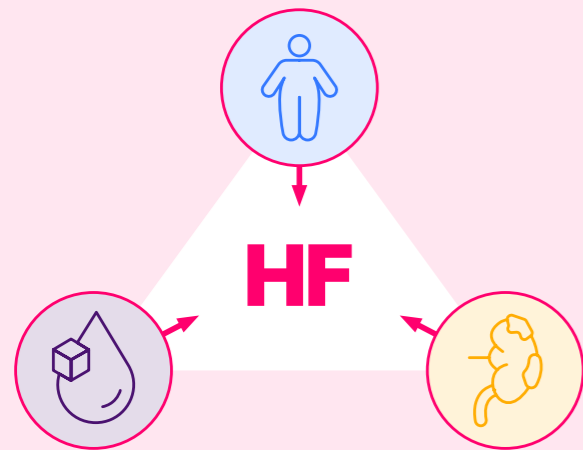




## Introduction and Epidemiology

HF is a clinical syndrome in which **structural** or **functional abnormalities** impair cardiac **filling** or **ejection**.<sup>1</sup>

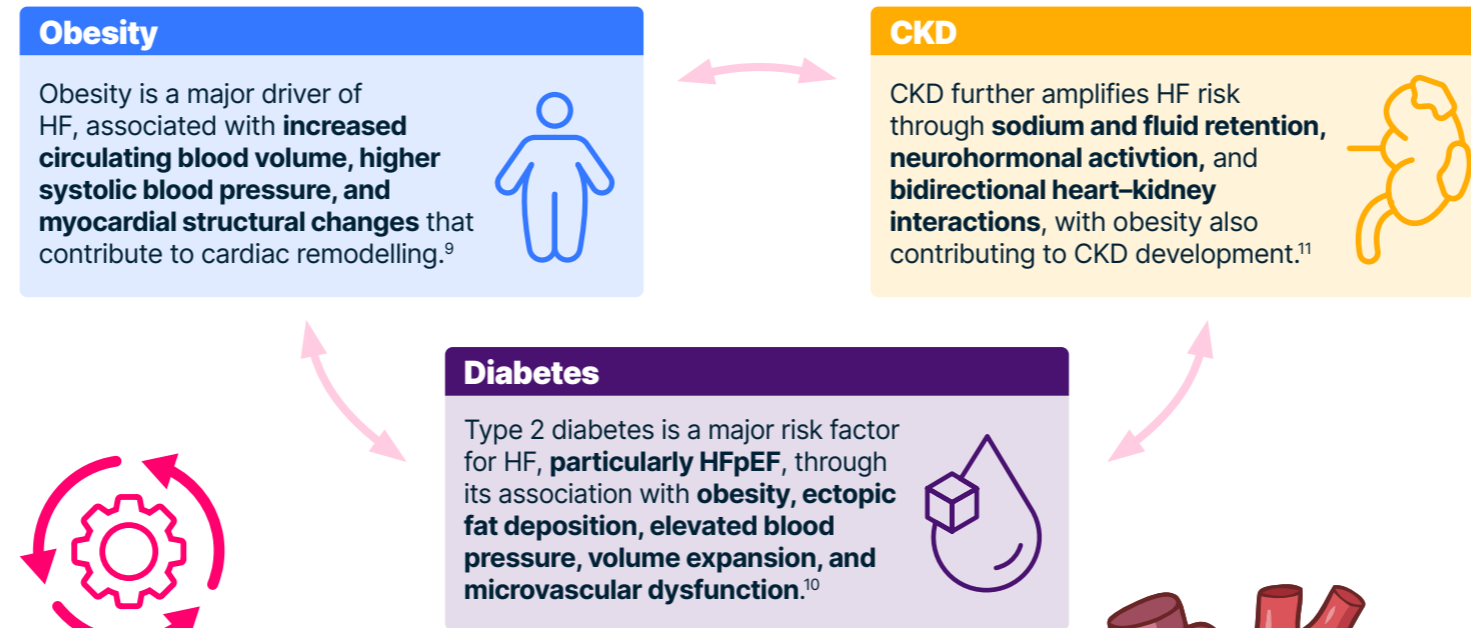


### Abbreviations:

CKD: chronic kidney disease; HF: Heart failure; HFpEF: Heart failure with preserved ejection fraction

## Cardiometabolic Drivers of HF

HF increasingly develops within a **cardiorenal-metabolic continuum**, in which **hypertension, metabolic disease, vascular dysfunction**, and **multiorgan interactions** contribute to progressive **myocardial impairment**.<sup>8</sup>



These conditions frequently coexist, forming a **multisystem network**. The resulting cardiometabolic environment drives **progressive cardiac remodelling** and **worsens long-term clinical outcomes**.

## Expert Opinions

“With rising levels of obesity and Type 2 diabetes, along with improved survival among individuals living with obesity, **the prevalence of heart failure - particularly HFpEF - is increasing**. This condition is now widely recognised to have a strong metabolic basis.”



“In terms of tackling obesity, **GLP-1 receptor agonists lead to effective weight loss, but loss of muscle mass in addition to fat mass**. Incorporating **isometric and resistance exercises** may be essential to minimise the loss of muscle mass and strength, especially in older people.”

**- Carl Lavie,**  
Ochsner Medical Center, New Orleans, Louisiana, USA

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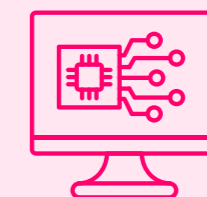
## Early Detection and Precision Intervention

**Earlier identification** of HF risk is a key priority. **Natriuretic peptides** remain central to diagnosis and risk stratification, while additional biomarkers of inflammation and fibrosis are under investigation for their potential role in risk assessment and disease characterisation.<sup>12</sup>



**Advanced imaging**, including **strain imaging** and **cardiac magnetic resonance**, can identify **subclinical myocardial dysfunction** before overt HF develops.<sup>13</sup>

**Wearables and remote monitoring** allow continuous tracking of **physiological signals**, such as heart rhythm and activity.<sup>14</sup>



**AI algorithms** increasingly analyse these data, detecting early signs of dysfunction.<sup>15</sup>

AI is also being applied to **ECG and imaging** to predict future HF risk, supporting a shift towards **predictive, data-driven care**.<sup>16</sup>

