COVID-19: Current Status of Testing, Treatments and Vaccines

For sound, stream audio through your speakers. If you are having trouble accessing sound, please send a message using the chat box in the lower left hand corner.

The COVID-19 education series is made possible with support from:
This webinar is being recorded.
Submit your questions using the chat function. It can be found at the **left hand side** of the window.
Upcoming Webinar

Drug Supply in the Time of COVID-19

May 21, 2:00pm EDT

CAPT Paras Patel, R.Ph, MBA
Food and Drug Administration

Sheila Arquette
National Association of Specialty Pharmacy

Register: https://bit.ly/3bSzHpg
NORD COVID-19 Resource Center

https://rarediseases.org/covid-19/

NORD COVID-19 Resources

- Upcoming Webinars
- On-Demand Videos
- On-Demand Webinars
- Advocacy Opportunities and Tools
- Disease-Specific Resources for Patients
- Informational Materials
- NORD COVID-19 Policy Statements
- Resources for Nonprofits

Additional COVID-19 Resources

* Information and links here are not necessarily endorsed by NORD but are shared for your consideration.

- Medical Coverage Information
- Official Resources
- Emergency Preparedness
- Mental Health Support
- On-Demand Videos
- On-Demand Webinars
- Online Events
- Resources for Nonprofits
- Stress Relief
Speaker

Rishi Desai, MD, MPH
Chief Medical Officer
Osmosis
COVID-19: Current Status of Testing, Treatments, and Vaccines

Rishi Desai, MD, MPH
Chief Medical Officer
Osmosis
<table>
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<tr>
<th>Date</th>
<th>States Tracked</th>
<th>New Tests</th>
<th>Positive</th>
<th>Negative</th>
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<th>Pending</th>
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Treatments

**Passive Immunity with Plasma Therapy**
- Worked previously (e.g., SARS)

**China**
- 245 Patients: 91 Benefit

**Vitamin D for Respiratory Infection**
- Modulates immune response to respiratory viruses
- Lowers IL-6

**Meta-Analysis**
- 25 RCTs and 11,000+ individuals

**Hydroxychloroquine + Azithromycin**
- Study 1:
  - Chloroquine is superior (few specific outcomes)
- Study 2:
  - Hydroxychloroquine (controls got antiviral) 80.6% improvement vs 55% improvement

**Remdesivir**
- Compassionate use protocol
- <99% oxygen saturation
- No other investigational antivirals
- Day 1: 200mg; Days 2-10: 100mg
- 36/53 improved; 8/53 worsened

Remdesivir: 36 of 53 patients (68%) showed an improvement in the category of oxygen support, whereas 8 of 53 patients (15%) showed worsening (Figure 1). Improvement was observed in all 12 patients

rarediseases.org
Treatments

**SPLITTING VENTILATORS**

2006
- 1 VENTILATOR SPLIT 4 WAYS (SAME PHYSIOLOGY)
- NO PATIENTS TESTED

**VESper**
- Y-SHAPED PIECE TO SPLIT A VENTILATOR

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**PRONE POSITIONING ON VENTILATORS**

**PRONE POSITION**
- REDUCES VOLUME OF COMPRESSED LUNG TISSUE
- BETTER SHAPE MATCHING

**PROSE VA**
- ARDS PATIENTS ON VENT <36 HOURS WERE KEPT PRONE 16 HOURS/DAY
- 16% MORTALITY RATE vs. 33%

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**MANAGING L TYPE COVID-19 PATIENTS**

- 52% OF SEVERELY ILL COVID-19 PATIENTS DIED
- 70% ARE TYPE L
  - LOW RECRUITABILITY, PERFUSION PROBLEM.
  - VENTILATE 9ml/kg and LOWER PEEP
  - “ALTITUDE SICKNESS”
- 30% ARE TYPE H
  - “CLASSIC ARDS”
COVID-19 VACCINES

- 115 VACCINE CANDIDATES, 5 VACCINES IN PHASE 1 OR 2 TRIALS

CANSINO (PHASE 2):
- ADENOVIRUS TYPE 5 VECTOR WITH VIRAL DNA INFECTS CELLS

MODERNA (PHASE 1):
- VIRAL mRNA WITHIN A LIPID NANOPARTICLE ENTERS CELLS

INOVIO (PHASE 1):
- VIRAL DNA ENTERS CELLS WITH ELECTROPORATION

SHENZHEN (PHASE 1 AND 2):
- IMMUNE CELLS EXTRACTED, LENTIVIRUS USED TO INTRODUCE VIRAL GENES, CELLS REINTRODUCED

SHENZHEN (PHASE 1):
- ARTIFICIAL IMMUNE CELLS WITH VIRAL GENES INTRODUCED.

GLOBAL VACCINE FUND IS NEEDED.
The road ahead
The road ahead
Question and Answer Session
Questions?

Submit your questions in the chat box.

Dr. Desai will answer them in the order in which they came in and based on relevance to the discussion.
Thank you.

Alone we are rare. Together we are strong.