Environmental Agents and the Timing of Puberty; Information from Animal Studies

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Since the late 1990's, tests for the timing of the onset of puberty have been required as part of the toxicity testing of drugs, pesticides and industrial chemicals. In addition, markers of puberty onset have become common in basic research studies of developmental effects of endocrine disrupting chemicals. This more recent research overshadows a few earlier and more detailed studies of toxicant effects on puberty for "classic" developmental toxicants like lead. This presentation will include a description of methods to determine changes in the time of puberty onset in standard laboratory animals, the markers or endpoints commonly used, overview of agents that have been shown to affect these markers, considerations in generalizing to humans, and public health implications of studies in this area. Issues to be addressed are (1) the sensitivity of markers of puberty onset; (2) the strength of the "signal" obtained from a routine evaluation of puberty timing; (3) alternative approaches to studying effects of chemicals on puberty.