



# New Ways to Maintain Healthy Blood Vessels Throughout Life

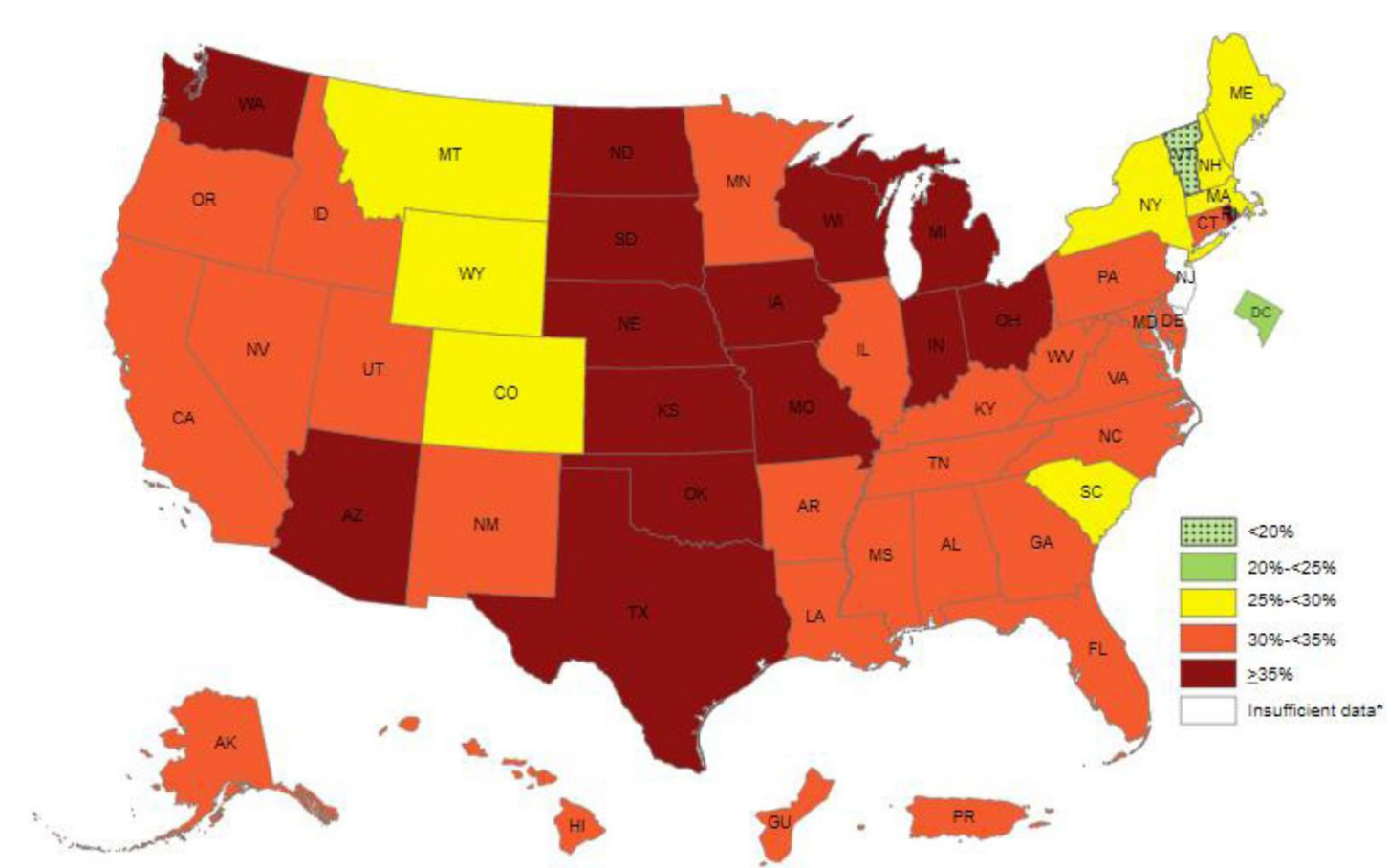


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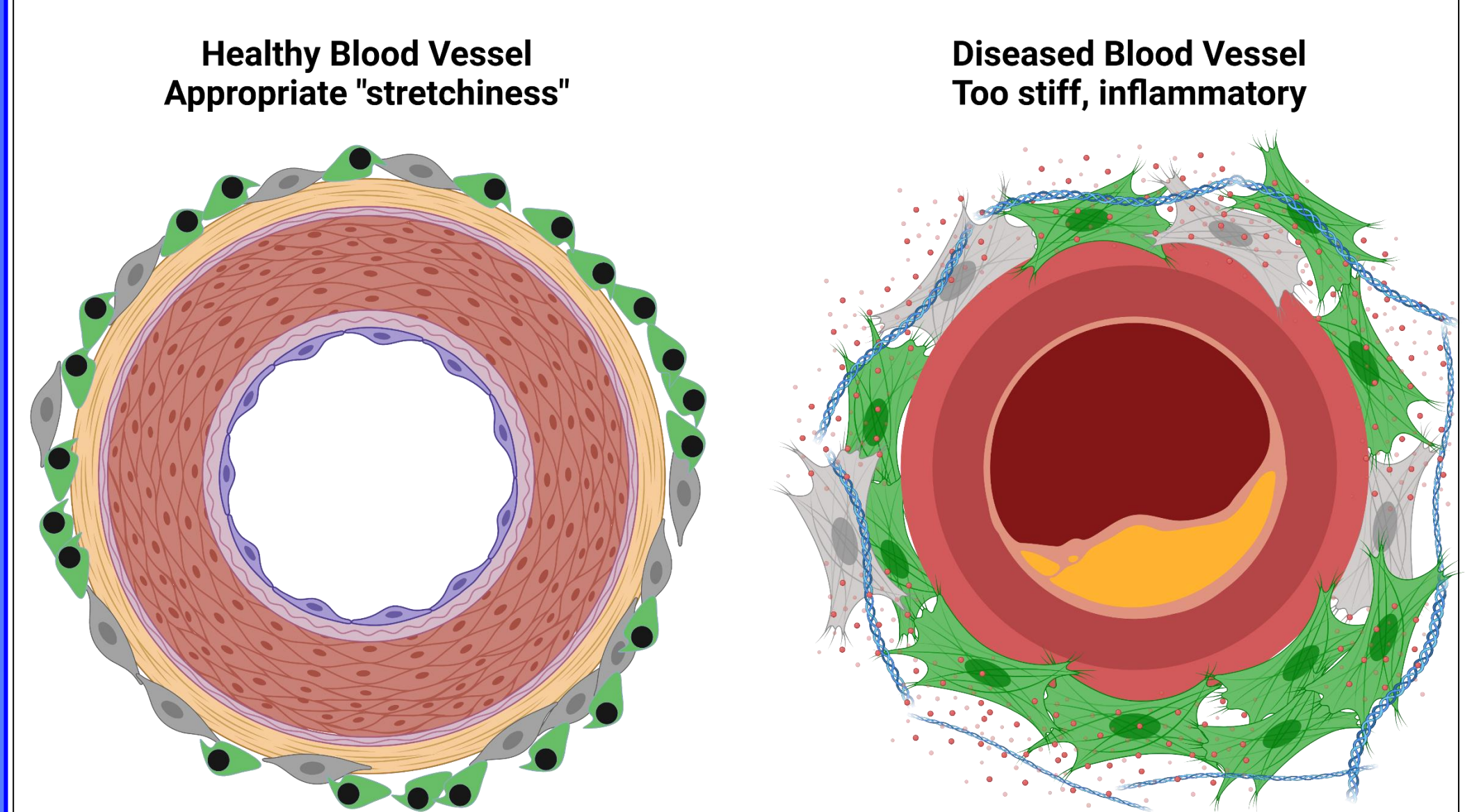
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## Background

- Heart attacks, diabetes, and high blood pressure cause blood vessels to become **too stiff**.
- Leads to diminished function and decreased quality of life.
- A population of **stem cells** contributes to stiffening of blood vessels.
- Key protein called **Brg1**, drives the stem cells to make the blood vessel stiff.



