



Pharmacokinetics of Aripiprazole: Clinical Summary

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Formulations

- Tablets
- Orally disintegrating tablets
- Liquid formulation
- IM injection

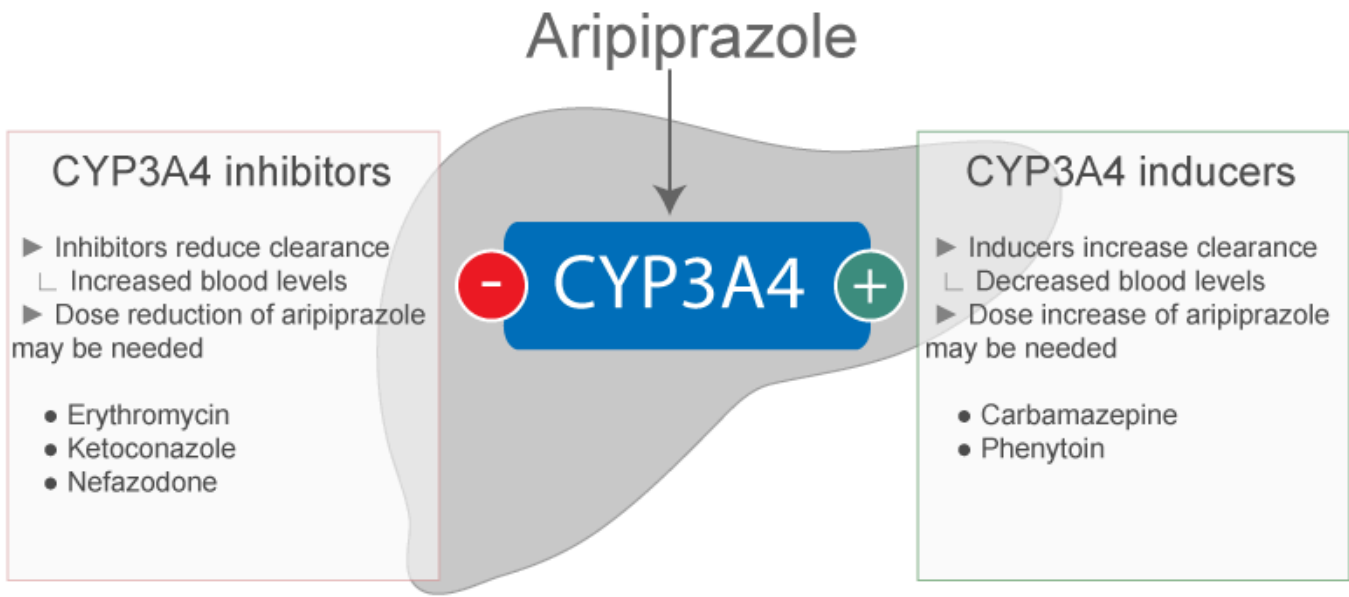
General pharmacokinetics and drug interactions

Half-life

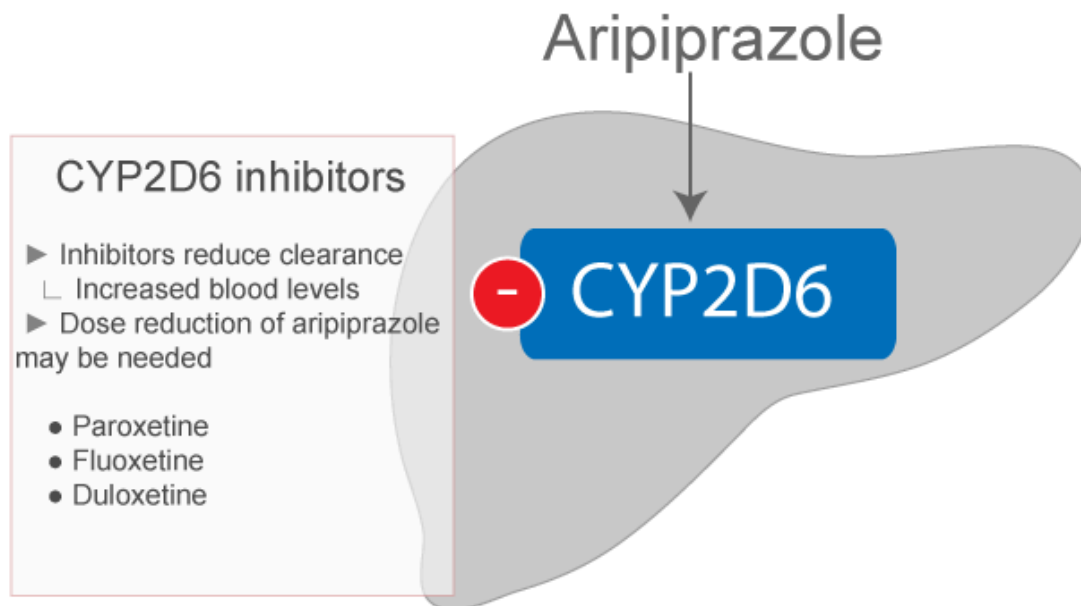
- aripiprazole: 75 hours
- dehydro-aripiprazole: 94 hours

Elimination Mainly through hepatic metabolism involving two P450 enzymes:

- CYP3A4: dose adjustment might be needed in the presence of inhibitors or inducers.
- CYP2D6: dose adjustment might be needed in the presence of inhibitors.



Pharmacokinetics of aripiprazole: metabolism by cytochrome P450 3A4





Pharmacokinetics of aripiprazole: metabolism by cytochrome P450 2D6

Pharmacokinetics of oral administration

Absorption

- Peak plasma concentrations occur within 3 to 5 hours.
- Can be administered with or without food.
- According to the manufacturer, a study found that plasma concentrations from the oral solution were higher than that from the tablet formulation.

Distribution

- The volume of distribution in studies after IV administration is of 404 L or 4.9L/Kg (extense extravascular distribution)
- Aripiprazole and dehydro-aripiprazole are greater than 99% bound to serum proteins (primarily albumin)

Pharmacokinetics of IM administration

- Median times to the peak plasma concentration: 1 hours and 3 hours.
- In one pharmacokinetic study [Boulton,2008], intramuscular aripiprazole demonstrated more rapid attainment of plasma aripiprazole concentrations than oral aripiprazole (78% and 5% of peak plasma concentration [Cmax] values at 0.5 hours postdose, respectively).

More Information on Aripiprazole

- [Aripiprazole Indications: FDA-Approved and Off-Label Uses](#)
- Aripiprazole Lauroxil Extended-Release Injectable (ARISTADA)
- [Mechanism of Action of Aripiprazole](#)
- [Aripiprazole for Schizophrenia](#)
- [Aripiprazole for Mania](#)
- [Aripiprazole for Depression](#)

References

1. Schatzberg, AF, Nemeroff, C . The American Psychiatric Publishing Textbook of Psychopharmacology. 4th ed.American Psychiatric Publishing, 2009.
2. Otsuka America Pharmaceutical, Inc. Abilify (aripiprazole) prescribing information. Retrieved from <http://www.abilify.com>
3. Boulton DW, Kollia G, Mallikaarjun S, Komoroski B, Sharma A, Kovalick LJ, et al. Pharmacokinetics and tolerability of intramuscular, oral and intravenous aripiprazole in healthy subjects and in patients with schizophrenia. Clinical pharmacokinetics. 2008;47(7):475-85