

THE ACTIVE KNOWLEDGE





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NEW GUIDELINES FOR SEVERE COMMUNITY-ACQUIRED PNEUMONIA MADE BY THE INFECTIOUS DISEASES SOCIETY OF AMERICA/AMERICAN THORACIC SOCIETY

severe community-acquired pneumonia (SCAP) is a crucial cause for hospital admission and it is related to high clinical burden so deep knowledge is required for its management

Before starting the treatment the etiology must be known especially in the case of hospitalized patients because the choice of the adequate antibiotic treatment depends on proper diagnosis and to reduce the treatment failure and the overuse of antibiotics, an aetiological determination is only recommended for individuals with SCAP, patients being treated for methicillin-resistant *Staphylococcus aureus* (MRSA) or *Pseudomonas aeruginosa* CAP, patients previously infected with MRSA or *P. aeruginosa*, or individuals hospitalized in the previous 90 days. [1]

CAP is pneumonia acquired outside a hospital setting, CAP criteria to be considered as severe (SCAP):

1 Major criterion out of 2:

- ◆ Respiratory failure requiring mechanical ventilation
- ◆ Septic shock with the need for vasopressors

Or 3 minor criteria out of 9:

- ◆ Respiratory rate ≥ 30 breaths/min
- ◆ $\text{PaO}_2/\text{FiO}_2 < 250$
- ◆ Multi-lobar infiltrates
- ◆ Confusion/disorientation
- ◆ Uremia ($\text{BUN} \geq 20$)
- ◆ Leukopenia ($\text{WBC} < 4000$)
- ◆ Thrombocytopenia (platelets $< 100,000$)
- ◆ Hypothermia (core temperature $< 36^\circ\text{C}$)
- ◆ Hypotension requiring aggressive fluid resuscitation [1]





TREATMENT

1) ANTIBIOTICS

Current guidelines recommend the administration of fluoroquinolones alone or a combination of a beta-lactam and macrolide to treat **CAP**, except in patients admitted to an ICU, individuals with concomitant diseases, or those with risk factors associated with greater resistance to the pathogens causing pneumococcal CAP. In patients admitted to an ICU, a beta-lactam in combination with either a macrolide or a fluoroquinolone is recommended

antibiotic treatment duration should be individualized and last at least 5 days, stopping treatment after 48 h of clinical stability and no fever.

In the case of complications such as necrotizing pneumonia, lung abscesses, complicated parapneumonic pleural effusion, extrapulmonary infections, or infections due to atypical pathogens (e.g., *P. aeruginosa*, MRSA, or anaerobes), antibiotic treatment should be prolonged.

The use of biomarkers is important, especially PCT,

The studies showed that the shorter the duration the lower the side effects.

2) Corticosteroids

prednisolone or methylprednisolone therapy reduced total mortality **hydrocortisone** use did not and they should only be used in SCAP [1]



FDA approved a new COVID-19 OTC test



The US Food and Drug Administration (FDA) authorized a new COVID-19 over-the-counter (OTC) test on November 5, 2021. The FDA has granted an emergency use permission to the iHealth COVID-19 Antigen Rapid Test, an OTC COVID-19 antigen diagnostic test with findings in 15 minutes (EUA). [2-3]

The test can be used in the following ways:

- A single test for persons who have signs of COVID-19.
- For people who don't have any symptoms, a serial test is used, which means the test is done twice over three days. eg. Immunocompromised patients who must be screened periodically.

The following people may benefit from the test:

- Age 15 years or older with a self-collected nose swab sample,
- or age 2 years or older with an adult-collected nasal swab sample

The FDA is working to increase the availability of COVID-19 at-home diagnostic tests that are both accurate and reliable, as well as to make these tests more accessible to consumers.

The SARS-CoV-2 nucleocapsid protein antigen is often found in anterior nasal swab specimens during the acute phase of illness. Positive findings indicate that viral antigens are present. [2-3]



Infection status, on the other hand, must be verified by clinical correlation with a patient's medical history and other diagnostic data. The presence of a bacterial infection or viral co-infection is not ruled out by positive findings. It's conceivable that the agent discovered isn't the root of the problem.

Individuals who test positive for your product should stay away from it and seek medical help from their doctor or healthcare provider, as additional testing may be necessary.

Negative findings are presumptive, and a molecular test may be utilized to confirm them for patient care if necessary.

Negative results do not rule out COVID-19, and they should not be used to establish therapy or patient management decisions based solely on negative findings, particularly infection prevention and control decisions.

