Fire-Proofing Your Heart

Heart Disease: The #1 Killer of Active and Retired Fire-Fighters

Benjamin Stone PhD
ben@benjaminstonespeaks.com
501-358-2112

Public Safety Longevity Statistics

	Fire-Fighters	Civilians
Average age of patient with heart attack	49 Years	65 Years
Heart attacks under age 45	45%	7%
Average Life Expectancy	62 Years	79 Years

Now 46 Years!

Int J. Emerg Med Health. 2013. 15(4) 217-28

Three Questions Plaguing Health of Fire-Fighters

1. **1st Responders develop heart disease at rates that supersede rates of heart disease found in civilian populations**
2. **1st Responders develop heart disease at younger ages than observed in civilian populations**
3. 1st Responders develop heart disease absent of clinical markers classically associated with early-onset heart disease

The Way it *really* works…

- Plaque formation doesn't happen the way scaling develops inside plumbing
- The amount of cholesterol in circulation doesn't determine one's propensity to develop plaque – It's about the ***CONDITIONS*** for plaque development
- Inflammation inside the vascular space (due to genetics, smoking, poor diet, stress, lack of sleep, etc) contribute to plaque development
- Plaque can develop in the arteries of patients with normal or low total cholesterol, who are fit-looking and young men and women.

THANK YOU!!

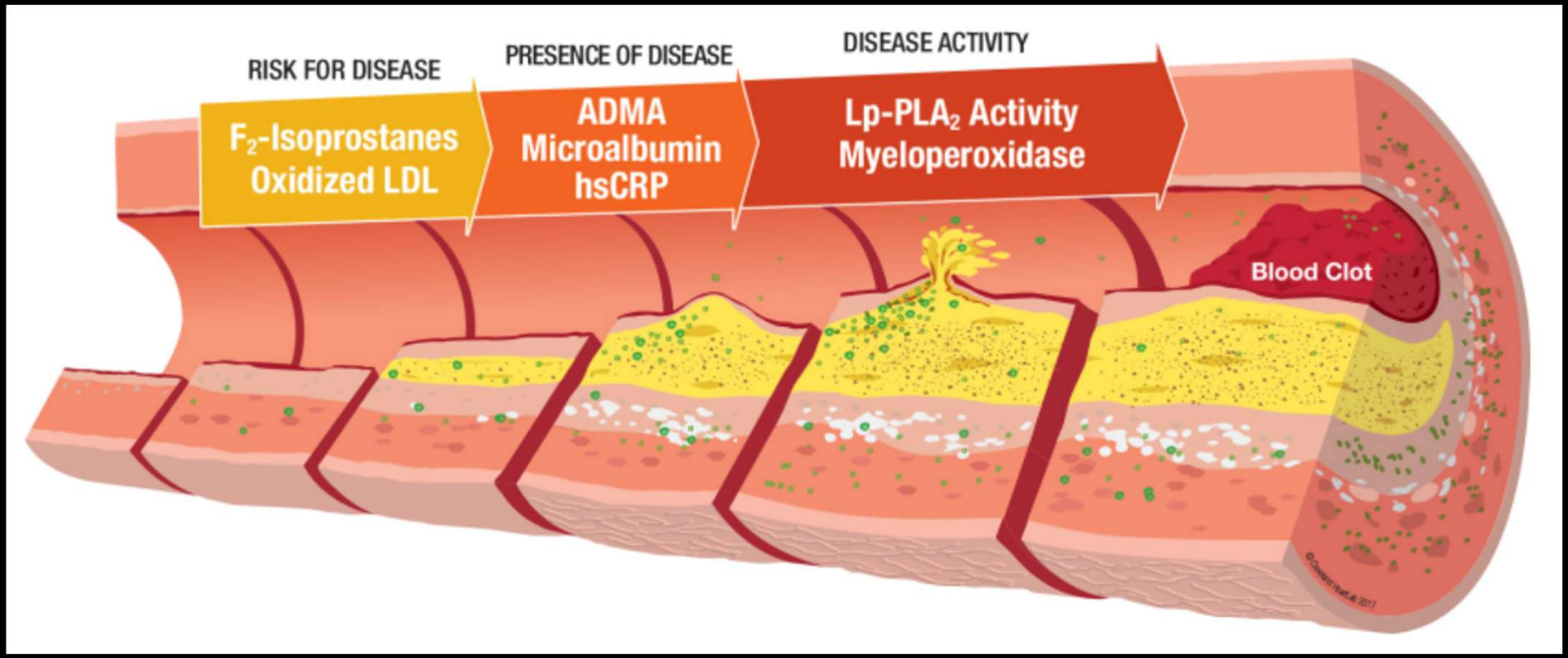
Bring this training to your agency!

