

NOVEMBER, 2021  
VOL.1 ISSUE.1

# THE EYE OPENER

DR. YASSER OMAR

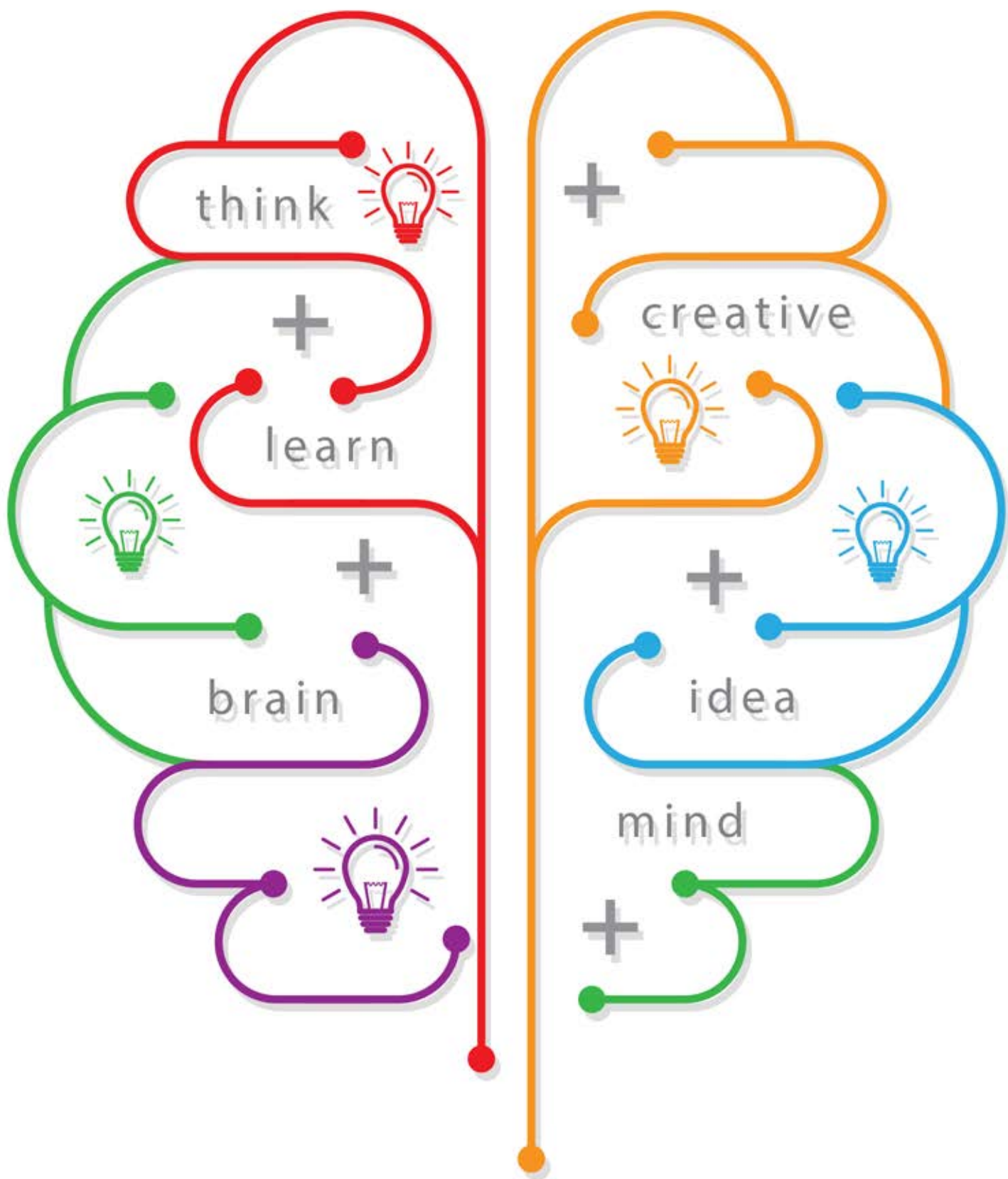


## IN THIS ISSUE.

- 1- GUIDELINE UPDATE 2021 OF HYPERTENSION
- 2- FDA ANNOUNCEMENT 2021 OF COVID19
- 3- COVID-19 AND VITAMIN-D CORRELATION
- 4- EGYPTIAN HEALTHCARE UPDATE 2021
- 5- HOW TO BE A PROFESSIONAL PHARMACIST?

