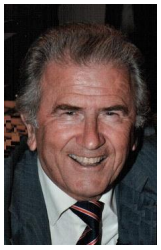

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With the term FRENCH PARADOX it is expressed an epidemiological phenomenon, which was coined in 1992, in order to be described the relatively low incidence of cardiovascular disease in the French population, despite a relatively high dietary intake of saturated fats, and potentially attributable to the consumption of red wine **[1]**

In most countries, high intake of saturated fat is positively related to high mortality from coronary heart disease (CHD). However, the situation in France is paradoxical in that there is high intake

of saturated fat but low mortality from CHD. This paradox may be attributable in part to high wine consumption. Epidemiological studies indicate that consumption of alcohol at the level of intake in France (20-30 g per day) can reduce risk of CHD by at least 40% **[2]**.

Numerous epidemiological studies indicate that a moderate intake of alcohol is associated with a reduced risk of morbidity and mortality secondary to cardiovascular diseases **[3]**.

Alcohol is believed to protect from CHD by preventing **atherosclerosis** through the action of high-density-lipoprotein cholesterol, but serum concentrations of this factor are no higher in France than in other countries
[2]
.

On the basis of clinical and experimental data, the favourable effect of moderate intake of alcohol results to its action on lipid profile, hemostatic parameters, and reduction of **inflammati on markers**

[3]
.

Re-examination of previous results suggests that, in the main, moderate alcohol intake does not prevent CHD through an effect on atherosclerosis, but rather through a haemostatic mechanism. Data from Caerphilly, Wales, show that platelet aggregation, which is related to CHD, is inhibited significantly by alcohol at levels of intake associated with reduced risk of CHD. Inhibition of platelet reactivity by wine (alcohol) may be one explanation for protection from CHD in France, since pilot studies have shown that platelet reactivity is lower in France than in Scotland **[2].**

. Alcohol intake from any type of alcoholic beverage appears beneficial, but in vivo studies have shown that red wine intake is more CHD-preventative in comparison to other alcoholic drinks; enhanced cardioprotection may be attributed to grape-derived polyphenols or red wine **polyphe nolic compounds**
(RWPC)., e.g., resveratrol, in
red wine
[3, 4]
.

After nearly 20 years, several studies have investigated the fascinating, overwhelmingly positive biological and clinical associations of red wine consumption with cardiovascular disease and mortality.

Light to moderate intake of red wine produces a kaleidoscope of potentially beneficial effects that target all phases of the atherosclerotic process, from **atherogenesis** (early plaque development and growth) to vessel occlusion (flow-mediated dilatation, thrombosis) **[1]**
.

Red wine **polyphenolic compounds** (RWPC) exert numerous effects including antioxidant and free radical properties, anti-aggregatory platelet and anti-thrombotic activities. Moreover, RWPC are powerful vasodilators and contribute to the preservation of the integrity of the endothelium and inhibition of smooth muscle cell proliferation and migration. All these effects of red wine might interfere with atherosclerotic plaque development and stability, vascular thrombosis and occlusion **[3].**

Among the beneficial effects of red wine are involved cellular signaling mechanisms, interactions at the genomic level, and biochemical modifications of cellular and plasma components. Red wine components, especially **alcohol**, resveratrol, and other polyphenolic compounds, may decrease oxidative stress, enhance cholesterol efflux from vessel walls (mainly by increasing levels of high-density lipoprotein cholesterol), and inhibit lipoproteins oxidation, macrophage cholesterol accumulation, and foam-cell formation.

These components may also increase nitric oxide bioavailability, thereby antagonizing the development of endothelial dysfunction, decrease blood viscosity, improve insulin sensitivity, counteract platelet hyperactivity, inhibit platelet adhesion to fibrinogen-coated surfaces, and decrease plasma levels of von Willebrand factor, fibrinogen, and coagulation factor VII.

Light to moderate red wine consumption is also associated with a favorable genetic modulation of fibrinolytic proteins, ultimately increasing the surface-localized endothelial cell fibrinolysis.

Overall, therefore, the "French paradox" may have its basis within a milieu containing several key molecules, so that favorable cardiovascular benefits might be primarily attributable to combined, additive, or perhaps synergistic effects of alcohol and other wine components on atherogenesis, coagulation, and **fibrinolysi**s.

Conversely, chronic heavy alcohol consumption and binge drinking are associated with increased risk of cardiovascular events.

Recent studies demonstrate the presence of melatonin in wine. According to Lamont KT , et al (2011) melatonin, at a concentration found in red wine, confers cardioprotection against ischemia-reperfusion injury. Furthermore, They investigated whether both melatonin and resveratrol protect via the activation of the newly discovered survivor activating factor enhancement (SAFE) prosurvival signaling pathway that involves the activation of
tumor necrosis factor alpha (TNFα)
and the signal transducer and activator of transcription 3 (STAT3). Their data demonstrated that both
melatonin
and
resveratrol
, as found in red wine, protect the heart in an experimental model of
myocardial infarction
via the
SAFE pathway
[5
].

In conclusion, mounting evidence strongly supports beneficial cardiovascular effects of moderate red wine consumption (one to two drinks per day; 10-30 g alcohol) in most populations due to beneficial effect of resveratrol and melatonin of red wine basis **[1, 5].**

Clinically thinking, the safest way to receive the beneficial constituents of red wine (polyphenolic compounds, resveratrol, melatonin, etc) in increased doses, but with the smallest possible dose of alcohol is the drinking of the condense organic, without sulphites, straw red wine
Gkelanto
.

Gkelanto is produced from red grape **"Ayioryitiko"** , which is cultivated traditionally, since ancient times , in Nemea (Korinthia, Greece). Two spoonfus of
Gkelanto
daily are equivalent to two drinks per day (30 g alcohol).

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