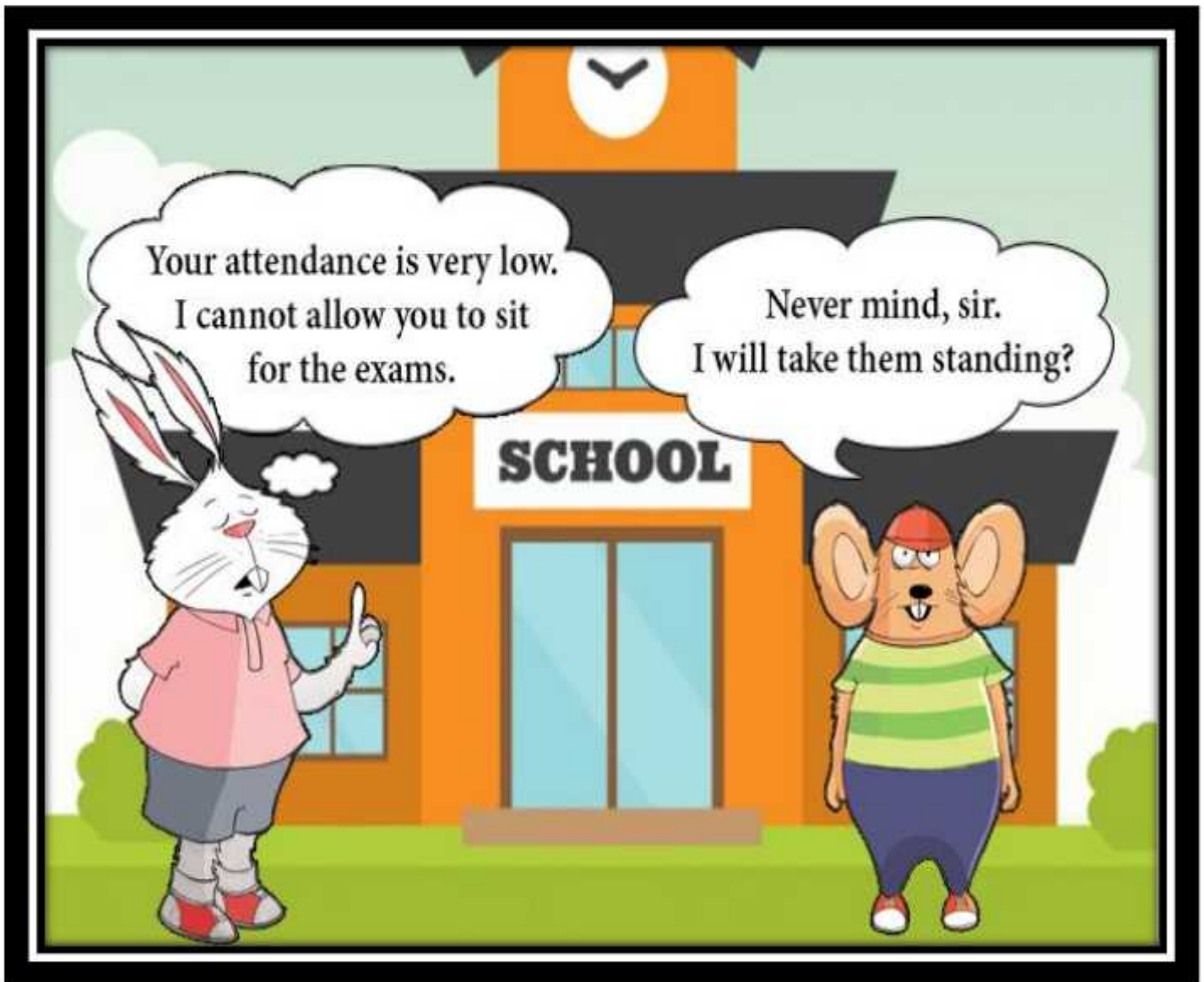
Linseed oil is also called as flaxseed oil or flax oil. It appears to be yellowish oil which is obtained from dried oil-pressed seeds of the flax plant. It has several health benefits. The oil has burnt and bitter odour which belongs to the family *Linaceae*.



	Quantity Per Serving(5 gm)
Energy	82kj
Protein	1.6g
Total Fat	0.5g
Saturated	0.02g
Monounsaturated	0.08g
Polyunsaturated	0.35g
Omega 3(ALA)	0.25g
Total Carbohydrate	2.18g
Sugar	0.07g
Dietary fibre	1.95g
Soluble fibre	0.4g
Insoluble fibre	1.55g
Lignans	25-50mg.



Christy Set et al. Health Benefits and Nutritional Value of Flax Seeds. 2016



DIMAG KI BATTI JALAO

- 1) Wrist Worn Devices Can Predict and Alert Seizures? True or False?
- 2) Linseed belongs to family.....?
- 3) Find the word using the clue given below?



Please send your quiz answers to medicalservices@microlabs.in and winner will get a surprise gift