Negative results must be interpreted in light of the person's recent exposures, medical history, and the presence of COVID-19-like clinical signs and symptoms.

Consumers should report any findings acquired with this product to their healthcare provider for public health surveillance.

[\[2-3\]](#)



Effect of Alkaline-Based Diet on Blood Pressure, Lipid Profile and Weight among Patients with Hypertension

Hypertension—or elevated blood pressure—is a serious medical condition that significantly increases the risks of heart, brain, kidney and other diseases.

And it's one of the most common diseases in Egypt with a prevalence of 56.7% in older ages, thus; one of the major causes of premature death worldwide.

In Egypt a few years ago, there was a lack of information about the epidemiology of hypertension, treatment protocols, and its consequences. **Recently, there has been a significant change in Egypt's health system, including research development.**[5]

Moreover, nurses in the outpatient clinic of Menoufia hospital have conducted a study to lower blood pressure and maintain a healthier lifestyle for hypertensive patients.[4]



Nurses-led interventions for hypertensive patients are measuring and monitoring blood pressure (BP); educating patients about the importance of performing physical exercises and selecting a healthy diet as an alkaline-based diet.

Furthermore, the nursing interventions in hypertension management involve seven aspects of care, starting with early recognition of the disease and ending by performing all practices in its management and preventing complications.

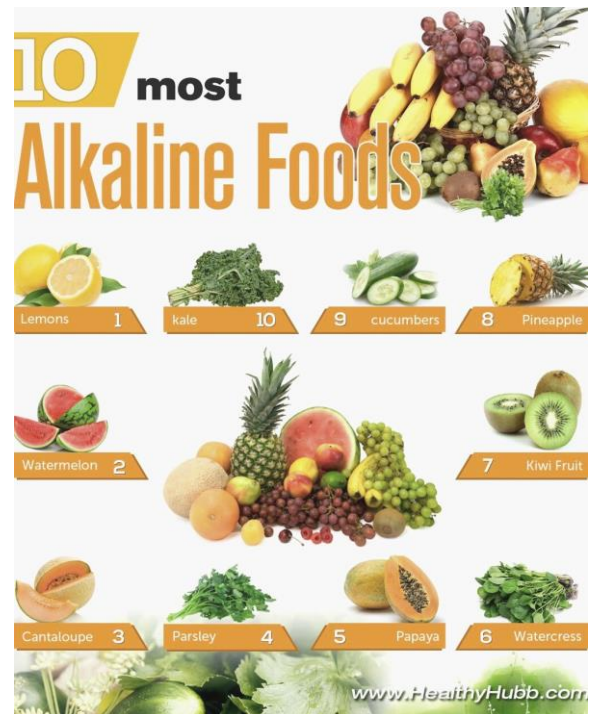
The alkaline diet is also promoted for conditions as hypertension; high blood lipid and overweight and changing food choices to more 'alkaline' selections prevent their serious complications.[4]



THE BENEFITS OF AN ALKALINE-BASED DIET INCLUDE IMPROVED CARDIOVASCULAR HEALTH, DECREASED BLOOD PRESSURE, BODY WEIGHT, BLOOD LIPIDS SUCH AS CHOLESTEROL, AND DISEASE PREVENTION.

Alkaline foods include;

- Green leafy vegetable
- Broccoli
- Citrus fruits
- Nuts
- Seaweed
- Onion, garlic, and ginger
- Sprouted seeds

