

## Min-Max Your Character

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### Character Strategies

These are general rules, ways to think about building a min-maxed character.

### Accentuate the Positive

You rely most heavily on your character's strengths. Any feat, skill, magic item, or skill that accentuates a strength is good.

- Fighter types: Weapon Focus (+1 with a weapon. Be sure it's a long-term weapon.)
- Archers: Point Blank Shot
- Spellcasters: Spell Focus (better with schools whose spells usually allow saves)

A bonus on a roll you make a lot is more important than a bonus on a roll that you don't make as often.

### Small vs. Medium-size Characters

Being small can be an advantage, if you swing the balance of good and bad factors in your favor.

#### Small Advantages

- +1 attack
- +1 AC
- +4 Hide

#### Small Disadvantages

- 2 Str (-1 attack & damage in melee)
- smaller weapons (roughly -1 damage)
- slow

A Small character isn't great in melee (though Weapon Finesse works great for a halfling). The AC bonus and ranged attack net bonus are nice for spellcasters, and the melee and speed penalties aren't so bad.

### Multiclassing

Picking the right class combinations can give you important benefits and cover your weaknesses.

**Accentuate the positive:** Classes with the same high points are good together (such as fighter and ranger).

**Share drawbacks:** Monk and wizard go well together because neither wants to wear armor. Sorcerer and paladin go together nicely because each requires a good Charisma.

**CYA ("Cover your backside"):** A level of fighter helps make up for a wizard's weaknesses (low Fortitude save, low hp, weak weapon skills).

**Dip for nice class features:** A level of monk gives you evasion. A level of cleric gives you healing.

## **CYA ("Cover Your Backside")**

The way for villains to defeat a mighty fighter is not to fight him. Taking him out with *hold person* or other attacks that circumvent AC and hit points is the way to defeat the character with high AC and hit points. Covering your soft parts can help. Here are four examples by class.

**Clerics:** Defensively, clerics are the strongest characters, but a level of bard or rogue can give you better Reflex saves and a handful of useful skills.

**Fighters:** *Cloaks of resistance* improve your saving throws. *Boots of springing and striding* improve your speed. Iron Will improves your Will saves.

**Rogue:** A level of fighter gives you better attacks, great weapon skills, more hit points, better Fortitude saves, and an extra feat.

**Wizards:** *Bracers of health* improve your Con and hit points.

## **Guidelines by Class**

### **Want to be a barbarian?**

- Choose half orc (+2 Strength is +1 attack and damage on all melee attacks---that's better than any bonus feat you could choose as a human and easily outweighs -2 Int and Cha, which you won't care about).
- Put your best ability score in Strength, your second best in Dex. Do not have a Constitution penalty.
- Multiclassing? Consider taking two levels of rogue for the skill points and evasion or one level of fighter for the bonus feat.

### **Want to be a cleric?**

- Choose human (Unlike other classes, you can't afford to have a bad-Charisma. Use your bonus feat to take weapon focus)
- Put your best ability score in Strength, your second best in Wisdom. Do not have a Constitution penalty. Don't worry about Dexterity, your heavy armor will negate a big bonus anyway.
- Multiclassing? Don't. It's probably not worth losing a level of cleric spells.

### **Want to be a druid?**

- Choose halfling (+1 AC and +1 attack for size and +2 Dex easily makes up for the -2 Strength penalty)
- Put your best ability score in Dexterity, your second best in Wisdom. Avoid having a penalty in Charisma. Since you can't wear good armor, you are going to want to have a good Dex.
- Multiclassing? Don't. It's probably not worth losing a level of cleric spells.

### **Want to be a fighter?**

- Choose half orc (+2 Strength is +1 attack and damage on all melee attacks--that's better than any bonus feat you could choose as a human and easily outweighs -2 Int and Cha, which you won't care about)
- Put your best ability score in Strength, your second best in Con. Avoid having a penalty in Dexterity, but beyond that don't worry about it. Your heavy armor will negate a big Dex bonus anyway.
- Multiclassing? Consider taking a level of cleric for the healing spells.

