LEAD Action NEWS

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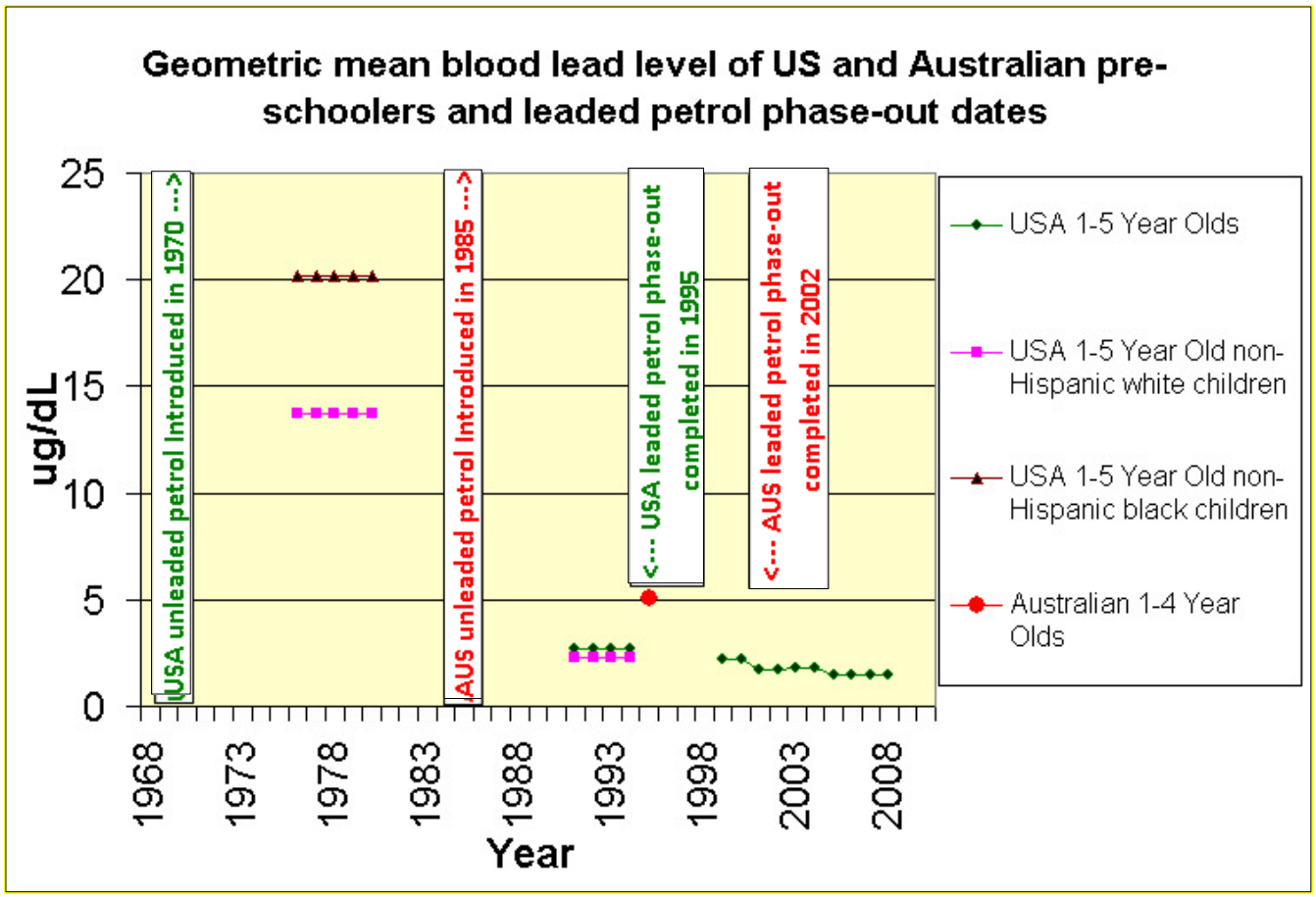
The newsletter of The LEAD (Lead Education and Abatement Design) Group Inc.
Joint Editors: Elizabeth O'Brien and Anne Roberts

Lead Poisoning Case Management: Australia compared to the USA



1. Graph: Geometric mean blood lead level of US and Australian pre-schoolers and leaded petrol phase-out dates.
Based on the one data point which is known in Australia, the average blood lead level of pre-schoolers in 1995 (Donovan 1996), it is possible that average Australian blood lead levels are approximately twice average US blood lead levels, and trail behind the US downward trend in blood lead levels, by approximately 7 years, which is the extra time it took Australia to eliminate leaded petrol, compared to the US. Average blood lead level data is available for all ages in the US, since 1976, due to blood lead testing being a component of the periodically repeated National Health and Nutrition Examination Surveys (NHANES). All ages show a downward trend, the success of public health policy.