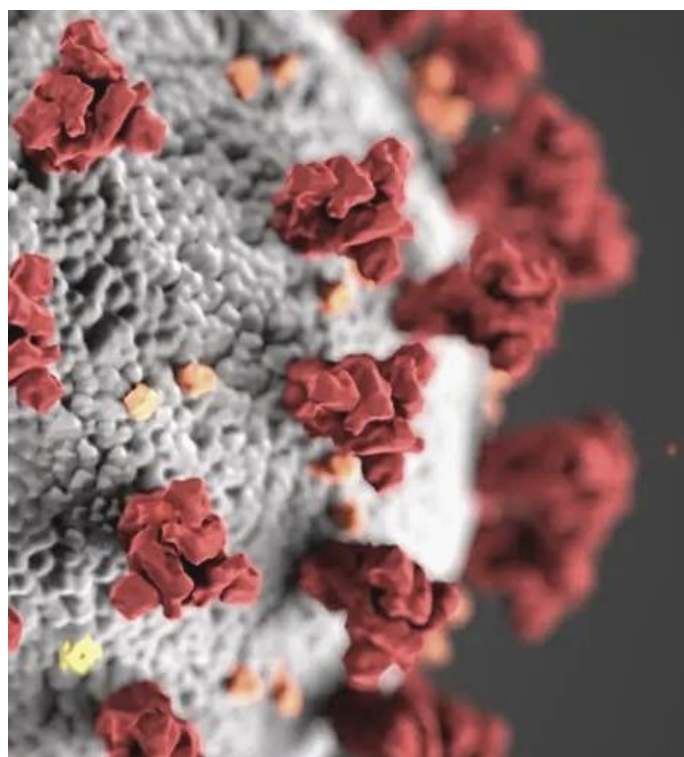


To conclude, the consumption of an alkaline diet and water had a good effect in reducing arterial blood pressure, body weight, and blood lipids.

Establishing periodical alkaline diet programs with planned meals for hypertension, overweight, and high blood lipids patients with continuous follow-up; could be the new non-pharmacological intervention of maintaining a better life for hypertensive patients.[4]



Covid- 19 and mental health



Covid -19; it's a highly infectious disease that causes severe acute respiratory symptoms. According to the World Health Organization reports on 11 November 2021, there have been 251,266,207 confirmed cases of COVID-19, including 5,070,244 deaths which have a catastrophic impact on the world's demographics being the most consequential global crisis related to health since the pandemic influenza era during the past century.

With around 5,070,244 deaths in the world and 19,399 in Egypt; Humanity panicked in the face of the smallest and fiercest enemy that has impacted every aspect of our lives.[6]

A-The impact of covid 19 on the global economy and its relationship to mental health:

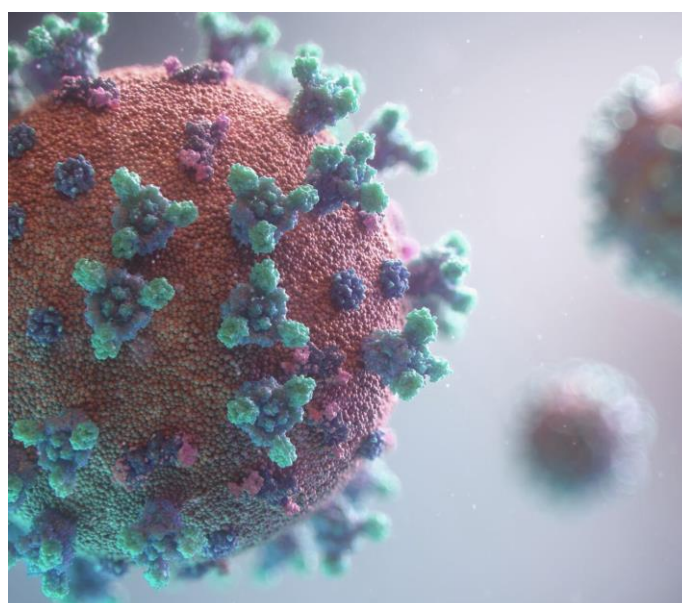
1- as a result of the lockdown and isolation, the world witnessed a massive shrinkage in GDP that was the worst in the history of capitalism as globalization went in the opposite direction.

2- International deterioration; The supply chains that were before organized production models and the backbone of the trade collapsed.

3- Focus on the national economy is back.

4- Travel and tourism abroad It almost stopped completely

5- Tens of millions of unemployed workers Millions of small businesses and Its suppliers have closed their doors. in a Europe, banks, railways, airlines, Airports, hotels, restaurants, bars On the verge of bankruptcy.