Email:
ben@benjaminstonespeaks.com

Phone:
501-358-2112

Website:
www.benjaminstonespeaks.com

Cardiology 101



Cardiology 101

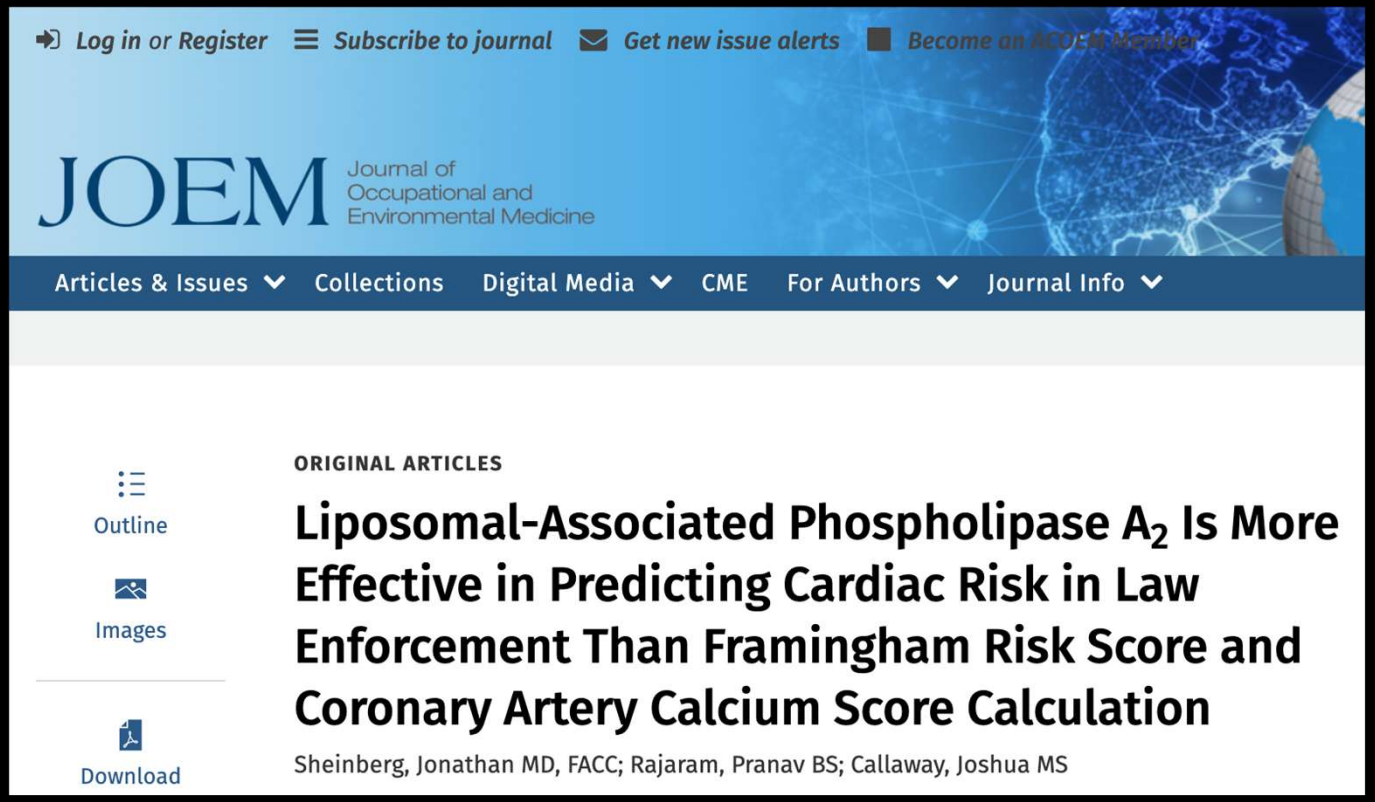
- Cardiac inflammatory markers can determine the stage of plaque development more accurately than traditional risk scoring

- Lp-PLA2 indicates late stage, soft plaque development much better than traditional risk scoring (based on civilian data) available through basic physicals

CAN INDICATE SIGNIFICANT CARDIAC RISK – up to 40% CHANCE OF DEVELOPING A HEART ATTACK IN 4 YEARS…

…regardless of age, cholesterol level, fitness, or physical presentation

How Many Are “We” Missing?