- Nearly one out of three Coloradans have vascular diseases that impair their quality of life.

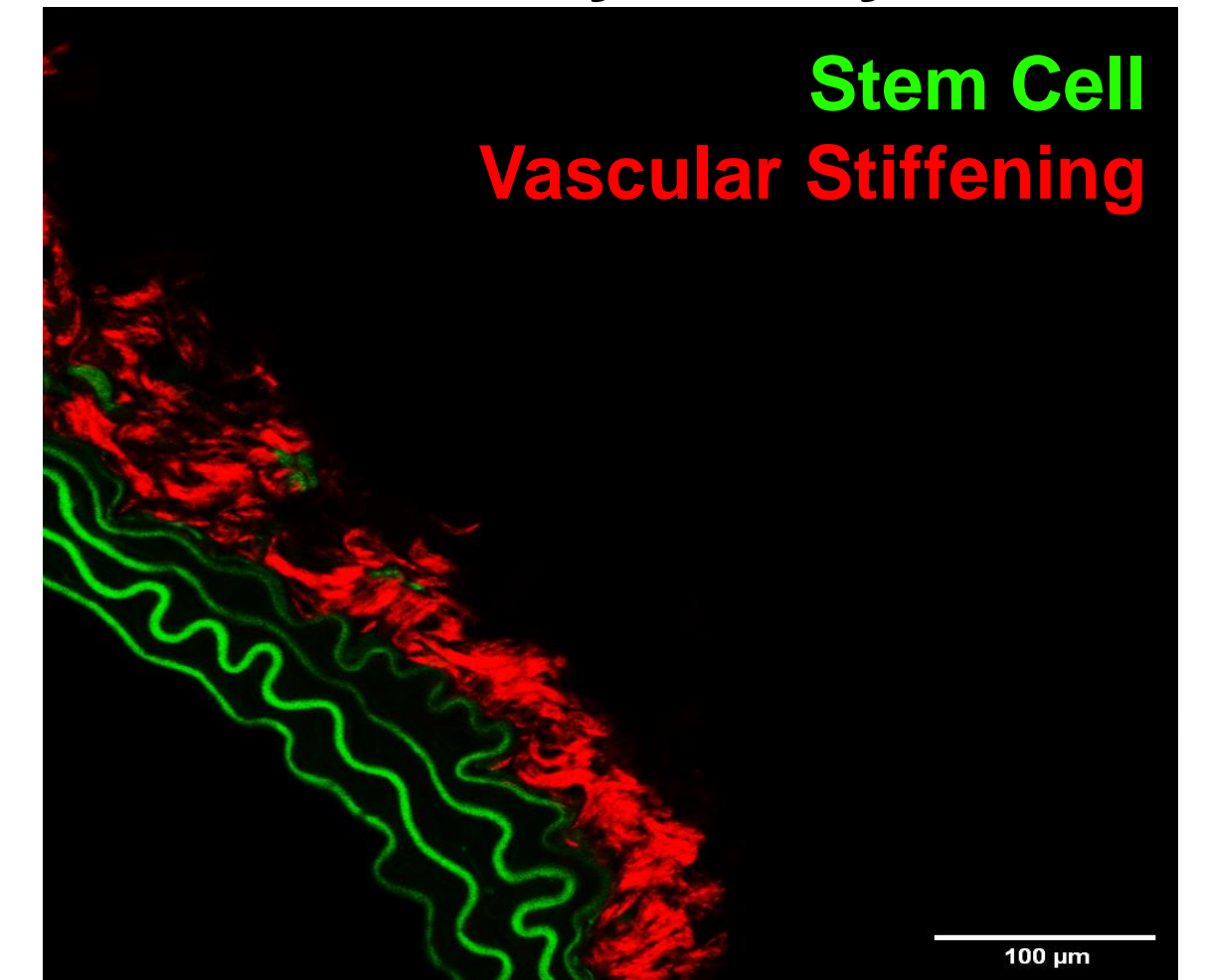


- In disease states, a cement-like matrix material deposits around the vessel, thus preventing the vessel from stretching appropriately.
- This stiffening causes poor blood flow, and makes people feel more tired, pain in their legs, and less able to participate in activities they enjoy.

