

## Efficacy of Botanical Derived MF3 VP Evolution Softgels for the Maintenance of Cardiovascular, Liver and Kidney Health

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## Abstract

Free radicals are produced from the external environment (pollution, cigarette smoke, radiation, pesticides and industrial solvents) and are also generated as by-products by our body systems. As we age, free radicals gradually accumulate and become overload, generating a phenomenon known as oxidative stress. Although our bodies can endogenously produce antioxidants to counter free radicals, their efficiency diminishes as we age. Accumulation of free radicals eventually leads to cellular damage and development of various illnesses including cardiovascular disease, liver disease and kidney disease. It has been known the consumption of nutritional supplements rich in antioxidants and vitamins play a significant role in the protection from free radical damage and the treatment of diseases. Currently, anti-aging program has been an increasingly debated topic to delay the fundamental biological aging process and to increase longevity to prevent disorders or age-related diseases and to improve the quality of life. The present article reports the consumption of MF3 VP Evolution for 3 months, resulting in better health condition as reflected by laboratory blood test results. In conclusion, the intake of MF3 VP Evolution could serve as a promising alternative in the management of cardiovascular, liver and kidney health.

## Keywords

Botanical derived extracts; Anti-aging; Low density lipoprotein; Estimated glomerular filtration rate; Gamma-glutamyl transferase

## Introduction

Free radicals gradually accumulate and become overload as we age, generating a phenomenon known as oxidative stress [1]. Free radicals and reactive oxygen species (ROS) are derived from alcohol, drugs, industrial chemicals as well as air pollutants [2]. Oxidative stress eventually leads to cellular damage and development of various illnesses including cardiovascular disease (CVD), liver disease and kidney disease. According to the World Health Organization (WHO), CVD accounts for 30% of the estimated 58 million deaths globally from all causes in 2005 [3]. Although there are many classical risk factors of CVD, renal and liver dysfunction has begun to attract considerable attention in recent years as the emerging independent risk of CVD. In 2003, the American Heart Association released a statement highlighting kidney disease as a risk factor in the development of CVD [4]. Several studies revealed that even the earliest stages of chronic kidney disease have the potential to heighten the risk of subsequent coronary heart disease [5]. Accumulating evidence is also beginning to associate non-alcoholic fatty liver disease (NAFLD) with rising incidences of CVD, independent of other traditional risk factors. Some researchers believed that NAFLD might play an early role in the development and progression of atherosclerosis [6]. Although NAFLD is prevalent in the Western population, the association between NAFLD and CVD has also been observed in other populations including Chinese [7] and African Americans [8]. Furthermore, there has been emerging evidence suggesting that there is a bidirectional relationship between fatty liver and CVD [6]. The increasing prevalence of cardiovascular, liver and kidney diseases opened up the necessity to search for preventive regimens. Thus the aim of this study was to investigate the efficacy of botanical extracts for the management of health and wellbeing.

## Case

A 34-year-old female patient presented herself, with a complaint of dyspnea in March 2018. A complete blood count including lipid studies, liver and renal function tests were performed to evaluate the health condition of the patient. Blood test results reveal several issues of concern, namely elevated platelets, total protein and globulin as well as reduced eGFR. In addition, LDL and GGT were also slightly elevated albeit still under acceptable range. Based on the patient's blood test results, a 3-month supply of MF3 VP Evolution

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softgels was recommended improving the health and general well-being of the patient. The patient was advised to consume one softgel daily before meal. Along with that, a life style changing guidance and advice was given to the patient. At the end of the 3-months course, another blood test was performed again to determine the efficacy of VP Evolution softgels intake towards the health condition of the patient. Blood test results reveal that a notable improvement on the platelet count, eGFR value as well as total protein and globulin levels. Further improvements were also observed on the LDL level and GGT value of the patient (Table 1).

## Results and Discussion

The patient in this case study presented herself and complained mainly of dyspnea, characterised by difficulty in breathing or sometimes described as shortness of breath may be a sign of serious underlying disease involving the lungs or heart. It is increasingly being acknowledged as an important factor for both prognostic and therapeutic purposes across a wide range of clinical conditions, particularly cardiovascular and pulmonary diseases [9]. A study involving nearly 18000 patients referred for cardiac stress revealed that patients with shortness of breath are at higher risk of cardiac-related death or heart disease even in the absence of the classical chest pain symptom [10].

