

Health, Damage & KO System

1. Problem Statement

For a 1v1 combat game to feel fair, intense, and satisfying, the system must clearly define:

- how damage is dealt
- how defense reduces damage
- how rounds are won or lost
- how cinematic finishes are earned

Without a defined health and KO system:

- combat feels grindy or random
- defensive play dominates
- KO moments feel accidental
- players lose trust in outcomes

This PRD defines how health is reduced, how rounds end, and how KO moments are resolved.

2. Goals

1. Create fast, decisive combat rounds
 2. Reward skillful aggression and defense
 3. Preserve player agency at low HP
 4. Make KO moments feel earned and climactic
 5. Avoid cheap or accidental round endings
 6. Support consistent tuning and playtesting
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3. Core Design Principles

- Fairness > Flash
 - Combat outcomes must be predictable
 - Defense reduces damage, not responsibility
 - KO is a choice, not a requirement
 - Readability always wins over realism
 - HP alone never removes player control
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4. Health Model

4.1 Rounds

- Match format: **Best of 3 rounds**
- Each round:
 - Players start with **full health**
 - No health carryover between rounds

4.2 Health Bar

- Single health bar per round
 - Health represents:
 - Ability to continue fighting
 - Vulnerability to stagger and KO
 - No secondary armor or shields in MVP
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5. Damage Philosophy

5.1 Damage Types

Combat damage is divided into:

- **Light Damage**
- **Heavy Damage**

Damage output depends on:

- Attack type
 - Successful hit confirmation
 - Defensive response (block/dodge)
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5.2 Light Damage

- Fast, low-risk attacks
 - Used to:
 - Apply pressure
 - Build combos
 - Control spacing
 - Low per-hit damage
 - Primary tool for consistent play
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5.3 Heavy Damage

- Slower, higher-risk attacks
- Used to:
 - Shift momentum
 - Punish mistakes
 - Trigger stagger at low HP
- **Deals ~3x the damage of light attacks**

Heavy hits must feel dangerous and decisive.

6. Defense & Damage Reduction

6.1 Block (Chip Damage)

- Blocking:

- Reduces incoming damage
- Triggers block-specific reaction
- Chip damage:
 - **Cannot reduce HP below 1**
 - Cannot end a round

This ensures:

- Blocking is useful
 - KO moments are preserved
 - No accidental round losses
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6.2 Dodge

- Successful dodge:
 - Avoids damage completely
 - Triggers no hit reaction
 - Dodge does not reduce HP
 - Dodge success depends on timing and positioning
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7. Low HP State

7.1 Threshold

- Low HP defined as **≤15% health**

7.2 Behavior at Low HP

- No stat buffs
- No stat debuffs
- Player capabilities remain unchanged

Low HP creates tension through:

- Stagger possibility
 - KO opportunity
 - Audio/visual feedback
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7.3 Player Feedback

- Subtle feedback only:
 - UI pulse
 - Slight audio tension
 - No extreme visual effects
 - No gameplay advantage or disadvantage
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8. Stagger & KO Integration

8.1 Stagger Trigger

Stagger occurs when:

- Opponent HP $\leq 15\%$
- Any successful hit connects

Stagger represents:

- Vulnerability
 - Opportunity
 - High-tension moment
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8.2 Stagger Rules

- Duration: ~2 seconds
 - Attacks disabled
 - Defense allowed (tight timing)
 - **Only one stagger per round**
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8.3 KO Opportunity

- During stagger:
 - KO prompt is shown
 - Player may choose to activate KO
 - KO:
 - Triggers cinematic finish
 - Is not dodgeable
 - Ends the round immediately
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8.4 Non-Cinematic Round End

- If KO is not used:
 - Combat continues
 - Round can still end via normal damage
 - HP reaching **0 via normal attacks ends the round**
 - KO button is optional, not mandatory
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9. Round End Conditions

A round ends when:

- Player HP reaches 0 (normal combat), OR
 - Player activates KO during stagger, OR
 - Time expires
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9.1 Timeout Resolution

- If time expires:
 - Player with **higher HP wins**
- No sudden death

- No tie-breaker modes

This keeps rules simple and predictable.

10. Camera & Feedback Hooks

- Heavy hits:
 - Micro directional camera shake
- KO:
 - Full KO camera control
- Low HP:
 - Subtle UI/audio tension only

Camera behavior is always driven by combat state.

11. Acceptance Criteria

- Rounds last ~60–90 seconds
 - Heavy hits feel meaningful
 - Light hits reward consistency
 - Blocking cannot accidentally lose rounds
 - KO moments feel earned
 - Players understand why they won or lost
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12. Risks & Mitigations

Risk: Light-hit spam

- Mitigation: Heavy damage scaling + stagger cap

Risk: Defensive turtling

- Mitigation: Chip damage + stamina system

Risk: Anticlimactic endings

- Mitigation: Optional KO system

Risk: Confusing outcomes

- Mitigation: Clear HP-based win condition