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2. Editorial

Xstrata is clearly the largest lead miner in Australia, with a 55% ownership of the tonnage of lead mining and exploration. In all the countries where Australian lead is in use Xstrata's contribution to research on treatment for low blood lead levels (especially research for improving case management among the aging), payment for carrying out national blood lead surveys of all ages, lead abatement programs, lead awareness campaigns and loans for DIY lead remediation, should therefore be greatest of the Australian lead mining companies. And the Minerals Council of Australia could pitch in.

The research that we'd most like to see done, would be double blind trials (where appropriate) of the following potential lead poisoning treatments:

- Vitamin C megadose
- Pectin
- Garlic
- Low dose EDTA
- Zeolite
- Detox preparations
- Alternative approaches such as: Footsies; Sauna; Self-myofascial release; Eating organic food, etc.

Two of the three biggest mining companies which will be affected by the mining tax (Federal Mineral Resource Rent Tax (MRRT)) are also the two largest lead mining companies in Australia: Xstrata and BHP Billiton. The LEAD Group calls on the Federal Government to use some of the mining tax on the above issues relating to lead. The LEAD Group is at the forefront of disseminating, globally, knowledge about lead management via its Global Lead Advice and Support Service (GLASS), and therefore calls for support for its activities.

The State and Territory jurisdictions which earn the most royalties from lead mining should put money towards on-line and media programs on lead awareness, etc. These programs would benefit the users of Australian lead, no matter what country they are in. All Australian States have different policies on case management of lead poisoning. The responses to our question on this topic to State health departments indicate that each has a different policy, with Queensland being the best at analysing and reporting cases and trends, on line. Western Australia has the most stringent blood lead action level (5 ug/dL – micrograms per decilitre), but only for children under five years old.

It is clear from these responses from the Australian States that there ought to be a federal policy which the States have to follow. This standardisation of procedures makes a clearer picture of national health. Further, at the moment, neither the Australian Capital Territory (ACT), nor the Northern Territory (NT), have a public health response to elevated blood lead levels.

To fill in for the lack of policy in Australia, The LEAD Group's federal environment department funded Global Lead Advice and Support Service (GLASS) attempts to disseminate knowledge and create information resources such as our library and newsletters. Several sample info packs by GLASS are published in this newsletter. With increased funding, the research, writing and publication of a raft of info packs on lead issues would be possible, for each Australian and State jurisdiction, and for each overseas country where Australian lead is currently circulating, in need of management.

By comparison, the US federal health department's Centers for Disease Control and Prevention (CDC) has for decades led the world with their excellent lead poisoning management and prevention policies. In mid-May, 2012, the CDC introduced the most stringent blood lead action level for children, outside of Germany. You can see their new fact sheet at www.cdc.gov/nceh/lead/ACCLPP/Lead_Levels_in_Children_Fact_Sheet.pdf This historic shift in determining what is an acceptable blood lead level, is in recognition of all the research at http://ntp.niehs.nih.gov/?objectid=98DAF3E2-E316-D8D9-A4F834B80E0EE1C4 - which demonstrates that even a little lead is still too much, for children and adults.

Always advocating for a Lead Safe America, lead health professionals and advocates in the United States are presently engaged in a lively debate on lead health policy; this will ensure that the United States continues to be at the forefront of protecting its population from lead exposure. In this issue of *LEAD Action News*, we reproduce some of this debate, from Leadnet.