## EDITORS

HUSSIEN ATWA HASSAN	20173150
IBRAHIM SABRY MOSTAFA	20171711
MAHMOUD NADER ABDELKADER	20173648
MOHAMED ASHRAF HASSAN	20172013
MOHAMED HAMDY EL-SAYED	20170049
SHROUK MOHAMED AMIN	20173066



The  
EYE  
Opener

# GUIDELINE UPDATE 2021 OF HYPERTENSION

## BLOOD PRESSURE THRESHOLD FOR INITIATION OF PHARMACOLOGICAL TREATMENT

WHO recommends initiation of pharmacological antihypertensive treatment of individuals (moderate- to high-certainty evidence)

- with a confirmed diagnosis of hypertension and systolic BP of  $\geq 140$  mmHg or diastolic BP of 90 mmHg.
- with existing cardiovascular disease and systolic blood pressure of 130-139 mmHg
- without cardiovascular disease but with high cardiovascular risk, diabetes mellitus, or chronic kidney disease, and systolic blood pressure of 130-139 mmHg.



NORMAL  
120/80



HYPERTENSION  
140/90

## LABORATORY TESTING BEFORE AND DURING PHARMACOLOGICAL TREATMENT

- WHO suggests obtaining tests to screen for comorbidities and secondary hypertension
- tests include serum electrolytes and creatinine, lipid panel, HbA1c or fasting glucose, urine dipstick, and electrocardiogram (ECG).
- long-acting dihydropyridine calcium-channel blockers (CCBs) are more suitable for initiation without testing, compared to diuretics or angiotensin-converting enzyme inhibitors (ACEi)/angiotensin-II receptor blockers (ARBs).

## CARDIOVASCULAR DISEASE RISK ASSESSMENT AS GUIDE TO INITIATION OF ANTIHYPERTENSIVE MEDICATIONS

- WHO suggests cardiovascular risk assessment at or after the initiation of pharmacological treatment for hypertension,



# DRUG CLASSES TO BE USED AS FIRST-LINE AGENTS

[STRONG RECOMMENDATION, HIGH-CERTAINTY EVIDENCE]



1. Thiazide and thiazide-like agents
2. Angiotensin-converting enzyme inhibitors (ACEis)/angiotensin-receptor blockers (ARBs)
3. Long-acting dihydropyridine calcium channel blockers (CCBs)

## COMBINATION THERAPY MODERATE-CERTAINTY EVIDENCE

[MODERATE-CERTAINTY EVIDENCE]

Preferably with a single-pill combination, Antihypertensive medications used in combination therapy should be chosen from the following three drug classes: diuretics (thiazide or thiazide-like), angiotensin-converting enzyme inhibitors (ACEis)/angiotensin-receptor blockers (ARBs), and long-acting dihydropyridine calcium channel blockers (CCBs).

## TARGET BLOOD PRESSURE

[STRONG RECOMMENDATION, MODERATE-CERTAINTY EVIDENCE]

- A target BP goal of <math><140/90</math> mmHg in all patients with hypertension without comorbidities.
- A target systolic BP goal of <math><130</math> mmHg in patients with hypertension + cardiovascular disease
- A target systolic BP goal of <math><130</math> mmHg in high-risk patients with hypertension (those with high CVD risk, diabetes mellitus, chronic kidney disease).

## FREQUENCY OF RE-ASSESSMENT

[CONDITIONAL RECOMMENDATION, LOW-CERTAINTY EVIDENCE]

- Monthly follow up after initiation or a change in antihypertensive medications until patients reach target
- Follow up every 3 months for patients whose blood pressure is under control.

