

Long-term macrolide use linked to resistant *P. acnes*

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(HealthDay)—Long-term oral macrolide administration may increase

macrolide-resistant *Propionibacterium acnes*, according to a study published online Dec. 13 in the *Journal of Dermatology*.

Keisuke Nakase, from the Tokyo University of Pharmacy and Life Sciences, and colleagues examined the mutation frequency of macrolide resistance in *P. acnes* in vitro.

The researchers found that resistant mutants with the 23S rRNA mutation were not isolated when *P. acnes* mutants were exposed to clarithromycin after being incubated in broth without antimicrobials. After being pre-incubated with 0.03 µg/mL of antimicrobials, the mutants were obtained at the frequency of 10^{-6} . The 23S rRNA mutations A2058G, A2059G, and C2611G were harbored by the resistant mutants. C2611G mutants, which showed resistance to clarithromycin, were obtained 32.1 percent more often when pre-incubated with clarithromycin versus clindamycin. A2058G mutants, which show high-level resistance to clarithromycin and clindamycin, were more often obtained when pre-incubated with clindamycin versus [clarithromycin](#) (87.5 percent). There was no difference in the isolation rate of A2059G mutants with either treatment; A2059 mutants showed high-level resistance to macrolides but low-level [resistance](#) to clindamycin.

"These results indicate the possibility that long-term use of oral macrolides for acne treatment facilitate the increase of macrolide-resistant *P. acnes*," the authors write.

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