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Health

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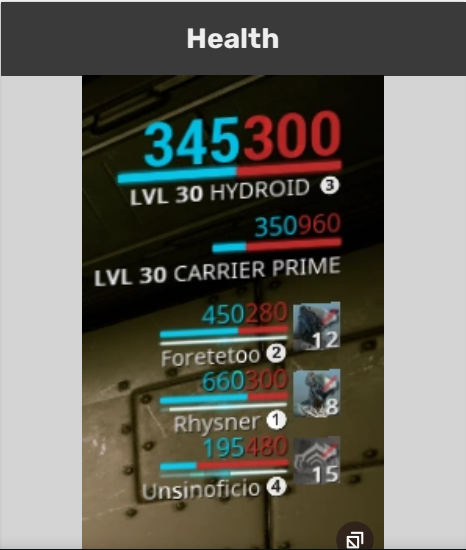
Total amount of Damage a Warframe can take before going into Bleedout.

—In-game Description

Critical to Railjack integrity. When the Hull goes, the Railjack goes.

—In-game Description

Health (**Hull** for [Railjacks](#)) is a value that represents how much [damage](#) an entity can sustain; if the value is reduced to zero, the entity will be incapacitated in some manner. [Warframes](#), [Railjacks](#), [Companions](#), [Rescue](#) targets, and certain enemies will enter "[bleedout](#)" when their health values are reduced to zero, while all other entities will instead be killed.



A Warframe's health is indicated as a red number at the top right of the screen. The health of other entities can be displayed over their heads, should the player aim directly at them. While a Warframe is losing health, the screen's edges will begin to flash red at a pulse. Once the Warframe reaches 10% health or below, a loud, heartbeat-like sound will play, and a slight ringing can be heard. This sound also plays when bleeding out and when dead.

The top right of the screen shows your health and [shield](#), as well as that of your [companions](#) and [squad](#) members.

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Effects

Health determines the amount of damage the user can sustain and is the last line of defense for all entities. Once the value is depleted, most enemies will die, while Warframes and certain characters will enter a weakened state called [bleedout](#) in which they must be revived within a few seconds or be killed.

Health receives damage mitigation from [armor](#).

Most attacks will only damage health after the entity's [shields](#) have been fully drained, but there are a few exceptions. [Toxin](#) damage will bypass shields and strike the target's health directly. [Viral Status Effect](#) also increases damage dealt towards health.



Modifying Maximum Health

Mods

 [Physique](#)

 [Shepherd](#) (Only benefits companions)

 [Vitality](#)

[Vigor](#)

[Primed Vigor](#)

[Carnis Carapace](#)

[Gladiator Resolve](#)

[Jugulus Carapace](#)

[Saxum Carapace](#)

[Umbral Vitality](#)

[Archon Vitality](#)

[Enhanced Vitality](#)
(Companion only)

Link Vitality (Companion only)

Adept Surge (Conclave only)

Calculated Spring (Conclave only)



Nira's Hatred

Abilities

- InnateAugmented
- ChromaWisp

Elemental Ward

Depending on Chroma's elemental alignment, an offensive area-of-effect is created. Chroma and his nearby allies are imbued with defensive energy.

2

50

Introduced in [Update 16.0](#) (2015-03-19)

HeatElectricityToxinCold

Strength:
25 / 50 / 75 / 100 (Heat damage per second)
15 / 20 / 30 / 55 % (health bonus)

Duration: 10 / 15 / 20 / 25 s

Range: 6 / 8 / 10 / 12 m (aura range)

Misc: 2 / 5 / 7 / 10 % (Heat status chance)
5 m (burn radius)

Subsumable to Helminth

Other

[Arcane Thrak Rhino Helmet](#)[Arcane Backdraft Ember Helmet](#)[Purity](#)[Magus Vigor](#) (Operator only)[Vazarin's Enduring Tides](#)
(Operator only)[Azure Archon Shard](#)[Tauforged Azure Archon Shard](#)[Arcane Blessing](#)[Arcane Intention](#)

Like most attribute values, Health is increased by single multiplier formed from effects that additively stack with each other. The health gained from leveling is an exception, stacking additively with base health before multipliers

Total Health = (Base Health + Warframe Rank Bonuses) × (1 + Modifier from Mods) + Other Bonuses

- **Base Health** refers to the Warframe's health at Rank 0.
- **Warframe Rank Bonuses** are increases to a Warframe's health that apply as the Warframe goes from rank 0 to 30. These are normally +100 at rank 30, though there are exceptions. Importantly, unlike capacity, they are not impacted by mastery rank, meaning that two players with newly built frames will always have the same bonuses regardless of their mastery.
- **Modifier from Mods** is from mods such as [Vitality](#) and [Vigor](#), increasing the Health by 100% and 50% at their maximum ranks, respectively. The [Physique Aura](#) mod increases it by 20% at maximum rank. Each additional [squad](#) member that brings Physique will increase your Modifier by an additional 20%, to a maximum 80% addition in a four-player mission, which can be further increased with [Coaction Drift](#). Lastly, the bonus from some [Arcane helmets](#) contribute to this modifier.