## Results

### A new drug that can help prevent the progression of blood vessel disease

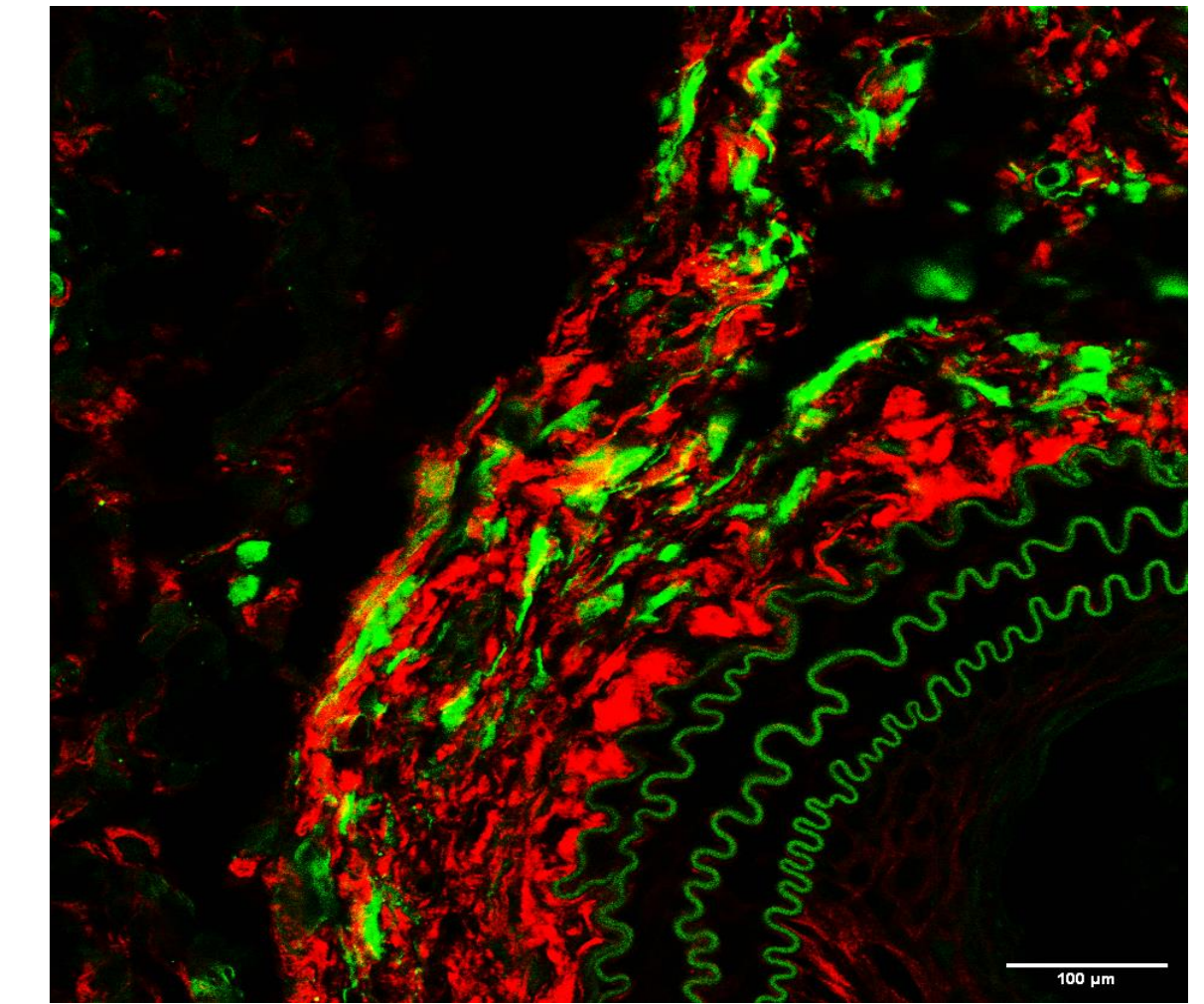
