



Early & High Medieval Weapons



European, *Spear*, possibly 500s-late 1000s, iron and wood,
The John Woodman Higgins Armory Collection 2014.163



European, *Battle Axe*, possibly 1200s, iron and wood,
The John Woodman Higgins Armory Collection, 2014.436

The weapons used and faced on the battlefield by knights came in different forms. As it could thrust and cut, the *spear* was the most common weapon of the 5th-13th centuries and was wielded by infantry and knights alike.

Battle axes were popular weapons that could both cut and provide a strong, concussive force.
Its ends could also hook an opponent.



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German, *Mace*, about 1550, steel and copper, 2014.292



Southern German, *Crossbow*, about 1475, Wood; painted parchment; cord; bone; horn; iron; modern leather, 2014.53.1



European, *Crossbow Bolt*, late 1400s, steel and wood, 2014.53.1



German, *Sword*, 1050–1150, steel, 2014.59

Maces provided a focused, concussive blow that could crush both armor and people.

Crossbows and war bows could send piercing arrows toward an opponent from a distance.

Swords could both cut and thrust. A symbol for knightly power and justice, they were expensive and few outside the knightly class could afford them.

Mail Armor



Egyptian/Ottoman, Persian, *Mail Coat*, late 1500s, iron and brass, 2019.9; Turkish, *Kalkan (one-handed shield)*, 1800s, wood, iron, textile, leather and brass, 2014.86; Northern African, Sudanic region, *Spear*, 1800s, iron with etching, brass inlay and wood, 2014.3; North African, Sudanic region, *Kaskara (sword)*, 1800s, steel, iron, wood, crocodile skin, and leather, 2014.67.1; North African, Sudanic region, *Scabbard*, late 1800s, tooled leather, fabric, brass, and iron, 2014.67.2. All objects from The John Woodman Higgins Armory Collection

This outfit is a combination of mail, helmet and shield together, similar to that worn by early knights. It shows the armor worn in the Sudanese area of Africa by cavalymen—soldiers on horses—between the 16th and 19th centuries.

Mail armor's main strength was its resistance to cuts from the edges of spears, axes and swords. However, mail was vulnerable to the hard force of impacts from weapons like maces and axes. Sharp, pointed weapons, such as spears, swords, and arrows could also pierce through mail.



Mail to Plate Armor

Italian, *Brigandine Fragment*,
1450-1470, iron, fabric and leather,
The John Woodman Higgins
Armory Collection, 2014.823



German, *Composite Armor*, about
1360–1929, steel, iron and brass
with modern leather, cord and
restorations, The John Woodman
Higgins Armory Collection,
2014.842

During the 13th and 14th centuries, armor began to transition from mail to plate armor.

Initially, plates were added to reinforce mail and used as spot protection for knees, elbows, and shoulders.

Also, small plates were added to the tunic or surcoat that was worn over mail.

This was called a coat-of-plates (by the 16th century called brigandine armor).

The image on the left is a fragment of brigandine with overlapping plates riveted to fabric and was part of an armored jacket.

By the late 14th century, the plates became larger and protection expanded to protect almost all of the body:

feet, calves, hands, forearms, upper arms, and chest. Look carefully at this suit of armor on the right,
and note the mail shirt and neck protection—mail was still used to fill gaps in plates of armor.

This suit weighs 54 pounds and 5 ounces.



Plate Armor in Combat

German and Austrian, *Composite "Gothic" Field Armor*, late 15th century, steel, The John Woodman Higgins Armory Collection, 2014.1146



German, *Composite "Maximilian" Field armor*, 1500–1525, steel, iron, brass and modern leather with modern restorations, The John Woodman Higgins Armory Collection, 2014.1159



The primary purpose of armor was to protect soldiers in battle. Plate armor was like wearing a shield or helmet all over the body. The knight was covered in a smooth, curved surface. The plates were jointed so they would move freely with the soldier's joints. This combination of flexibility and protection made an armored knight very difficult to hit directly with a weapon.

Plate armor suits weighed an average of 55 pounds, similar to mail suits, but the weight of the plates was more evenly distributed over the body.

A trained man-at-arms could do cart wheels in his armor!

The biggest drawbacks of plate armor were that it was expensive and hot to wear.

Plate Armor on Parade



French, *Ceremonial Half-Armor with "Repoussé" Decoration*, about 1580-1610, steel with traces of gilding, leather, The John Woodman Higgins Armory Collection, 2014.70

Not all armor was practical. Some suits were purely decorative and made to be worn for show on parade.

The armor above was heavily decorated with fancy etchings and engravings on its metal plates. Softer and thinner metal was easier to decorate. This created armor that had virtually no protective value.

This armor, weighing only 30 to 45 pounds, was light enough to dance in!



The Decline of Armor



Etienne Prosper Berne-Bellecour, *The Soldier*, 1858-1900,
oil on panel, Bequest of the Marjorie C. Sawyer Trust, 2001.112

In the 14th century primitive firearms were introduced, which became more common in the 1500s. Some armor could be reinforced to protect against firearms. By 1660, as firearms such as muskets and pistols dominated the battlefield, armor no longer provided protection and was not worn.

Slowly, new types of armor developed to keep soldiers protected.
Think of some modern types of armor and protection used by soldiers.



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Composite "Black-and-White" Half Armor, German Object Number: 2014.1144

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Northern German, *Composite "Black-and-White" Half Armor*, late 16th–early 17th century, painted steel and iron with modern leather, The John Woodman Higgins Armory Collection