Current Research

- Traditional risk scoring does NOT adequately predict cardiac risk in members of public safety ESPECIALLY LAW-ENFORCEMENT
- 92% INEFFECTIVE in members of law-enforcement with low-risk according to traditional risk scoring models (Framingham)
- Traditional risk scoring was only 24% INEFFECTIVE in civilian populations indicating that LEOs have qualities of a special population
- Male and female LEOs are NOT dissimilar in terms of cardiac risk as once suspected – especially in young (20yr-25yr old) populations

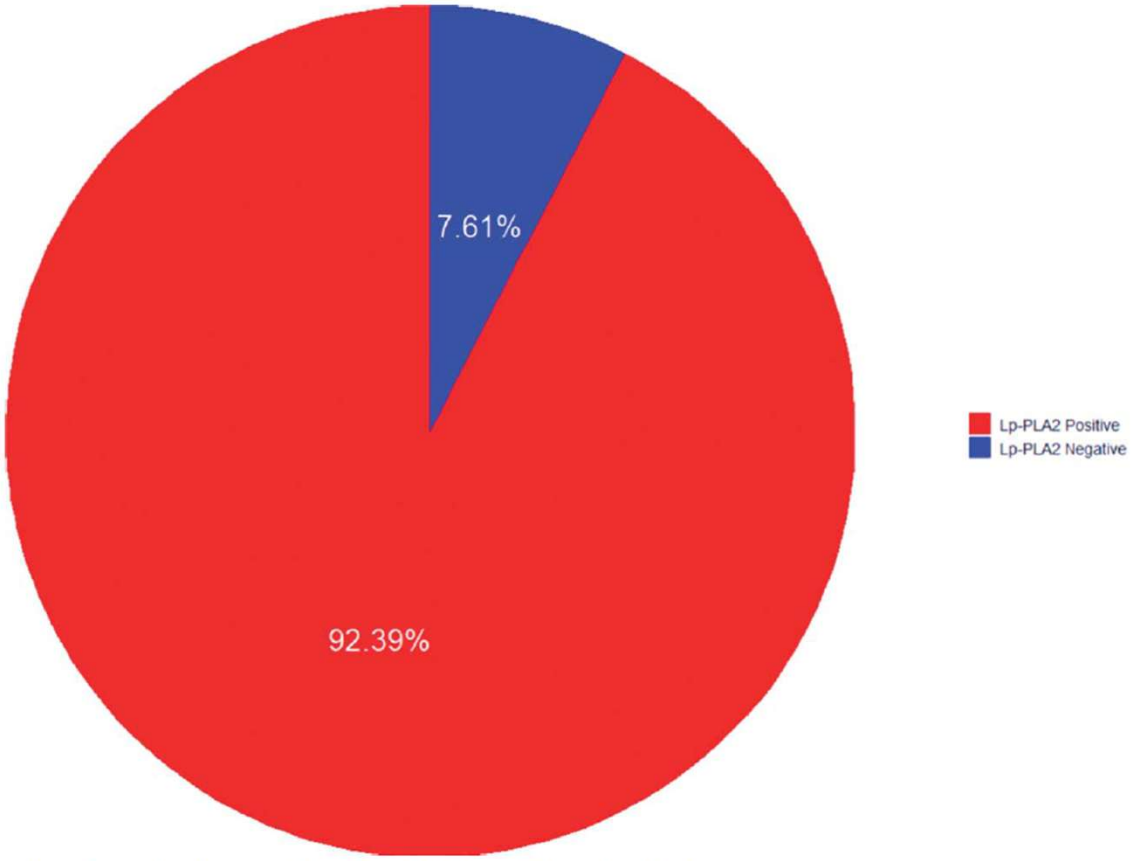
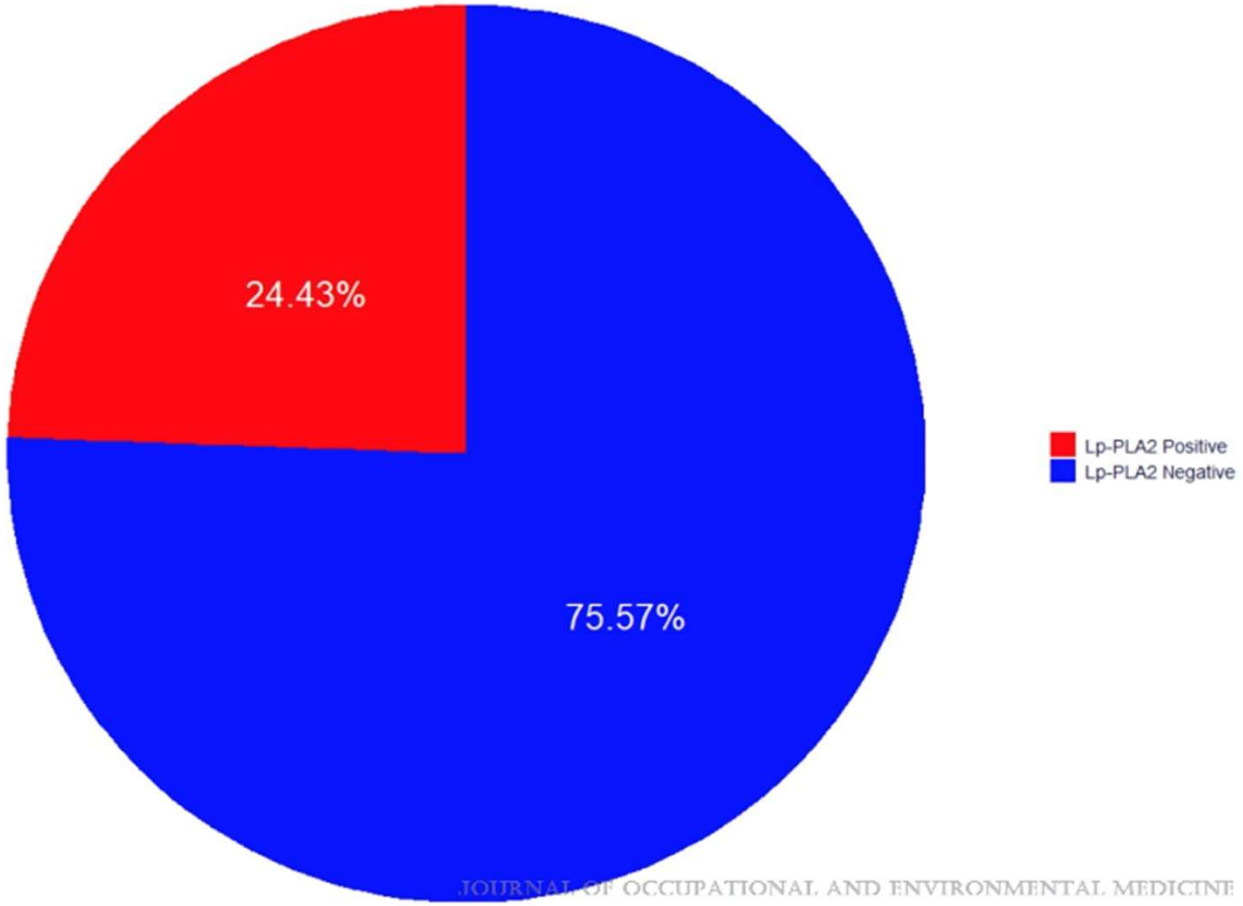
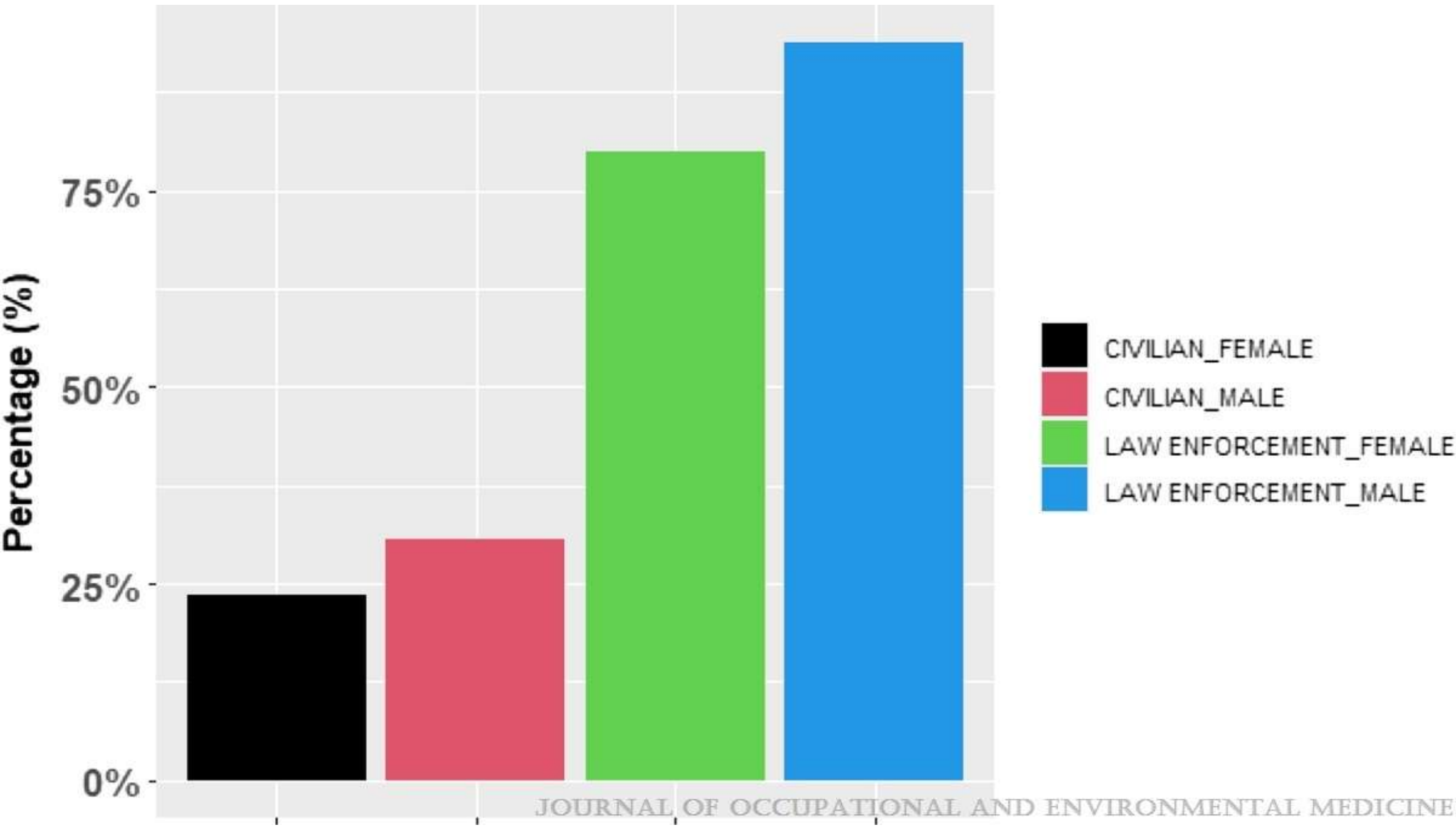


