

Hades - A Guide to DAMAGE

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The (Basic) Damage Formula

Every instance of damage in Hades is calculated according to the following formula:

$$Damage = Base * (1 + Bonuses) * (1 - Reduction) * Crit + Extra Damage$$

This is a little confusing at first, but usually **Reduction**, **Crit**, and **Extra Damage** are all negligible, so the cleaner way to think of damage is:

$$Damage = Base * (1 + Bonuses)$$

Throughout a run of Hades, you are mostly building your damage one of two ways. Either by adding additional damage sources (e.g. Zeus lightning on attack, a dash boon, etc.) or by adding additional damage bonuses (Most boons that refer to **+X%** damage in their descriptions). **Base** damage is connected to those damage sources, while **Bonuses** are connected to the damage bonuses.

Base Damage

The amount of damage an attack does without any bonuses is referred to as “base damage.” These are values like 20 for the basic Sword Attack, or 50 for the Sword Special. Any “source” of damage has its own base damage. Damage sources can be difficult to keep track of, but if it’s creating its own damage number on the screen, it is a distinct source of damage. Damage numbers only combine for the same damage source (Two Tidal Dashes in a row may display as one large number, for example, while Tidal Dash and Razor Shoals damage will not combine on screen).

To illustrate this better, consider the following case: Zagreus is wielding the Sword, with the boon Lightning Strike and the hammer Piercing Wave. When using the Sword Attack on an enemy, there will be 3 distinct sources of damage:

- 20 from the sword attack
- 10 from Lightning Strike
- 30 from Piercing Wave

So 60 damage will be done, but the game will likely display those three numbers separately, since they originate from different damage sources.

Base damage can be increased for a particular damage source, through some Daedalus hammers for weapon attacks, or Poms of Power for non **+X%** boons.

Damage Bonuses

Bonuses are the other primary means of increasing damage in Hades. Bonuses are applied by multiplying them into the base damage, so the higher the base damage, the more damage created by the bonus. All damage bonus boons have **+X%** in their description, where X is the bonus being applied (Not all **+X%** boons are damage bonus boons though, as the text can be misleading. This guide will have the correct attribution for every boon.)

THE MOST IMPORTANT THING TO TAKE AWAY FROM THIS GUIDE IF YOU LEARN ABSOLUTELY NOTHING ELSE IS THIS:

Damage bonuses stack **additively** with each other. A +50% attack boon from Aphrodite combined with a +50% attack damage from boiling blood and +50% backstab damage from shadow presence equals +150% damage bonus added on top of the base damage. Very few special cases **+X%** damage bonuses are multiplicative (Trap damage from Stygian Shards), and you should assume they are additive unless otherwise noted.

Bonuses are usually selective in the damage they apply to. For example, Fiery Presence boosts damage by 75% on the first hit on an undamaged enemy, but only applies to Attack and Special base damage. So a 50 base damage Sword Special will gain 37.5 damage, and a 10 base damage Rail Attack will gain 7.5 damage, regardless of what other boons are on the attack, since bonuses only operate off the damage of their target.

Some bonuses (Privileged Status, High Confidence, etc.) apply to all damage done by Zagreus, and are referred to as "Global Damage," which is generally the most valuable type of damage bonus you can acquire in a run.

Damage Reduction

Any boons or features reducing damage go into the reduction category. Unlike damage bonuses, reduction is multiplicative in nature, so you cannot feasibly approach 100% damage reduction with the tools available ingame. If the Weak status is applied to an enemy (30% damage reduction), and you have additional 30% damage reduction through Sturdy (from Hyper Sprint or a hammer upgrade that gives it), your total damage reduction is:

$$(1 - 0.3) * (1 - 0.3) = 0.49$$

Or roughly 50% damage reduction, rather than the 60% it would be were they additive. The efficacy of additional damage reduction sources is lessened, essentially. Damage reduction almost always applies to Zagreus, and rarely plays a role in the damage the player is dealing.

Critical Hits

Some boons and weapons (usually those given by Artemis) grant a critical hit chance onto Zagreus's attacks. Critical hit chances are applied independently per enemy hit by an attack, and any enemy receiving a critical hit has the damage (bonuses and reduction included) multiplied by the critical hit multiplier. This is why critical hits are so valuable, because they are not additional additive bonuses, but are one of the game's rare true damage multipliers. The base critical hit multiplier is 300% (3x multiplier) but can be increased with the boons Heart Rend (+150% for a total of 4.5x multiplier) and Clean Kill, both stacking additively like normal damage bonuses, just for the critical multiplier.

"Extra" Damage

Some damage in the game is unaffected by even global damage bonuses, and even escapes critical multiplication. These damage sources are very small and not super significant in the long run, but it's important to note that they exist nonetheless. Known as "Extra" damage, these get no bonuses from any other boon or item, and just add in the damage they do at the very end. There are only two known sources of damage that function in this way: Hoarding Slash damage (5% of your current Obol count), and Merciful End "combo" damage (A flat 40 damage whenever Merciful End is triggered).