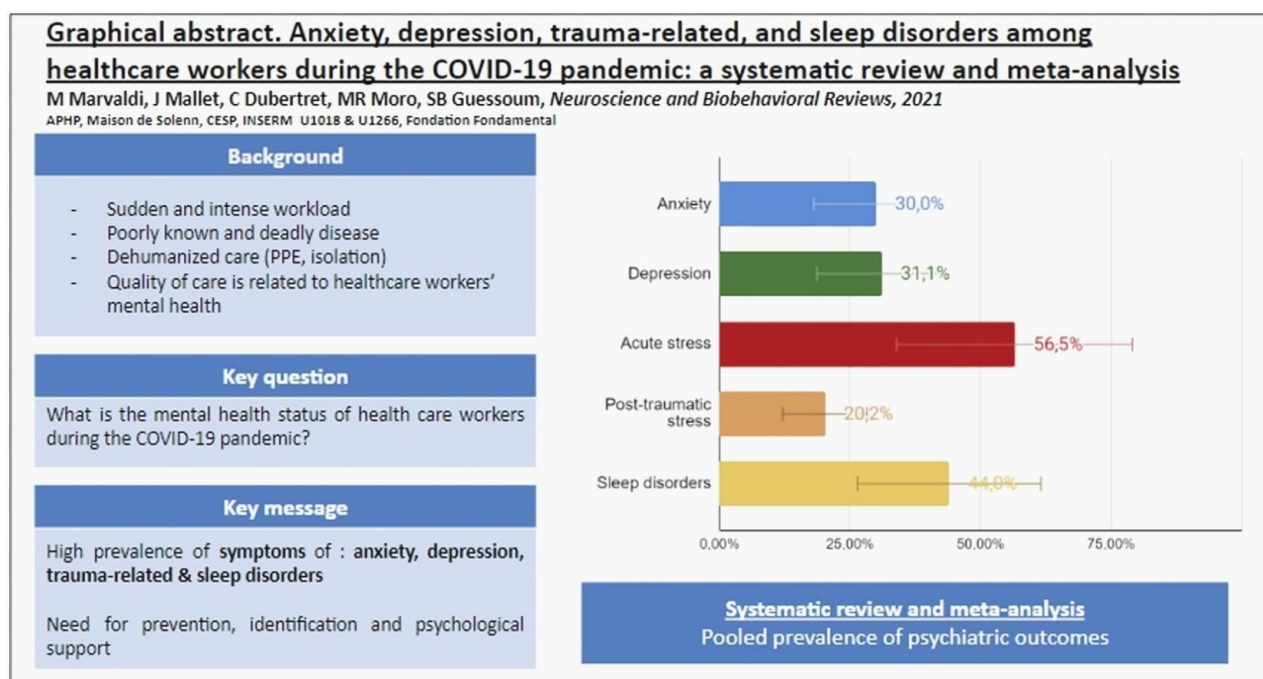


As a result of dispersal, homelessness, the low standard of living for some, and the interruption of income sources for others, this leads to a deterioration of the psychological state and an increase in psychological stress and anxiety, which led to a rise in cases of depression.[7]



B- During the COVID-19 epidemic, healthcare workers experienced anxiety, depression, trauma-related disorders, and sleep difficulties.

This is owing to their continual exposure to a large number of critically ill patients and deaths, as well as their heavy workloads. Up until October 8, 2020, this PRISMA systematic review and meta-analysis on Pubmed/Psycinfo assesses the prevalence of mental health disorders among healthcare workers throughout the pandemic. Only high-quality studies were included in the meta-analysis, which included 70 studies with 101 017 participants. The following prevalences were calculated as a group: 30 percent anxiety (95 percent confidence interval: 24.2–37.05); 31 percent depression (95 percent confidence interval: 25.7–36.8); 56.5 percent acute stress (95 percent confidence interval: 25.7–36.8)[6]



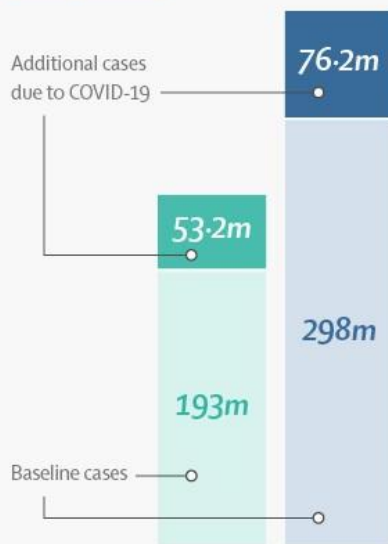
A REPORT IN THE LANCET PROVIDES THE FIRST GLOBAL ESTIMATES OF THE IMPACT OF THE COVID-19 PANDEMIC ON MENTAL HEALTH IN 2020 AND SUGGESTS AN ADDITIONAL 53 MILLION CASES OF MAJOR DEPRESSIVE DISORDER AND 76 MILLION CASES OF ANXIETY DISORDERS WERE DUE TO THE PANDEMIC. [8-9]

The COVID-19 pandemic has had a large and uneven impact on global mental health

Cases of mental disorders rose sharply during the pandemic

Cases in 2020

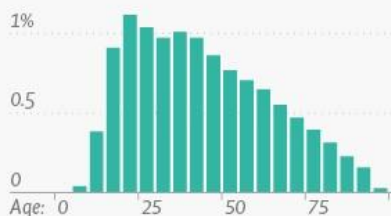
Major depressive disorder
Anxiety disorders