#### Healthy Artery



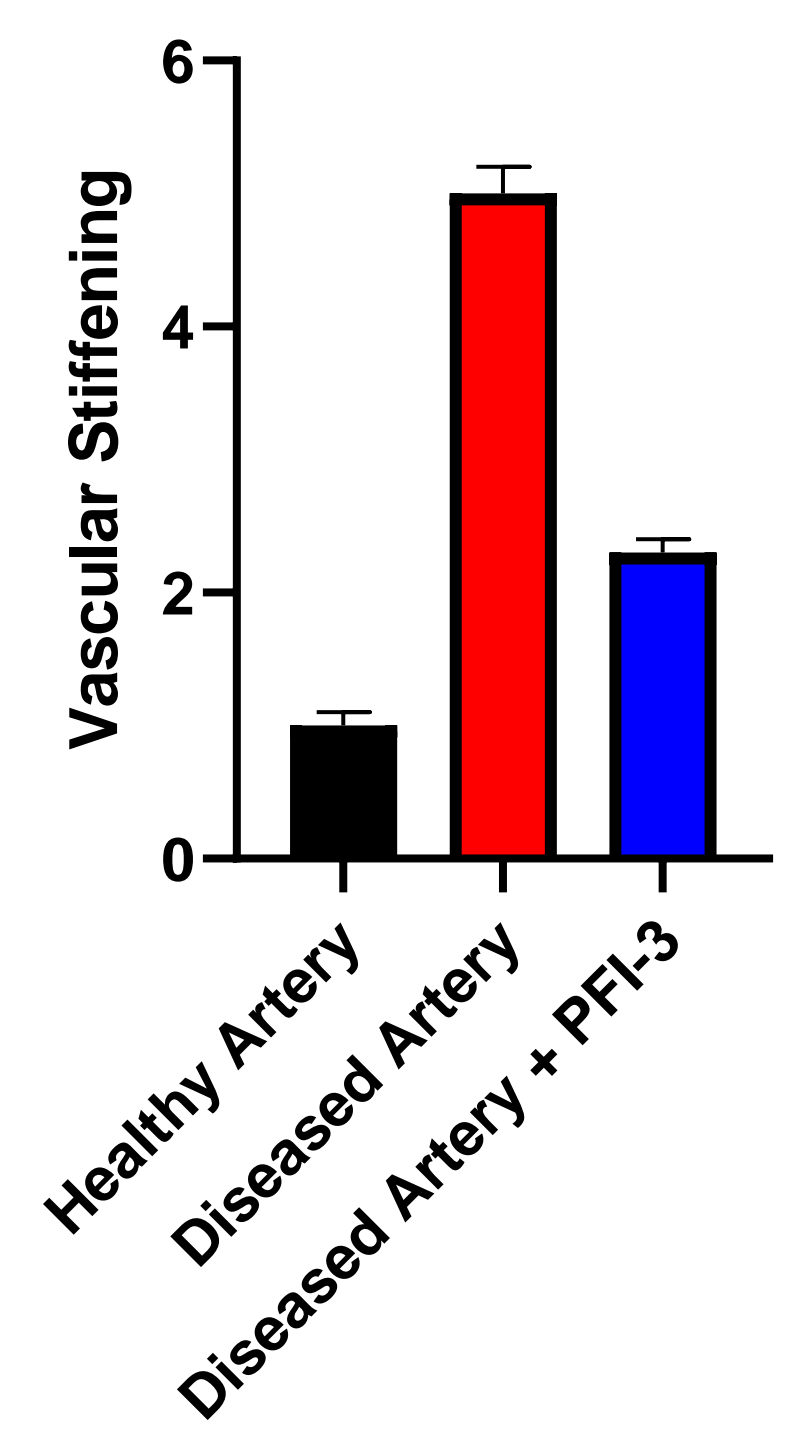
Representative Images of diseased mouse arteries.