## REFRENCES

Adults, G., 2021. Guideline for the pharmacological treatment of hypertension in adults. [online] Ncbi.nlm.nih.gov. Available at: <<https://www.ncbi.nlm.nih.gov/books/NBK573631/>> [Accessed 1 December 2021].



# THE FDA ANNOUNCEMENT 2021 FOR COVID19

The FDA approved a new COVID-19 over-the-counter (OTC) test on November 5, 2021. The FDA has given the iHealth COVID-19 Antigen Rapid Test, an OTC COVID-19 antigen diagnostic test with results in 15 minutes, an emergency use authorisation (EUA). The company plans to produce 100 million tests every month in the first half of 2022, with capacity growing to 200 million in early 2022.

The test can be used as a single test for those who have symptoms of COVID-19. A serial test for persons who don't have any symptoms, which means the test is repeated twice over three days.

The test can be used on the following individuals:  
Have a self-collected nasal swab sample and be at least 15 years old.

When an adult collects the nose swab sample, the child must be at least 2 years old.

The FDA is dedicated to improving the availability of COVID-19 at-home diagnostic tests that are both accurate and reliable, as well as facilitating consumer access



Get instant results in 15 mins  
with easy-to-read results



## REFERENCE

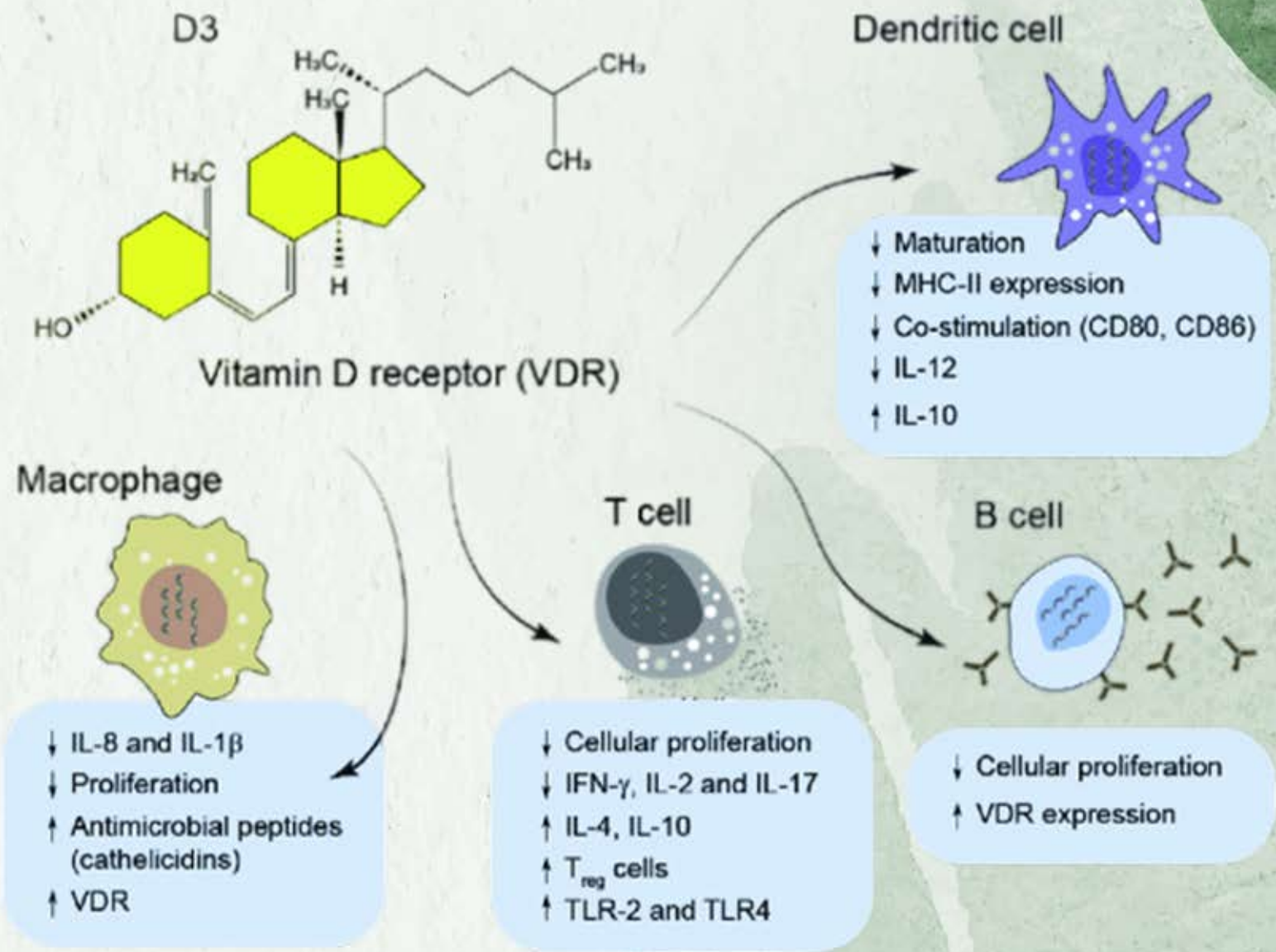
1-U.S. Food and Drug Administration. 2021. Coronavirus (COVID-19) Update: November 5, 2021. [online] Available at: <https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-november-5-2021>

