

## **Mississippi, Aging-Related Disease, Diabetes, and the Game-Changing Metformin Study**

**Nearly 75% of all U.S. deaths are linked to 9 aging-related diseases. [i]**

- Heart disease, Cancer, Chronic Lower Respiratory Diseases (i.e., Emphysema), Stroke, Alzheimer's, Diabetes, Influenza, Pneumonia, Kidney Disease

**In each of these categories of disease, Mississippians die at rates far higher than the national average. [ii]**

- Highest in nation for heart disease, flu, and pneumonia; 2nd in cancer, diabetes, and kidney disease, and 4th in stroke

**Recently, researchers have initiated the testing of the first drug, Metformin, to treat the underlying causes of aging-related disease. Metformin is the drug of choice for treating diabetes in the healthiest parts of the U.S. - and not the preferred choice in the South. [iii]**

- prevents the onset of diabetes by ~30% [iv]
- prevents new cardiovascular events in diabetes ~30% [v]
- decreases onset of cancer by ~30% [vi, vii]
- decreases deaths from diabetes by over 50% [viii]
- in a study of 78,000 persons aged 60+, diabetes sufferers who used Metformin lived longer than those who did not have diabetes [ix]
- associated with delayed cognitive decline and Alzheimer's Disease [x]

**With an FDA-approved reduced-cost budget of \$64 million, the TAME study will recruit and monitor the health of 3,000 individuals between 65 and 79 years of age at fourteen centers throughout the nation over a six year period. [ix]**

- will show if Metformin use results in less aging disease for the control group or not
- Metformin is a generic drug, and this study does not directly benefit any pharmaceutical company
- Our researchers have selected universities in diabetes and aging disease danger zones like Mississippi, Birmingham, Tennessee, and Utah

**This study cannot be privately funded, because there is no way for a pharmaceutical company to benefit directly by changing the FDA's "one drug, one disease" approval model - and their involvement would throw scrutiny on the FDA's potential policy change that would ideally lead to a new class of reimbursements.**

- opens opportunity for massive educational campaign to public health practitioners in diabetes danger states like Alabama about Metformin's potential to halt diabetes surge

**Diabetes cost the U.S. \$245 Billion in 2012 [xi]**

- \$176 billion in direct medical costs (medical goods and services)
- \$69 billion in indirect costs from lost workdays, restricted activity, disability, and early death
- By 2050, 1 of every 3 Americans may have diabetes

**With the “silver tsunami” of seniors outnumbering youth, the CDC projects a \$9 billion increase in Medicare costs in the next 15 years. [xii] The economic value of treating the underlying causes of aging diseases, instead of just one disease at a time, is estimated to be \$7.1 trillion over the next 50 years - a game-changer on par with clean water and the introduction of germ theory in the 20th century. [xiii]**

**The TAME study opens the door to 20+ new potential treatments for aging-related disease.**

- Human studies of Rapamycin are proving that Alzheimer’s Disease can be prevented by addressing the underlying causes of the disease, much like Metformin [xiv]
- A new class of drugs called “senolytics” are proving that the loss of strength and mobility in aging can also be delayed by many years. [xv] Human studies of Rapamycin have been effective against Alzheimer’s Disease and in prolonging productive healthspans. [xvi]
- The Buck Institute for Research on Aging has identified a new class of pharmaceuticals that can block free radicals in human cells, with a wide range of applications for cancer and neurodegenerative disease treatment. [xvii, xix]

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