Health Reduction

Having equipped a [Bleeding Dragon Key](#) reduces total health by 75%, after all other calculations. During missions,





Healing

Main article: [Healing](#)

Unlike shields, health does not naturally regenerate over time, except when either the [Rejuvenation](#) or [Dreamer's Bond Aura](#) mod is equipped by at least one member of the [squad](#). Otherwise, damage inflicted upon health must actively be healed by picking up [Health Orbs](#), by receiving the effects of certain Warframe abilities, or by using certain mods, weapons, consumable equipment, or [Arcane Enhancements](#).

Bleedout & Death

Main article: [Death](#)

When health is reduced to 0, Warframes enter the [Bleedout](#) state. In bleedout, Warframes can barely move and are restricted to firing their [sidearm](#). If they do not receive the appropriate attention from an ally within 20 seconds, they are killed in action. It is quite difficult to complete missions successfully when all players are dead, so players typically strive to keep health above 0 at all times.

Effective Health

Damage calculations get complicated when damage resistances are involved. **Effective health** (EHP) is a common [metagame](#) concept which states that because each hit point you have actually absorbs more than one point of damage, you effectively have more hit points than indicated. In [WARFRAME](#), effective health can be increased by [armor](#), sources of [damage reduction](#), negative [damage type modifiers](#), [resistance mods](#), and health classes.

Calculation

Effective health against a particular damage type can be calculated as such:

$$\text{EHP} = \text{Nominal Health} \cdot \frac{\text{Net Armor} + 300}{300} \cdot \frac{1}{1 - \text{Net Damage Reduction}} \cdot \frac{1}{1 + \text{Damage Type Modifier}}$$

$$= \frac{\text{Nominal Health} \cdot (\text{Net Armor} + 300)}{300(1 - \text{Net Damage Reduction})(1 + \text{Damage Type Modifier})}$$

Nominal health refers to listed health points as displayed in-game; in other words, it is the total health after mods and buffs are applied

Net damage reduction refers to total damage reduction outside of armor

Enemy Health Scaling

Main article: [Enemy Level Scaling](#)

For health, the ranges of level differences from base to current level at which scaling transitions is between 70 & 80.



The formula by which Grineer health scales is as follows:

$$f_1(x) = 1 + 0.015(x - \text{Base Level})^{2.12}$$

When Current Level - Base Level < 70

$$f_2(x) = 1 + \frac{24\sqrt{5}}{5}(x - \text{Base Level})^{0.72}$$

When Current Level - Base Level > 80

Corpus

The formula by which Corpus health scales is as follows:

$$f_1(x) = 1 + 0.015(x - \text{Base Level})^{2.12}$$

When Current Level - Base Level < 70

$$f_2(x) = 1 + \frac{30\sqrt{5}}{5}(x - \text{Base Level})^{0.55}$$

When Current Level - Base Level > 80

Infested

The formula by which Infested health scales is as follows:

$$f_1(x) = 1 + 0.0225(x - \text{Base Level})^{2.12}$$

When Current Level - Base Level < 70

$$f_2(x) = 1 + \frac{36\sqrt{5}}{5}(x - \text{Base Level})^{0.72}$$

When Current Level - Base Level > 80

Corrupted

The formula by which Corrupted health scales is as follows:

$$f_1(x) = 1 + 0.015(x - \text{Base Level})^{2.1}$$

When Current Level - Base Level < 70

$$f_2(x) = 1 + \frac{24\sqrt{5}}{5}(x - \text{Base Level})^{0.685}$$

When Current Level - Base Level > 80

Murmur, Sentient, and Unaffiliated

The formula by which enemy health scales is as follows:

$$f_1(x) = 1 + 0.015(x - \text{Base Level})^2$$



$$f_2(x) = 1 + \frac{24\sqrt{5}}{5}(x - \text{Base Level})^{0.5}$$

When Current Level - Base Level > 80

Eximus

Eximus health scaling is the same across all factions

The formula by which eximus health scales is as follows:

$$f_1(x) = 1 + 0.015(x - \text{Base Level})^2$$

When Current Level - Base Level < 70

$$f_2(x) = 1 + \frac{24\sqrt{5}}{5}(x - \text{Base Level})^{0.5}$$

When Current Level - Base Level > 80

In addition, the base health is also increased between certain breakpoints:

- Between level differences 0 inclusive and 15 inclusive, base health stays the same as listed in the [Codex](#).
- Between level differences 15 exclusive and 25 inclusive, base health is linearly increased from +0% to +25% (e.g. for each level, enemy gains 2.5% base health).
- Between level differences 25 exclusive and 35 inclusive, base health is linearly increased from +25% to +150% (e.g. for each level, enemy gains 12.5% base health).
- Between level differences 35 exclusive and 50 inclusive, base health is linearly increased from +150% to +350% (e.g. for each level, enemy gains 13.33% base health).
- Between level differences 50 exclusive and 100 inclusive, base health is linearly increased from +350% to +500% (e.g. for each level, enemy gains 3% base health).
- Above level difference of 100, base health will stay +500% (6x) of its Codex value.

$$\text{Health Multiplier} = \begin{cases} f_1(x), & x \leq 15 \\ (1 + 0.025 * (x - 15)) * f_1(x), & 15 < x \leq 25 \\ (1.25 + 0.125 * (x - 25)) * f_1(x), & 25 < x \leq 35 \\ (2.5 + 2/15 * (x - 35)) * f_1(x), & 35 < x \leq 50 \\ (4.5 + 0.03 * (x - 50)) * [f_1(x) \times (1 - S_1(x)) + f_2(x) \times S_1(x)] & 50 < x \leq 100 \\ 6 * f_2(x), & 100 > x \end{cases}$$

Where the Health Multiplier is the value that multiplies an enemy's base health to its current health.





Current health scaling at Base Level = 1.

Enemy EHP

Effective Hit-points is a stat that indicates how much gross damage must be dealt to a target until the net damage thereby inflicted depletes its entire health pool. Effective Hit-points is not a fixed stat for any given enemy, it is heavily dependent on the damage type used against the target, as well as the various buffs and debuffs in effect for both the attacker and the enemy in question. For the following considerations, however, these influences are disregarded, as they do not alter the course of the graphs except for clinching or stretching them as a whole, which manifests as a scaling of the Y-axis.

For Enemies with Health only

For targets without shields and armor, the standardized effective hit-point scaling is synonymous with standardized health scaling, the health graph and formula apply.

For Enemies with Health and Shields

The standardized effective hit-points of shielded enemies are simply the sum of their shields and health, except for the case when the [Toxin](#) damage portion of the gross damage depletes the target's health faster than the rest of the gross damage depletes its shield. Exact effective hit-point calculations considering damage types also become significantly more complex if [Toxin](#) damage is involved, but this is disregarded here. The level scaling of standardized effective hit-points of shielded enemies is influenced by the ratio of base shields to base health:

$$\text{EHP Multiplier} = \text{Health Multiplier} + \text{Shield Multiplier} \times \frac{\text{Base Shields}}{\text{Base Health}}$$

In the cases where you are trying to one-shot shielded enemies without [Toxin](#) damage, their effective hit-points will actually be higher due to their [shield gate](#) mechanic. Only 5% of total damage dealt will only damage the enemy's health when their shield gate is active. However, attacking enemy weakpoints ignores the shield gate.





Current EHP scaling with only Health and Shields at Base Level = 1.

For Enemies with Health and Armor

The standardized effective hit-points of armored enemies are simply the health divided by the compliment of the damage reduction granted from armor. Because armor adds damage reduction to incoming damage on health the level scaling of standardized effective hit-points of armored enemies is influenced by the base armor itself:

$$\text{EHP Multiplier} = \text{Health Multiplier} \times \left(1 + \frac{\text{Base Armor} \times \text{Armor Multiplier}}{300} \right)$$



Current EHP scaling with only Health and Armor at Base Level = 1.

