Reference Blood Lead Levels (BLLs) for Adults in the U.S.

Blood lead concentration (µg/dL)
- OSHA’s Medical Removal BLL
- OSHA’s Return to Work
- OSHA’s NEP – lead (2008)
- ACGIH Biological Exposure Index (2017)
  - Level for BLL testing every 6 months (AOEC, 2007)
  - California DPH Medical Guidelines (2009)
  - Healthy people 2020, OSH Objective 7 (2010)

2013-2014 average BLL among adults (National Report on Human Exposure to Environmental Chemicals)

*The OSHA Lead Standards state that the examining physician has broad flexibility to tailor protections to the worker’s needs.*
Source Documents for Reference Blood Lead Levels – as posted on the NIOSH web page, April 17, 2018

https://www.cdc.gov/niosh/topics/ables/ReferenceBloodLevelsforAdults.html

1. Occupational Safety and Health Administration (OSHA). Lead Standards
2. American Conference of Governmental Industrial Hygienists (ACGIH). Biological Exposure Indices
3. OSHA Instruction: National Emphasis Program (NEP) on Lead

“Inspections will also be conducted in establishments where reported employee blood lead levels were at or above 25 μg/dL”

6. California Department of Public Health (CDPH) Medical Guidelines for the Lead-Exposed Worker
7. Department of Health and Human Services. Healthy People 2020 Occupational Safety and Health objective 7 (OSH-7) and operational definition
9. Centers for Disease Control and Prevention(CDC), National Institute for Occupational Safety and Health (NIOSH), Adult Blood Lead Epidemiology and Surveillance (ABLES) case definition for an elevated blood lead level
11. CDC. Advisory Committee on Childhood Lead Poisoning Prevention (ACCLPP): Guidelines for the Identification and Management of Lead Exposure in Pregnant and Lactating Women

These guidelines recommend follow-up activities and interventions beginning at blood lead levels (BLLs) ≥ 5 μg/dL in pregnant women. The essential activity in management of pregnant women with BLLs ≥5 μg/dL is removal of the lead source, disruption of the route of exposure, or avoidance of the lead-containing substance or activity.

12. National Toxicology Program (NTP). Health Effects of Low-level Lead Evaluation