2-U.S. Food and Drug Administration. 2021. FDA Approves First Treatment for Common Type of Post-Transplant Infection that is Resistant to Other Drugs. [online] Available at: <https://www.fda.gov/news-events/press-announcements/fda-approves-first-treatment-common-type-post-transplant-infection-resistant-other-drugs>

# COVID -19 AND VITAMIN-D CORRELATION

VITAMIN D'S ANTI-INFLAMMATORY, ANTIVIRAL, AND IMMUNOMODULATORY PROPERTIES MAKE IT A SAFE AND AFFORDABLE TREATMENT FOR CORONA VIRUS DISEASE

VITAMIN D IS KNOWN TO IMPROVE THE ACTIVITY OF IMMUNE CELLS THAT PROTECT YOUR BODY FROM DISEASES



## CLINICAL STUDY [1]

Outcome Treatment with vitamin D has been shown to reduce the occurrence of viral respiratory tract infection, particularly in patients who are vitamin D deficient.

Vitamin D deficiency was linked to a higher risk of COVID-19

Vitamin D Status and the COVID-19 Test Results in a Clinical Study

The study's findings raise the question of whether vitamin D deficient treatment is linked to a lower incidence of COVID-19 Because many factors that may be linked to COVID-19 risk, such as age, obesity, diabetes, and chronic illness in general, can increase vitamin D deficiency.

When compared to patients with likely sufficient vitamin D status at the time of COVID-testing, patients with likely deficient vitamin D status had a higher relative risk of testing positive for COVID-19

## CLINICAL STUDY [2]

Cytokine storm causes a strong attack on the body in COVID-19 patients, resulting in a variety of vascular changes that may contribute to ARDS as well as cardiac and artery injury, especially if the patient has a prior heart defect Vitamin D can also block NF $\kappa$ B activation, lowering the inflammatory response to viral infections in the airway epithelium while maintaining viral clearance. This is backed by research that found vitamin D to be a negative regulator of RAS activity, which can help to balance out the effects of SARS-CoV-2 infection and the cytokine storm caused by covid-19.

By re-modulating acute respiratory distress syndrome expression and ACE2 activity, which is an essential receptor for COVID-19 pathogenesis, vitamin D pretreatment was useful in minimizing lung injury.

Vitamin D supplementation, according to experts, may boost immunity and aid humans in combating COVID-19 and its virulent effects on all organ systems





## CLINICAL STUDY (3)

The evidence for a link between vitamin D deficiency and COVID-19 is growing

Some of the methods by which vitamin D regulates COVID-19 include

- 1- Inhibits viral replication by lowering the expression of pro-inflammatory cytokines and increasing the production of antiviral proteins.
- 2- Reducing viral replication by inhibiting zinc metabolism.
- 3 - Vitamin D's immunomodulatory involvement in dendritic cells and T cells promotes anti-inflammatory action and viral clearance,.
- 4 - Vitamin D deficiency is linked to reduced levels of interleukin 6, which helps to regulate cytokine storm in severe COVID-19 infections.