For Enemies with Health, Shields, and Armor

The standardized effective hit-points of enemies that are both armored and shielded are more complex than the simple EHP cases from the previous sections above. The level scaling of standardized effective hit-points of these enemies is influenced by the ratio of base shields to base health *and* base armor, making the formula at least 3 variable:

$$\text{EHP Multiplier} = \text{Health Multiplier} \times \left(1 + \frac{\text{Base Armor} \times \text{Armor Multiplier}}{300} \right) + \text{Shield Multiplier} \times \frac{\text{Base Shields}}{\text{Base Health}}$$



Damage Mechanics			Edit	[Collapse]
Offense		Attack Speed • Buff & Debuff • Critical Hit • Damage (Faction Damage Bonus, Positive Type Modifier, Quantization) • Damage Falloff • Damage Reflection • Enemy Body Parts • Fire Rate • Multishot • Punch Through • Status Effect		
Defense		Armor • Damage Attenuation • Damage Reduction • Health (Healing) • Invulnerability • Negative Damage Type Modifier • Overguard • Shield		
Damage Types				
Physical (IPS)		Impact • Puncture • Slash		
Elemental	Primary (HCET)	Heat • Cold • Electricity • Toxin		
	Secondary	Blast • Corrosive • Gas • Magnetic • Radiation • Viral		
Special		Tau • True • Void		
Hidden/Internal		Cinematic • Energy Drain • Shield Drain		
Status Effects				
Physical		Knockback • Weakened • Bleed		
Elemental	Primary	Ignite • Freeze • Tesla Chain • Poison		
	Secondary	Detonate • Corrosion • Gas Cloud • Disrupt • Confusion • Virus		
Special		Status Vulnerability • Bullet Attractor		
Effect Only		Big Stagger • Disarmed • Impair (PvP only) • Knockdown • Lifted • Microwave • Parried • Ragdoll • Silence • Sleep • Slow • Stagger • Stun		
Shield, Armor, and Health Classes				
Tenno		Tenno		
Grineer		Grineer • Kuva Grineer		
Corpus		Corpus • Corpus Amalgam		
Infested		Infested • Infested Deimos		
Corrupted		Orokin		
Sentient		Sentient		
Narmer		Narmer		
Zariman		Zariman		
The Murmur		The Murmur		
Miscellaneous		Hit Points • Object • Overguard		
Calculating Bonuses				

Game System Mechanics			Edit	[Collapse]
Currencies		Credits • Orokin Ducats • Endo • Platinum • Aya • Regal Aya • Standing		
General	Basics	Arsenal • Codex • Daily Tribute • Empyrean • Foundry • Market • Mastery Rank • Nightwave • Orbiter • Player Profile • Reset • Star Chart		

	Factions	Corpus • Grineer • Infested • Orokin • Sentient • Syndicates • Tenno
	Social	Chat • Clan • Clan Dojo • Leaderboards • Trading
	Squad	Host Migration • Inactivity Penalty • Matchmaking
	Player Housing	Clan Dojo • Dormizone • Drifter's Camp • Orbiter
Gameplay	Basics	Affinity • Buff & Debuff • Death • Hacking • Invisible • Maneuvers • One-Handed Action • Open World • Pickups • Radar • Stealth • Tile Sets • Void Relic • Waypoint
	Damage Mechanics	Critical Hit • Damage • Damage Redirection • Damage Reduction • Damage Reflection • Damage Type Modifier • Damage Vulnerability • Health • Status Effect
	Enemies	Bosses • Death Mark • Enemy Behavior • Eximus (Overguard) • Lich System
	Mission	Arbitrations • Archon Hunt • Break Narmer • Empyrean • Invasion • Sortie • Tactical Alert • The Circuit • The Steel Path • Void Fissure
	Activities	Captura • Conservation • Fishing • K-Drive Race • Ludoplex • Mining
	PvP	Duel • Conclave (Lunaro) • Frame Fighter
	Other	Gravity • Threat Level
	Modding and Arcanes	Arcane Enhancements • Archon Shard • Fusion • Mods (Flawed, Riven) • Polarization • Transmutation • Valence Fusion
Equipment	Warframe	Attributes (Armor, Energy, Health , Shield, Sprint Speed) • Abilities (Augment, Casting Speed, Helminth System, Passives, Duration, Efficiency, Range, Strength)
	Weapons	Accuracy • Alternate Fire • Ammo • Area of Effect • Attack Speed • Bounce • Critical Hit • Damage Falloff • Exalted Weapon • Fire Rate • Hitscan • Holster • Incarnon • Melee • Multishot • Noise • Projectile • Projectile Speed • Punch Through • Recoil • Reload • Ricochet • Trigger Type • Zoom
	Operator	Amp • Focus (Madurai, Vazarin, Naramon, Unairu, Zenurik) • Lens
	Drifter and Duviri	Decrees • Drifter Combat • Drifter Intrinsic • Kaithe
	Other	Archwing • Companion • K-Drive • Necramech • Parazon • Railjack
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	Mathematical	Calculating Bonuses (Additive Stacking, Multiplicative Stacking) • Condition Overload (Mechanic) • Enemy Level Scaling • Maximization • User Research



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▼

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