The need for better control of LDL-C ("bad" cholesterol) to tackle risks associated with cardiovascular disease

Cardiovascular disease (CVD) is the leading cause of death in the United States (US), surpassing all types of cancer, unintentional injury and stroke[1]. CVD prevalence is expected to rise, affecting a projected 45% of the US population by 2035[2].

On average, a death due to CVD occurs every

37 seconds

in the US[1].

Atherosclerotic cardiovascular disease (ASCVD) is diagnosed as a result of an event like a heart attack or stroke[3]. In the US, approximately 30 million patients have been diagnosed with some form of ASCVD[4-6]. Low-density lipoprotein cholesterol (LDL-C) - also called "bad" cholesterol - is the most readily modifiable risk factor for ASCVD[8].

1 in 4 heart attacks and strokes are recurrent events[7].

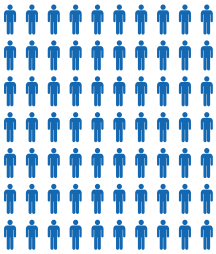
Role of long-term exposure to high LDL-C levels

Atherosclerosis is the fatty buildup in the inner lining of the artery, also known as "atherosclerotic plaques". The accumulation of LDL-C over time can cause these plaques. As the disease progresses, most people do not experience significant symptoms until the atherosclerotic plaque unexpectedly ruptures, causing a heart attack or stroke[9].

The length of time a person has elevated LDL-C is understood to be causal or related to ASCVD[10]. The duration and intensity of exposure to elevated LDL-C levels over a lifetime are key contributors to increasing the overall risk of developing and worsening ASCVD[10].

Controlling LDL-C levels is crucial

Growth of atherosclerotic plaque over time is proportional to the concentration of circulating LDL-C. Long-term exposure to persistently elevated LDL-C determines CV risk[10,11]. Therefore, it is crucial to integrate sustained LDL-C control into patients' care experience and ensure appropriate follow-up in order to reduce risk and help bend the curve of life.



In 2016

Nearly 70 Million

US adults had higher than recommended LDL-C levels[7].

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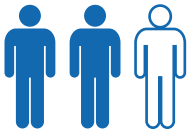
When statins are not enough to reach LDL-C goals

As of 2020, an estimated 20 million Americans were receiving statin therapy for some form of ASCVD[4]. Despite the widespread use of such therapies, people often do not reach optimal LDL-C levels, placing them at increased risk of a cardiovascular event.

Multiple factors may impact the success of currently available treatments:

Poor adherence to treatment, sometimes due to lack of information, side effects or frequent mode of administration[12].

- Up to **two-thirds of patients** stop taking their cholesterol medication within one year of starting treatment[13].



Even when people take their oral treatment as prescribed, **not all reach their LDL-C goals**[4].

- **Only 20%** of patients with ASCVD who are taking statins actually achieve healthy levels of LDL-C[4].

For individuals with elevated cholesterol, achieving and maintaining healthy LDL-C levels is a vital ongoing process that can involve a variety of therapies and lifestyle modifications.

Bending the curve of life requires addressing some of society's greatest public health concerns. Committed to reimagining medicine, Novartis has a growing pipeline of potentially first-in-class molecules addressing cardiovascular, metabolic and renal diseases.

References

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Novartis Pharmaceuticals Corporation
East Hanover, New Jersey 07936-1080

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