In this case, blood test results of the patient reveal normal but slightly elevated low-density lipoprotein (LDL) cholesterol and raised platelet count. If left untreated, the patient is at risk of suffering from coronary artery diseases such as myocardial infarction and stroke caused by acute thrombosis and plaque build-up [11]. Oxidative modification of LDL in the arterial wall is believed to contribute toward the development of atherosclerosis and is one of the major contributors of heart disease [12]. In addition, high level of LDL is well known to result in plaque build-up in the heart arteries, resulting in narrowing of the arteries which reduces the efficiency of oxygen-rich blood transport, a condition known as ischaemia [13]. The condition may be further aggravated by high platelet count that makes it easier for blood to clot, further occluding and narrowing the arteries [14].

Furthermore, the blood test result of the patient revealed elevated total protein which may be attributed to the increase in blood globulin level or accumulation of proteins other than albumin (e.g during chronic inflammation). In addition, impaired renal and liver function may also lead to an increase in total protein. Elevated gamma-glutamyl transferase (GGT) in the patient's blood suggests the possibility of liver damage. On the other hand, the estimated glomerular filtration rate (eGFR) value indicates that the patients had mild renal dysfunction.

The patient was recommended to consume MF3 VP Evolution softgels for 3 months consecutively. It is a daily nutritional supplement made up of a blend of Dermacenta Plus™ bioactive compounds rich in phosphatidylcholine, isoflavones, amino acids, peptides and flavonoids which contribute in neutralizing free radicals with anti-inflammatory properties. Furthermore, other active ingredients present in MF3 VP Evolution are tripeptide L-gamma-glutamyl-cysteinyl-glycine and ubiquinol which promotes skin rejuvenation and cellular renewal while improving cardiovascular health and general well-being. Flavonoids and tripeptides are an important source of antioxidants with free radical scavenging properties, with skin lightening effects and act as an excellent anti-aging compound, effectively improving overall skin condition and complexion [15]. They also play important role in providing cellular energy, DNA synthesis and repair. Phosphatidylcholine is well known to have hepato-protective properties [16] and are effective in promoting liver repair and cholesterol reduction [17].

A follow-up blood test was performed 3 months later to evaluate the health condition of the patient. Results revealed an improvement of LDL level with normal platelet count, indicating a reduced risk of CVD [13]. VP Evolution softgels confer protection on CVD through the effects of the antioxidant property of the tripeptides, flavonoids and ubiquinol. Phosphatidylcholine and ubiquinol, in particular, plays a major role in improving cholesterol efflux, as reflected by an

Test Name	Before	After	Reference Range
LDL	2.2	1.5	<2.59 mmol/L
eGFR	82 (L)	104	90-200 ml/min/1.73 m <sup>2</sup>
Total protein	88 (H)	75	66-87 g/L
Globulin	44 (H)	34	18-42 g/L
GGT	31	16	5-36 g/L
Platelet	575 (H)	359	150-450 × 10 <sup>9</sup> /L

LDL: Low density lipoprotein; eGFR: Estimated glomerular filtration rate; GGT: Gamma-glutamyl transferase; L: Low; H: High

**Table 1:** Blood test results of patient 3 months before and after consumption of MF3 VP evolution softgels

improvement in the LDL level of the patient. Besides, globulin, total protein, eGFR and GGT levels return to the normal range following consumption of VP Evolution softgels indicating an improved renal and liver function. This is consistent with several reports suggesting the tripeptide's positive roles in improving renal [18] and liver [15] functions. We postulate that tripeptide assists in organ repair while improving immune system [19], thereby reducing inflammation proteins as reflected by the blood test result. In addition, flavonoids and ubiquinol offer tremendous antioxidant properties to combat cellular damage caused by free radicals while phosphatidylcholine also assists in liver repair [16].

## Conclusion

The overall results suggested MF3 VP Evolution could improve platelet count, eGFR value, total protein, globulin, LDL and GGT levels. Hence, the consumption of MF3 VP Evolution serves as a daily nutritional support system for the repair, rejuvenation and regeneration of cells and tissue thus restoring health and wellness.

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## Conflict of Interest

Authors declare no potential conflict of interests.

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