However, a UK study with 580 positive patients and 723 negative controls found that modest vitamin D deficiency has no effect on corona virus disease .:

According to AlipoM, patients with severe COVID-19 infection who required ICU care were vitamin D deficient. According to his retrospective analysis of 212 covid positive cases, increasing vitamin D levels to 1.63 times the baseline would enhance the clinical prognosis of critically ill patients.

An rising rate of deficiency was found to be associated with increasing radiological signs of disease deterioration, particularly in covid positive male patients. The estrogen/androgen-dependent immunological disparities in both genders could be the cause of sexual dimorphism.

Another retrospective investigation found that vitamin deficient covid patients had a death rate of 98.9% .



## CLINICAL STUDY [4]

The study looked at the severity of disease in two groups: vitamin D deficiency and vitamin D sufficient, and found that the latter had lower CRP levels, higher lymphocyte percentage, lower clinical severity, and hence lower inpatient mortality

The renin-angiotensin-aldosterone system is inhibited by vitamin D. (RAAS)  
Chronic activation of the RAAS due to a deficiency in vitamin D may result in a reduction in lung function  
Vitamin D administration may boost the immune system of COVID-19 patients by regulating the innate and adaptive immune response systems, as well as inhibiting RAAS

## REFERENCE

- 1 - Meltzer, D., Best, T., Zhang, H., Vokes, T., Arora, V. and Solway, J., 2020. Association of Vitamin D Status and Other Clinical Characteristics With COVID-19 Test Results. *JAMA Network Open*, 3(9), p.e2019722.
- 2- Gonedes, A., 2021. COVID-19 and Vitamin D: Is There a Direct Relationship Between Vitamin D Deficiency and COVID-19 Severity?. *International Journal for Research in Applied Science and Engineering Technology*, 9(8), pp.3048-3054.
- 3 - Cassinadane, A., Sridhar, A., Mohan, M., Rajendiran, K., Sekar, P., Singh, A. and Nambiar, S., 2021. Vitamin D nemesis of COVID-19. *International Journal of Clinical Biochemistry and Research*, 8(3), pp.179-185.
- 4- Maha, Q. and Talal, M., 2021. Can Vitamin D Deficiency Increase the Susceptibility to COVID-19?. *Frontiers in Physiology*, 12.
- 5- Shojadoost, B., Yitbarek, A., Alizadeh, M., Kulkarni, R., Astill, J., Boodhoo, N. and Sharif, S., 2021. Centennial Review: Effects of vitamins A, D, E, and C on the chicken immune system. *Poultry Science*, 100(4), p.100930.



# EGYPTIAN HEALTH CARE UPDATE 2021

PREPAREDNESS OF ISOLATION HOSPITALS TO COVID-19 RISK MANAGEMENT AND ITS IMPACT ON NURSES' WORK ENGAGEMENT DURING THE OUTBREAK



-Covid-19 Risk management in health care settings is a process that influences all parts of the organization and must be integrated into everything the organization does in order to control or limit the outbreak's negative results

-hence isolation hospitals should be considered, It is ready for the arrival of (Covid-19) patients, and its nursing team is well-prepared trained, equipped, and capable of working with patients like these

-According to the findings, about half of the Covid-19 risk management levels were unsatisfactory (75 %), and less than half of them (44.9%) had a moderate degree of job involvement throughout the epidemic This could be owing to the fact that there is a scarcity of personal protection equipment, as well as there, aren't enough medical supplies to go around.

- Considering the pandemic and the number of cases that have occurred beyond the isolation hospitals' capacity, putting them in a difficult working environment for a long time.