PFI-3, a drug that blocks the protein Brg1, slows disease progression by halting blood vessel stiffening.

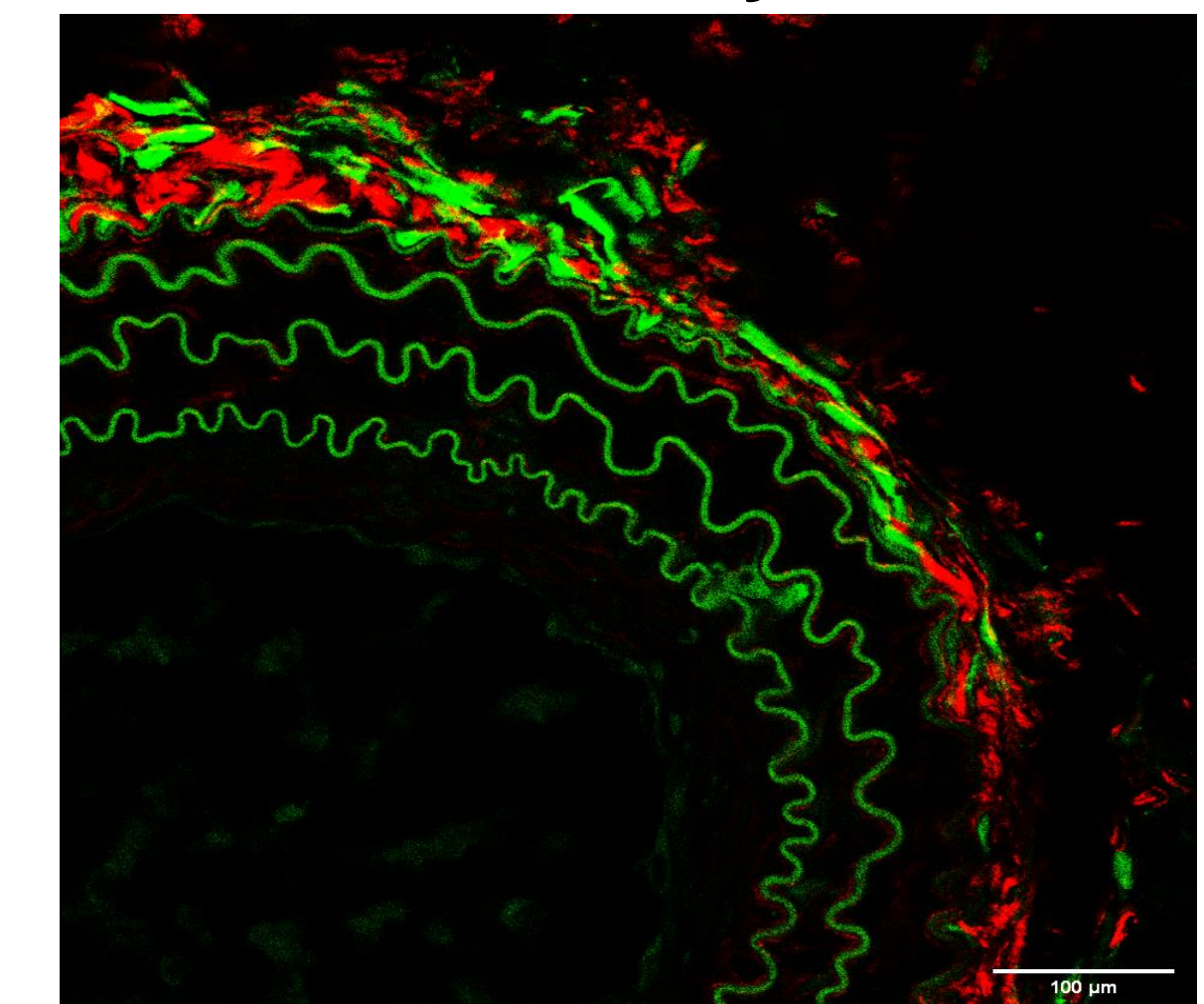
#### Diseased Artery



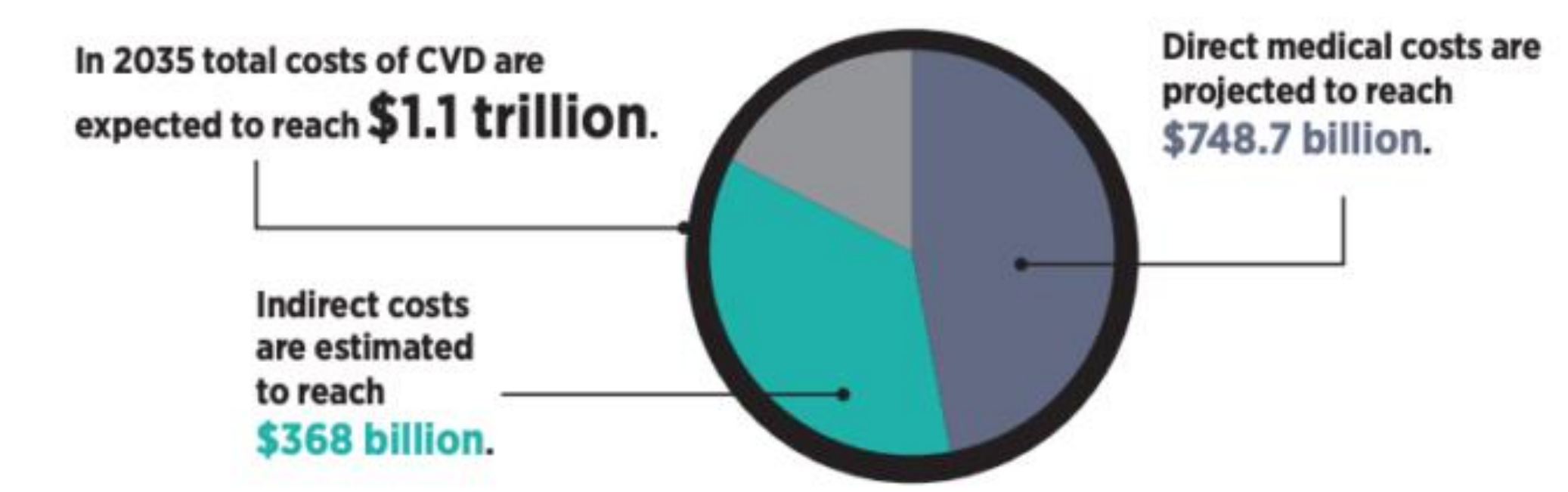
