

World-first trial to test benefit of intravenous zinc in COVID-19 fight

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A world-first trial will see researchers from Austin Health and the University of Melbourne use intravenous zinc to fight the symptoms of coronavirus (COVID-19).

The trial will be led by Dr. Joseph Ischia from Austin Health, along with Dr. Oneel Patel from the Department of Surgery at the University of Melbourne, who has a long history of investigating the protective effects of intravenous [zinc](#) against organ damage induced by lack of oxygen.

Dr. Ischia said COVID-19 is especially dangerous because it replicates inside a patient's body which can lead to respiratory conditions like bronchitis and pneumonia.

"If COVID-19 enters a patient's lungs then they often need to be placed on a ventilator to help their breathing and, in severe cases, COVID-19 can cause multiple organ failure and brain injury due to a lack of oxygen," Dr. Ischia said.

Dr. Patel said studies have shown that zinc is very effective at slowing the rate that similar viruses such as SARS (Severe Acute Respiratory Syndrome) and common cold (a type of coronavirus) replicate in the body.

"Our published studies have also shown that high doses of zinc can protect vital organs such as the heart, kidneys and liver against the damage caused by a lack of oxygen," Dr. Patel said.

The clinical trial has been fast-tracked to test whether receiving a daily injection of zinc chloride will benefit patients with [coronavirus](#).

"There is currently no specific treatment available for patients who have COVID-19 and are at high risk of respiratory failure, which means this study has the potential to have an enormous positive impact on their clinical outcomes," Dr. Ischia said.

"Importantly, we hope to show that we can save lives by limiting the impact of the symptoms. We are expecting to have preliminary results of the trial available after only seven days so we will know very quickly how effective this treatment is."

The trial is the culmination of a rapid collaboration between surgeon scientists as well as [intensive care](#), [infectious diseases](#) and respiratory medicine doctors at Austin Health, working with the Australian pharmaceutical firm, Phebra.

Phebra Chief Executive Officer Dr. Mal Eutick said intravenous (IV) zinc injections, manufactured at Phebra's multi-purpose sterile injectables plant in Sydney, would be used in the trial.

"Zinc has been proven to be effective in treating severe pneumonia and other viruses although not COVID-19 to date. This trial is an extraordinary opportunity to discover if IV zinc can help us respond to the current pandemic," Dr. Eutick said

"If successful this could save lives and with this trial we should know in a short time frame. In particular, it could be very important for those high risk elderly patients and also help reduce the level of general anxiety in the community."

However, both Dr. Ischia and Dr. Eutick warned of the need to manage the risk of zinc overdose for patients.

"Zinc can be toxic and it will be carefully administered as part of the trial to ensure patients are safe," Dr. Ischia explained.

Provided by University of Melbourne

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