- all of these factors combine to make the Nurses believe they are insecure and capable of harm infected more easily than others at any time, They are at significant risk of contracting an infection.



-There was a statistically significant positive link between Covid-19 risk control and nurse job satisfaction

Recommendations: To build a sustainable healthcare system with experienced and skilled nurses in infection control, continuous education programs for nurses were combined with redesigned healthcare systems based on Covid-19 risk evidence practice.



## REFERENCE

Mohammed Atia Mohammed, K., Abdel Hamid Mohamed, A., El said El sabahy, H. and Saleh Moustafa Saleh, M., 2021. Preparedness of isolation hospitals to Covid-19 risk management and its impact on nurses' work engagement during the outbreak. *Egyptian Journal of Health Care*, 12(4), pp.61-74.



# HOW TO BE A PROFESSIONAL PHARMACIST?

## APTITUDE FOR SCIENCE

Pharmacists must have a thorough understanding of chemistry and biology, as well as a passion for these subjects. They must also be able to quickly absorb new and difficult material when it becomes accessible

## PERSONALITY TRAITS

Developing the interpersonal skills to deal with doctors who don't want to be questioned and dissatisfied patients who are furious about having to wait for their prescriptions needs patience, diplomacy, and a great sense of humor. It's critical to be able to soothe damaged egos and broken feelings if the process is to function smoothly

## ANALYTICAL SKILLS

Pharmacists must approach their profession with an analytical mindset, referring to the appropriate sources when necessary, and making logical and accountable decisions about a patient's prescription

## CONFIDENTIALITY

Being a pharmacist necessitates that you maintain confidentiality. You should be able to keep all of the patient's details confidential. Information about the client's medical history, diagnosis, and prescriptions should be kept confidential. You, the patient, and any other medical workers working with him or her are all part of it. This sensitive information should never be shared with community members



## FINANCIAL KNOWLEDGE

Pharmacists, may be in charge of budgeting and ordering new inventory, as well as overseeing other expenses such as payroll. This necessitates excellent organizational skills as well as a fundamental understanding of financial, bookkeeping, and taxation principles

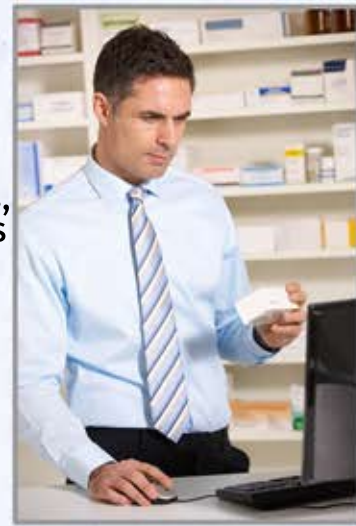
## READING COMPREHENSION

Refers to the ability to comprehend written material



## LITERACY ON THE COMPUTER

Almost all dispensary systems, as well as inventories, patient registries, and consultation programmes, are now digital. As a result, pharmacists must be comfortable using computers and have the ability to learn quickly



## COUNSELING ABILITIES

Despite the fast-paced nature of the profession, pharmacists should take the time to thoroughly explain a patient's medicine and explain the potential side effects. For example, if a patient forgets to take specific pills on a regular basis, a pharmacist should try to figure out why (it could be more than mere forgetfulness) and give a solution that would help the patient

## ABILITY TO MENTOR OTHERS

Pharmacists must be able to teach and pass on their knowledge and experience to junior pharmacists and pharmacy technicians who are just starting out



## CRITICAL THINKING

Is the ability to solve problems and consider the pros and cons of many alternatives. The capacity to carry out activities with granular precision is known as attention to detail. Physical stamina refers to your capacity to stand throughout the most of your shift

## CONSCIENTIOUSNESS

Regardless of their personal opinions, pharmacists, like other medical professionals, are expected to follow defined ethical and moral principles



WEBSITE: WWW.EYEOPENER.COM

EMAIL: EYEOPENER@FUE.EG

NUMBER: 012345678



**FUTURE**  
UNIVERSITY IN EGYPT

جامعة المستقبل