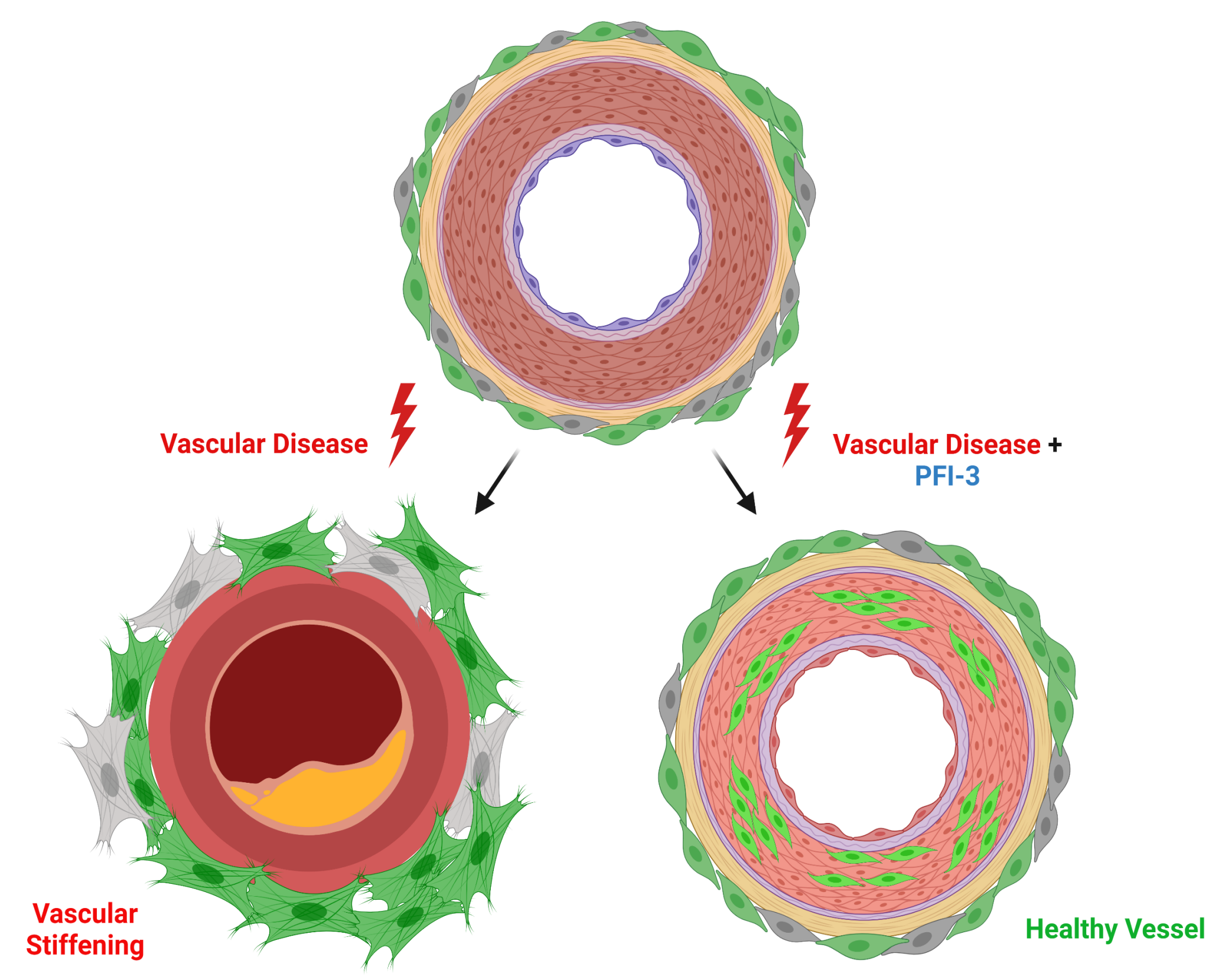
#### PFI-3 Decreases Progression of Disease



#### Diseased Artery + PFI-3



## Conclusions



Source: American Heart Association's Heart Disease and Stroke Statistics - 2019 Update

Developing medicines that block Brg1 can be used to prevent vascular stiffening and maintain healthy blood vessels for life

## References

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