



A common misconception is that hydrogen is too dangerous to use, but it's actually quite safe when handled properly due to its low density and rapid dispersal upon leakage. While it is flammable, hydrogen's light weight means it disperses quickly in the atmosphere, unlike heavier fuels that can pool and create hazards. Safety measures and regulations are in place to ensure safe handling and storage of hydrogen in various applications.

### Myth 1:

Hydrogen is too dangerous to use.

#### Fact:

Hydrogen is flammable – but so are other fuels like gasoline and natural gas. What makes hydrogen safer in some cases is that:

Fact	Explanation
Hydrogen disperses quickly	It's lighter than air and rises rapidly, reducing ignition risk near people
Gasoline is actually more explosive at lower oxygen levels	Gasoline: explosive between 1–3% oxygen Hydrogen: 18–59%
Hydrogen needs more heat to ignite	Hydrogen's ignition temp: 535°C Gasoline: 280°C
We already use it safely	Hydrogen is used globally in a multibillion-dollar industry (transport, power, etc.)

### Myth 2:

Hydrogen leaks more easily than other fuels.

#### Fact:

While hydrogen molecules are smaller, studies have shown that hydrogen leaks at a similar rate to natural gas. The key factor is that hydrogen's low density means it disperses upwards and away from the leak source, unlike heavier gases that can pool.

### Myth 3:

The Hindenburg disaster proves hydrogen is unsafe.

#### Fact:

The Hindenburg disaster was not caused by the flammability of hydrogen itself. [BBC Science Focus Magazine explains](#) that the fire was likely caused by the highly flammable paint used on the airship's exterior, which contained materials similar to solid rocket fuel.



#### **Myth 4:**

Hydrogen production is inherently unsustainable.

#### **Fact 1:**

While much of the hydrogen produced today is "grey" hydrogen, derived from fossil fuels, "**green hydrogen**" produced using renewable energy sources is a sustainable alternative.

#### **Fact 2:**

Green hydrogen production is becoming increasingly **cost-effective** and scalable, with projections indicating significant growth in electrolysis capacity in the coming years.

#### **Myth 5:**

Hydrogen is too expensive and not ready for widespread use.

#### **Fact 1:**

While green hydrogen currently costs more than hydrogen from fossil fuels, costs are expected to decrease as technology improves and production scales up.

#### **Fact 2:**

Hydrogen and fuel cell technologies are already in use in various applications, including forklifts, buses, and backup power systems.

### **Conclusion,**

Hydrogen is a safe and versatile fuel when handled properly, and many of the safety concerns surrounding it are based on misconceptions. Continued research, development, and implementation of safety protocols will further ensure the safe and effective use of hydrogen in the future

