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“Preventable Soprano Death”

As we mourn actor James Gandolfini’s sudden passing we should reflect on the teachable moment his untimely demise presents. While we are all mortal, if modern diagnostic blood tests were routinely performed and any discovered abnormalities were treated with proper lifestyle and appropriate pharmacological intervention, premature death from atherosclerotic coronary heart disease (CHD) would likely disappear. In 2009 coronary heart disease (CHD) killed 787,931 people: 1 out of every 3 deaths¹. A large number of these are entirely preventable.

Mr. Gandolfini’s death is quite reminiscent of Tim Russert’s sudden and tragic passing, a man who had extensive and ultimately fatal atherosclerosis, despite having well-treated cholesterol levels and a normal cardiac stress test. Despite classic (and incorrect) teaching, humans do not die from severely narrowed or blocked coronary arteries or “pipes.” The fact is that the real cause of heart attacks is the presence of small, non-obstructive cholesterol-laden plaques that suddenly rupture and rapidly induce blood clots that obstruct the artery, which causes blood flow to the heart to be blocked leading to injury or death of heart muscle.

The only absolute requirement for plaque development is the presence of cholesterol in the artery: although there are additional heart risk factors like smoking, hypertension, obesity, family history, diabetes, kidney disease, etc., none of those need to be present. Unfortunately, measuring cholesterol in the blood, where it cannot cause plaque, until recently has been the standard of risk-testing. That belief was erroneous and we now have much better biomarkers to use for CV risk-assessment. The graveyard and coronary care units are filled with individuals whose pre-death cholesterol levels were perfect. We now understand that the major way cholesterol gets into the arteries is as a passenger, in protein-enwrapped particles, called lipoproteins.

Particle entry into the artery wall is driven by the amount of particles (particle number) not by how much cholesterol they contain. Coronary heart disease is very often found in those with normal total or LDL-cholesterol (LDL-C) levels in the presence of a high LDL particle number (LDL-P). By far, the

most common underlying condition that increases LDL particle concentration is insulin resistance, or prediabetes, a state where the body actually resists the action of the sugar controlling hormone insulin. This is the most common scenario where patients have significant heart attack risk with perfectly normal cholesterol levels. The good news is that we can easily fix this, sometimes without medication. The key to understanding how comes with the knowledge that the driving forces are dietary carbohydrates, especially fructose and high-fructose corn syrup. In the past, we've often been told that elimination of saturated fats from the diet would help solve the problem. That was bad advice. The fact is that until those predisposed to insulin resistance drastically reduce their carbohydrate intake, sudden deaths from coronary heart disease and the exploding diabetes epidemic will continue to prematurely kill those so afflicted. While obesity and insulin resistance often co-exist, 1 out of 5, or (20%), of afflicted patients have a normal body mass index (BMI). That is why testing and correctly interpreting the right blood tests are so important. And for goodness' sake, if you want to live longer, start reducing the amount of dietary carbohydrates, including bread, potatoes, rice, soda and sweetened beverages (including fruit juices), cereal, candy – the list is large).

James Gandolfini's death is a tragedy, and if history is our guide, our guess is that we will find that his passing was likely preventable. It's important for both doctors and families to learn these lessons, so that similar tragedies are prevented from occurring in our own families. Bill Clinton (also a victim of a preventable heart attack) won the 1992 election with the slogan, "It's the economy stupid." When it comes to heart disease, a similar quip is equally as powerful and important: "It's the particles, stupid."

James Joseph Gandolfini, Jr. (September 18, 1961 – June 19, 2013) was an American actor best known for his role in [The Sopranos](#) as [Tony Soprano](#), a troubled [crime boss](#) struggling to balance his family life and career in the [Mafia](#). Gandolfini garnered enormous praise for this role, winning both the [Primetime Emmy Award for Outstanding Lead Actor in a Drama Series](#) and [Screen Actors Guild Award for Outstanding Performance by a Male Actor in a Drama Series](#) three times. Gandolfini's other roles include the [woman-beating](#) Mob henchman Virgil in [True Romance](#), enforcer/[stuntman](#) Bear in [Get Shorty](#), and the impulsive Wild Thing Carol in [Where the Wild Things Are](#)².

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References

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