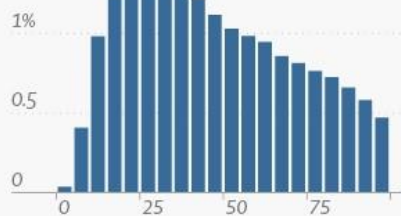
Younger people were hardest hit

Additional prevalence due to COVID-19, by age

Major depressive disorder



Anxiety disorders



Increases were higher among females than males

Additional cases due to COVID-19, by gender

Major depressive disorder



Anxiety disorders



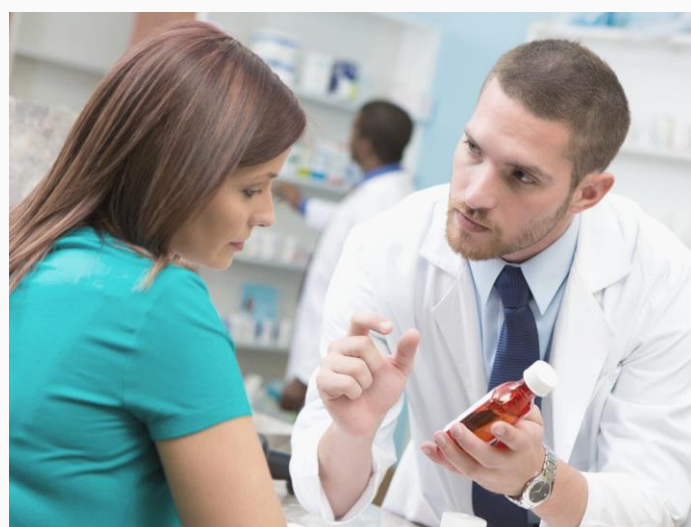
Read the full paper: Santomauro DF, Mantilla Herrera AM, Shadid J, et al. Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic. *The Lancet* 2021. Published online October 8

- a COVID-19 infection can affect your body's immune response which leads to:
 - 1- nerve inflammation
 - 2- Blood-brain-barrier disruption
 - 3- Peripheral immune cell invasion into the central nervous system
 - 4- Impaired nerve transmission
 - 5- Hypothalamic-pituitary adrenal (HPA) axis dysfunction [10]



HOW TO BE A PROFESSIONAL PHARMACIST:

A pharmacist's oath states that he or she would assist patients, strive for optimal health outcomes, and behave with the highest moral, ethical, and legal standards. All healthcare workers are supposed to be professional, and pharmacists' actions should reflect this throughout their careers. Clinical pharmacists must make it their priority as professionals to form a "fiducial" relationship with individuals they treat. They vow to act in the patient's best interests in exchange for this "gift of confidence." The clinical pharmacist's contact with the patient is based on a covenantal relationship.[\[11\]](#)



Clinical pharmacists are required to have self-awareness, self-evaluation, and self-development abilities. These abilities are frequently obtained through postgraduate training evaluation and mentoring, and then further developed throughout their careers.

Continuous Professional Development (CPD)

Continuous professional development (CPD) is a key ability for every professional since it demonstrates a dedication to excellence and an understanding of the need for continual learning. [\[11\]](#)





PHARMACOTHERAPY KNOWLEDGE

Clinical pharmacists must have a thorough understanding of pharmacology and pharmacotherapy, as well as the scientific and clinical data that support rational drug therapy. This knowledge is essential for making decisions that improve the medication-related outcomes of patients. Clinical pharmacists must also have a broad understanding of medicine (e.g., illness pathophysiology and causes, clinical presentation, diagnostic testing, and disease natural history). This information aids in accurate and efficient patient assessment, as well as medication evaluation, monitoring, and optimization. [11]

THE PROFESSIONAL PHARMACIST MUST:

- 1- assess patients, prioritize their problems and medication-related needs.
- 2- evaluate drug therapy for effectiveness, appropriateness, safety, affordability, and adherence.
- 3- Develop therapeutic plans and handle medication-related problems.
- 4- monitor therapeutic plan outcomes.
- 5- apply in-depth knowledge of Pharmacotherapy, pharmacology, pathophysiology, and the clinical signs, symptoms, and natural history of diseases and disorders.
- 6- use scientific and clinical evidence as to the basis for therapeutic decision-making.
- 7- collaborate with other health care providers to achieve the optimal patient outcome.
- 8- communicate effectively with: caregivers, Patients, families, and laypersons of diverse backgrounds
- 9- communicate with appropriate levels of confidence, respect, empathy, and assertiveness.
- 10- Maintain and enhance pharmacotherapy knowledge, including recertification or other appropriate methods of self-assessment and learning. [11]



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make sure you have Active
Knowledge to impress
everyone!"*