FIGURE 6. Low/intermediate Framingham risk vs Lp-PLA2 positivity in LEOs.





Blood Testing

What Blood Tests Should you receive as part of a comprehensive wellness program?

Advanced Cardiac Panel:

- **Lp-PLA2 – marker assocated with late-stage rupture-prone plaque development**
- **OxLDL – measure of early-stage inflammation (leading to plaque development**
- **Apolipoprotein B – represents the sum total of atherogenic (plaque producing) particles in circulation**
- **Lipoprotein A – important data regarding your genetic predisposition towards cholesterol production**

Some Solutions

- **Statins** have been shown to be remarkably effective at significantly reducing inflammation inside the coronary vasculature
- **2000-4000mg of Omega-3** (as a supplement) can act as a potent "cardio-protectory" agent when taken consistently or sourced in your diet
- **Mediterranean Diet** has been shown to be extremely effective at mitigating risks of heart disease, reducing obesity, and lowering bad cholesterol
- **Smoking cessation** (incl smoke-less tobacco) remains to be extremely important in preventing inflammation associated with increases in PLA2
- **Low Intensity exercise** is extremely valuable and can boost good cholesterol (HDL) – reduces likelihood of atherosclerotic plague development
- **Avoid fructose!** – This can reduce the synthesis of "sticky" lipids that can manifest as arterial plaque under the "right" conditions