### **Want to be a monk?**

- Choose human (choose Weapon Finesse for your unarmed strike as your bonus feat). Halfling is another very good choice, but the lowered unarmed damage and speed makes human your best bet.
- Put your best ability score in Dexterity, your second best in Wisdom. Avoid having a penalty in

Strength.

- Multiclassing? Consider taking a level of sorcerer to be able to cast mage armor and true strike (but take this level first, since you can't go back as a monk).

### **Want to be a paladin?**

- Choose human (Unlike other classes, you can't afford to have a bad Charisma. Use your bonus feat to take weapon focus)
- Put your best ability score in Strength, your second best in Charisma. Make sure that by 4th level you will have a Wisdom high enough to cast spells.
- Multiclassing? Don't.

### **Want to be a ranger?**

- Choose elf (for the +2 Dexterity bonus and the bonuses to Spot, Search and Listen).
- Put your best ability score in Dexterity and your second best in Strength. Avoid a penalty in Intelligence.
- Multiclassing? Consider taking two levels of rogue for the sneak attack and evasion.

### **Want to be a rogue?**

- Choose halfling (+1 AC and +1 attack for size, +4 to hide, +2 to climb and move silently, plus a +2 bonus to Dex makes the halfling the best rogue)
- Put your best ability score in Dexterity, your second best in Wisdom (lots of rogue skills are keyed to Wisdom). Make sure you don't have a penalty in Intelligence (you don't want to lose the skill points).
- Multiclassing? Consider taking a level of fighter for the hit points and bonus feat.

### **Want to be a sorcerer?**

- Choose halfling (+1 AC and +1 attack for size and +2 Dex easily makes up for the -2 Strength penalty)
- Put your best ability score in Dexterity, your second best in Charisma.
- Multiclassing? In general, don't. But you might consider taking a level of monk for the AC and evasion.

### **Want to be a wizard?**

- Choose gnome (+1 AC and +1 attack for size easily makes up for the -2 Strength penalty)
- Put your best ability score in Dexterity, your second best in Intelligence.
- Multiclassing? In general, don't. But you might consider taking a level of monk for the AC and evasion.

### **Combat Calculations**

If you can calculate how a feat, a weapon, a spell, a tactic, or a magic feature affects your performance in combat, you can better select those options that help you most.

### **Average Damage per Round**

A key statistic to know is your average (mean) damage per round. Basically, you multiply the number of successful hits you get in the average round by the amount of damage you deal per hit. (Since the number of hits you can expect per round varies by the opponent's AC, you need to look at a different ACs over a range of typical ACs.)

**Example:** At 1st-level, Tordek the dwarven fighter attacks at +4 for 1d10+2 damage. His average damage vs. AC 16 (an ogre) is 45% (chance to roll 12+ on 1d20) times 7.5 (average damage) for a total of 3.375. His average damage vs. AC 11 (a zombie) is 70% x 7.5 = 5.25.

**Warning:** When you calculate average damage this way, you assume that every point of damage you deal counts. Against a kobold with 2 hit points, Tordek's average damage with a successful hit is 3 points. Any more damage than that is wasted. Thus, he deals the same average damage per hit with his fist as with a dwarven waraxe. When you're fighting creatures with fewer hp than you can deal damage, not all of your damage capacity "counts."

### Criticals and Average Damage

Think of a standard critical as "a 5% chance to deal +100% damage," which averages out to **+5% damage**.

A sword-like critical (threat on 19 & 20) is "a 10% chance to deal +100% damage," which averages out to **+10% damage**.

An axe-like critical (triple damage) is "a 5% chance to deal +200% damage," which also averages out to **+10% damage**.

Thus, Tordek's average damage is actually 3.7125/round vs. ogres. His triple crits don't improve his damage vs. zombies because undead are not subject to critical hits.

