Comparison of Antioxidant Effects of the Proton Pump-Inhibiting Drugs Omeprazole, Esomeprazole, Lansoprazole, Pantoprazole, and Rabeprazole

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- Proton pump inhibitors (PPIs) are drugs that are highly effective and widely used for therapeutic management of peptic disorders through inhibition of gastric acid secretion.
- The antioxidant activity of different PPIs was evaluated calorimetrically to test the ability of each drug to quench oxygen free radical, using the well-known stable free radical, -diphenyl- -picrylhydrazyl (DPPH), and compared to ascorbic acid.
- All the PPIs reduced DPPH, but to different extents. However, omeprazole and esomeprazole showed the highest ability to scavenge free radicals.

> Omeprazole and esomeprazole may confer a significant dual action in gastrointestinal protection by providing potent antioxidant properties in addition to their major role as acid-suppression agents.