BE AWARE OF YOUR HEART DISEASE RISK AS A POLICE OFFICER

DON'T DO NOTHING

MD

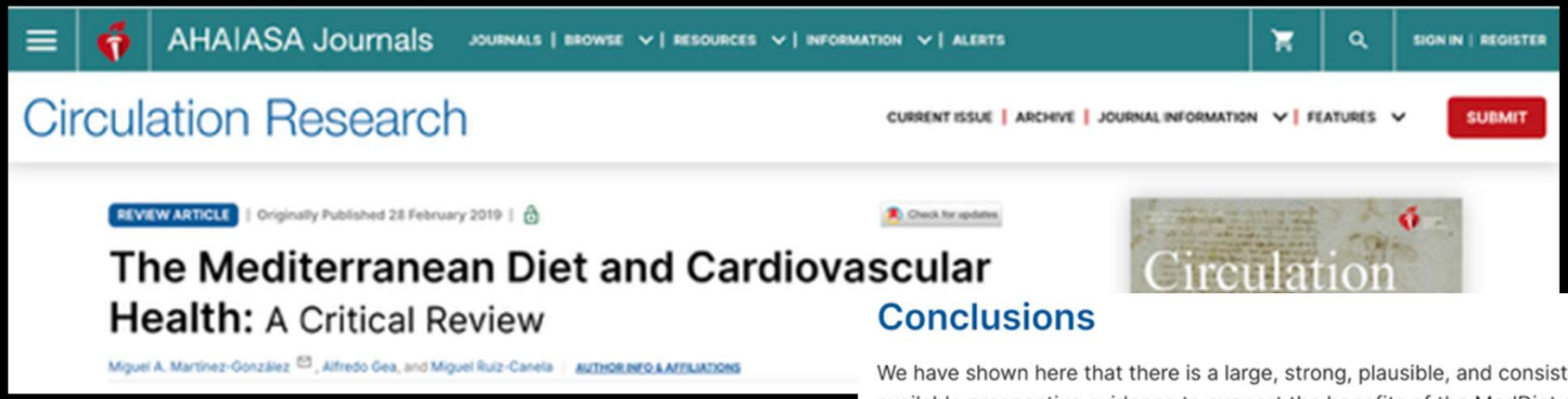
MEDITERRANEAN DIET

Abundant Fruits and Vegetables
Whole Grains
Nuts and Seeds
Legumes
Cruciferous vegetables
Fish, Seafood, Poultry
Moderate Dairy
Limited Red Meat
Spices and Herbs
Dark Chocolate (in moderation)

1. *Reductions in Inflammatory patterns*
2. *Increase in HDL*
3. *Stimulus of lipolytic systems = energy stability*

MD

MEDITERRANEAN DIET



No dietary strategy has been subject to more scrutiny than the MedDiet. It is as close as we can get to the perfect human diet.

Conclusions

We have shown here that there is a large, strong, plausible, and consistent body of available prospective evidence to support the benefits of the MedDiet on cardiovascular health. Moreover, in the era of assessing overall food patterns, no other dietary pattern has undergone such a comprehensive, repeated, and international assessment of its cardiovascular effects. The MedDiet has successfully passed all the needed tests and it approaches the gold standard for cardiovascular health.

The MedDiet can be adapted to many different geographic settings by tailoring it to individual characteristics such as food and cultural preferences and health conditions. Promotion of the MedDiet requires changes in the food environment, the food systems, and public health policies to improve overall diet quality of individuals, communities, and populations.

Approved Supplements:

- *BRANCHED CHAIN AMINO ACIDS*
- *OMEGA-3 (NOT OMEGA 6) – 2000 to 4000mg/day*
- *DHEA – 25 to 50mg*
- *PROTEIN – 1.4 to 1.6g/kg body weight*
- *VITAMIN D - 1000IU*
- *CREATINE – 3 to 5g/day*
- *GLUTAMINE – 3g/day*

THANK YOU!!

Bring this training to your agency!

Email:
ben@benjaminstonespeaks.com

Phone:
501-358-2112

Website:
www.benjaminstonespeaks.com