### Attack Stats

Sometimes you need to choose between more attacks, higher attack bonuses, and more damage. For instance, a monk can use a "flurry of blows" to get 1 extra attack at the cost of suffering -2 on all attack rolls. The Power Attack feat also lets you decrease your attack bonus to increase your damage. We can compare how different benefits effect average damage.

**Example:** Ember, a 1st-level monk, is fighting a monster with AC 14 (such as an ore). She can strike with one unarmed attack (attack +2) or with two, as a *flurry* (attack +0). Her number of expected hits per round is .45 with one attack (her chance to roll 12+ on 1d20), and her number of expected hits per round is .7 with two attacks (35% chance to roll 14+, twice).

*Wrinkle:* If Ember is fighting an ore, there's a 23% chance that she won't have an opportunity for a second attack (because the first attack does the ore in). Thus, her chance to hit with the second attack is really only 77% x 35%, or 27%. Thus her expected number of hits against the ore is .35 + .27 or .62 (still better than .45 with one attack).

Example: At 1st level, Regdar (attack +4, damage 11 with a two-handed sword [damage 10 vs. creatures not subject to criticals]) has Power Attack. Against low AC creatures, it's a good idea to use it. Against high AC creatures, it's a bad idea. This table shows Regdar's average expected damage against these creatures.

	Gelatinous Cube (AC3)	Zombie (AC 11)	Orge (AC 16)	Ogre in Half Plate (AC 20)
Normal Attack	9.5	7.0	5.0	2.8
Power Attack (-1+1)	10.5	7.2	4.8	2.4

### Randomness vs. Predictability.

Raw calculations of averages doesn't take into account randomness. **Player characters want to reduce randomness.** Randomness favors the underdog, and PCs are usually the favored side in a fight. Thus, the more randomness there is in a fight, the worse it is for the PCs.

**Hypothetical:** Imagine a monster that dealt 1 damage to one character every round and another that had a 1 in 20 chance to deal 20 damage to one character every round. Their average damage would be the same, but the one capable of getting lucky and dealing 20 damage all at once is much more likely to kill a 1st-level PC.

**Orcs:** Orcs only have about 4 hit points, and their AC is only 14, but they wield greataxes that deal 1d12+3 damage with triple damage criticals. They don't last long, and their average damage isn't that bad, but if you fight orcs several times, one of them is bound to get lucky eventually and hit a character with a critical (average damage 28.5).

### Offense vs. Defense

Sometimes it pays to improve your attack at the expense of you defense (such as by charging). Sometimes it pays to improve your defense at the expense of your attack (such as with Expertise).

**Example:** Tordek's facing a goblin. Should Tordek charge (+2 attack, -2 AC) or attack normally?

### Stats

Tordek: +4 attack, AC 17, d10+2 damage

Goblin: +0 attack, AC 15, hp 5

### Combat

Tordek chance to drop, normal: chance to hit x chance to deal 5 damage.

$$= 50\% \times 80\% = 40\%$$

Tordek chance to drop, charge:

$$= 60\% \times 80\% = 48\%$$

Goblin chance to hit Tordek, standard:

$$= 20\%$$

Goblin chance to hit Tordek, charge:

$$= 30\%$$

Chance for goblin to survive Tordek's attack and hit him.

If Tordek attacks normally:  $60\% \times 20\% = 12\%$

If Tordek charges:  $52\% \times 30\% = 15.6\%$

Tordek is fighting the goblin. Should he fight normally or defensively (-4 attack, +2 AC).

Tordek's chance to hit the goblin, normal/defensive: 50%/30%

Goblin's chance to hit Tordek, normal/defensive: 20%/10%

Fighting normally, Tordek hits the goblin 2-1/2 times as often as the goblin hits him.

Fighting defensively, Tordek hits the goblin 3 times as often as the goblin hits him.

[Fighting defensively has a hidden benefit. The longer a fighter can drag out a combat, the more spells the spellcasters will have time to cast.]

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