



**GP2U Telehealth**

*Bridging the gaps*

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Kim Atkins

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Friday 3<sup>rd</sup> March 2023

RE: Mr Muris Boric

Claims No: 22000032/01

Date of Injury: 01/11/2021

Nature of Injury: Pericarditis post mRNA Covid-19 vaccine

Dear Kim Atkins,

I am the general practitioner looking after the above-mentioned and I have written a supplementary report as per your request.

Mr Boric sustained a pericarditis after his first injection of Moderna Spikevax. Prior to this, he was a fit and well man who could do a 20km bike ride most days.

Mr Boric saw a cardiologist in Adelaide and even attended the emergency department on one occasion with symptoms of pericarditis. He continued to see me for episodes of left sided chest pain on minimal exertion via Telehealth on GP2U. He recently had an exacerbation of left sided chest pain when he tried to increase his activity levels. He is also seeing an exercise physiologist and a psychologist.

As an added note, pericarditis is an inflammation of the sac-like tissue surrounding the heart. The chest pain occurs when the irritated layers of the pericardium rub against each other.

Initially, Mr Boric was treated with colchicine, NSAIDs and aspirin at different times to help with the chest pain. After a while, colchicine started to cause weakness and aspirin and NSAIDs had to be limited due to potential gastrointestinal adverse effects. Due to the continuing episodes of chest pain, more feasible and safer alternatives were put into place as anti-inflammatory agents. These included Curcumin, Quercetin, Omega 3 fish oils, Magnesium, Zinc and Vitamin C.

In your letter, you stated that Dr Mahar does not recommend any of the listed nutraceuticals and reports the efficacy to be of placebo effect only. With due respect, Dr Mahar has no postgraduate training in nutritional and environmental medicine.

The rest of the report will focus on the evidence base from published medical journals of the efficacy of the listed supplements as anti-inflammatory and antioxidative agents.

#### 1/ Curcumin (e.g. Bioceuticals Theracurmin BioActive)

Curcumin derived from turmeric (*Curcuma longa*) aids in the management of oxidative and inflammatory conditions.

(Hewlings SJ & Kalman DS. Curcumin: A review of its effects on human health. *Foods*. 2017 Oct; 6(10):92)

Curcumin can modulate multiple cell signalling pathways. Extensive clinical trials over the past quarter century have addressed the pharmacokinetics, safety and efficacy of this nutraceutical against numerous diseases in humans.

(Gupta SC et al. Therapeutic Roles of Curcumin: lessons learned from clinical trials. *AAPSJ*. 2013 Jan; 15(1):195-218)

## 2/ Quercetin (e.g. Researched Nutritionals Histaquel, Orthoplex Repairase)

Quercetin is a bioflavonoid that exhibits a variety of biological activities. It is an antioxidant to prevent cell membrane damage and a long-acting anti-inflammatory. It also exerts cardiovascular protection.

(Yang D et al. Quercetin: Its Main Pharmacological activity and Potential Application in Clinical Medicine. *Oxid Med Cell Longev*. 2020 Dec 30: 8825387)

## 3/ Omega 3 Fish Oils and SPM

Eicosapentaenoic acid (EPA) and Docosahexaenoic acid (DHA) are n-3 (omega -3) fatty acids which are capable of inhibiting many aspects of inflammation.

(Calder P. Omega-3 fatty acids and inflammatory processes: from molecules to man. *Biochem SOC Trans*. 2017 Oct 15; 45(5): 1105-1115)

A systematic review and metanalysis in 2021 showed that Omega 3 fatty acids was associated with reducing cardiovascular mortality and improved cardiovascular outcomes.

(Khan S et al. Effects of Omega-3 fatty acids on cardiovascular outcomes: A systematic review and metanalysis. 2021 Jul 08, Vol 38; 100997)

## 4/ Magnesium

Magnesium is an essential trace mineral and plays a pathophysiological role in inflammatory conditions. Increase in magnesium concentrations in the body can decrease the inflammatory response.

(Mazur A et al. Magnesium and the inflammatory response: potential physiopathological implications. *Arch Biochem Biophys*. 2007 Feb; 458(1):48-56)

## 5/ Zinc

Zinc in humans plays an important role in cell mediated immunity and is also an antioxidant and anti-inflammatory agent. Zinc supplementation studies show decreased generation of inflammatory cytokines.

(Prasad A. An antioxidant and anti-inflammatory agent: role of Zinc in degenerative disorders of aging. *J Trace Elem Med Biol*. 2014 Oct; 28(4):364-371)

## 6/ Vitamin C

Macrophage reprogramming is vital for resolution of acute inflammation. Parenteral (intravenous) Vitamin C attenuates proinflammatory states.

Vitamin C deficiency significantly delays resolution of inflammation. Vitamin C supplementation restores macrophage function to resolve inflammation.

(Mohammed B et al. Resolution of sterile inflammation: role for Vitamin C. Mediators Inflamm. 2014 Sep 9: 173403)

In conclusion, Mr Boric has benefitted greatly with the above nutraceuticals and attributes the progress of his recovery to the nutraceuticals and ongoing support during his consultations with me.

His prognosis is good and Mr Boric looks forward to the day where he is able to get back to his pre vaccine activities.

At his recent appointment with me, he reported that he had had no chest pain for a few days straight as long as he keeps up with his current regime of nutraceuticals. Mr Boric has remained well since the last visit.

Kind Regards,

Dr Manmohan (Mona) Kaur

