

Human serum DDT levels related to consumption of fish from the coastal waters of Los Angeles

Richard Gossett¹, Gary Wikholm², John Ljubenkov³, David Steinman⁴

¹*Southern California Coastal Water Research Project, Long Beach, CA*

²*Glendale Adventist Medical Center, Glendale, CA*

³*La Mer Taxonomic Consultants, San Pedro, CA*

⁴*National University, Los Angeles, CA*

ABSTRACT

Fish from Los Angeles County coastal waters contain high concentrations of the banned pesticide DDT, its metabolites DDE and DDD, and polychlorinated biphenyls (PCBs). The most popular sportfish caught from piers in southern California (comprising 30% of the catch), white croaker (*Genyonemus lineatus*), contains total DDT levels above the Federal Drug Administration guideline (5 mg/kg wet weight) in edible tissue at 7.6 mg/kg wet weight total DDT.

We quantified blood serum levels of DDTs and PCBs in 16 subjects who consumed locally caught sportfish at least three times a week for 3 years and compared them with those in nine control subjects who consumed little or no local fish. No subjects or controls had other known significant exposures to DDT and its metabolites. The consumers of locally caught sportfish had significantly higher serum levels of total DDT (mean 35 ng/ml) than did nonconsumers (mean 7 ng/ml). Within the consumer groups, serum levels of 4,4'-DDE and fish consumption history were significantly correlated.

Keywords: DDT Polychlorinated biphenyls Serum Fish consumption

Due to distribution restrictions, the full-text version of this article is available by request only.

Please contact pubrequest@sccwrp.org to request a copy