In Australia, there aren't enough lead poisoning prevention professionals who are willing to have a debate, so we're holding a forum instead. Please see the flyer for "Eliminating Childhood Lead Toxicity in Australia: A Little is Still Too Much" forum on Tuesday 5th March 2012 below, and look out for the presentations which will be published at http://www.mq.edu.au/research/centres_and_groups/macquarie_public_health_research_network/

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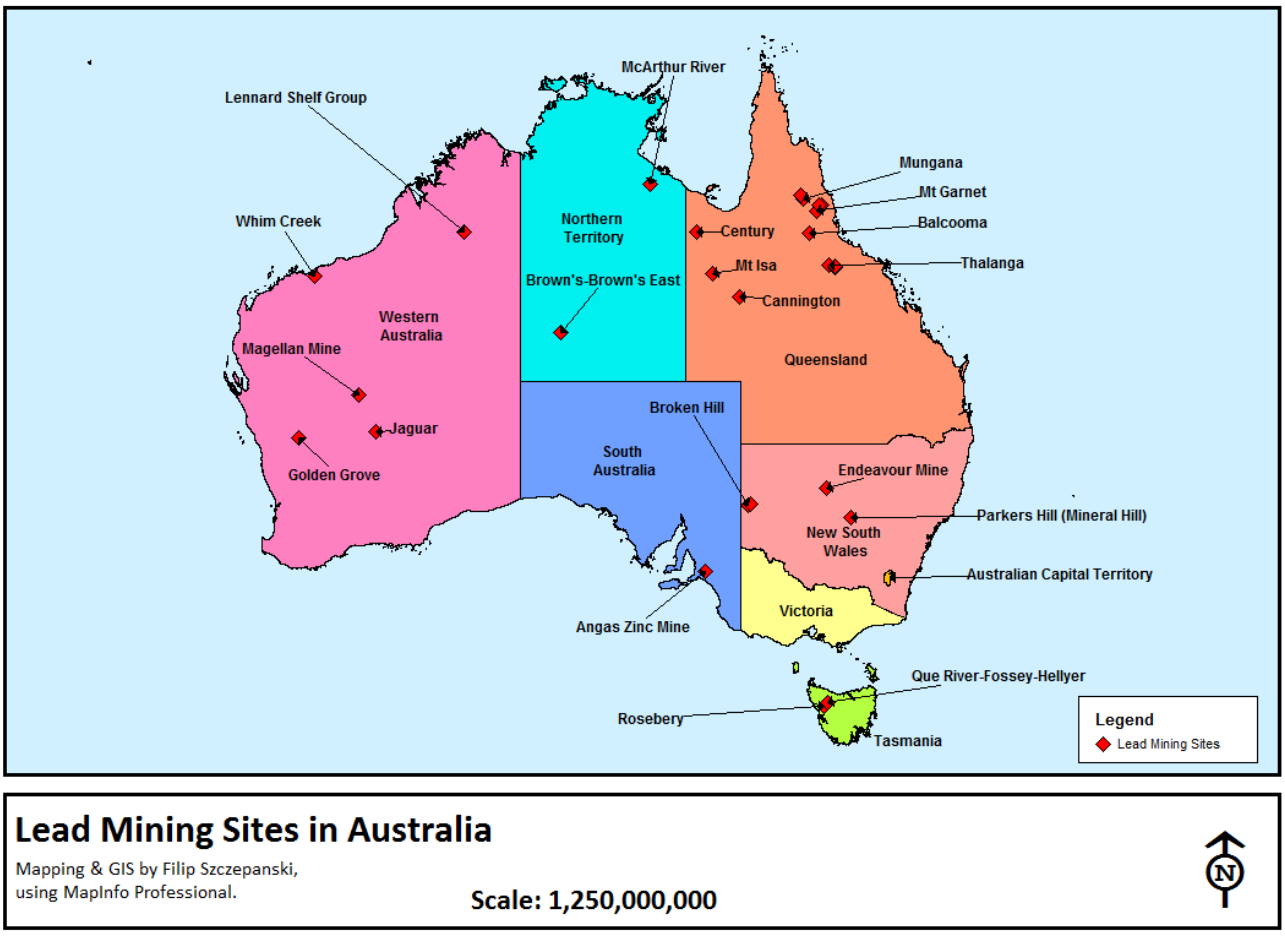
3. Map of Australian Lead Mining Sites

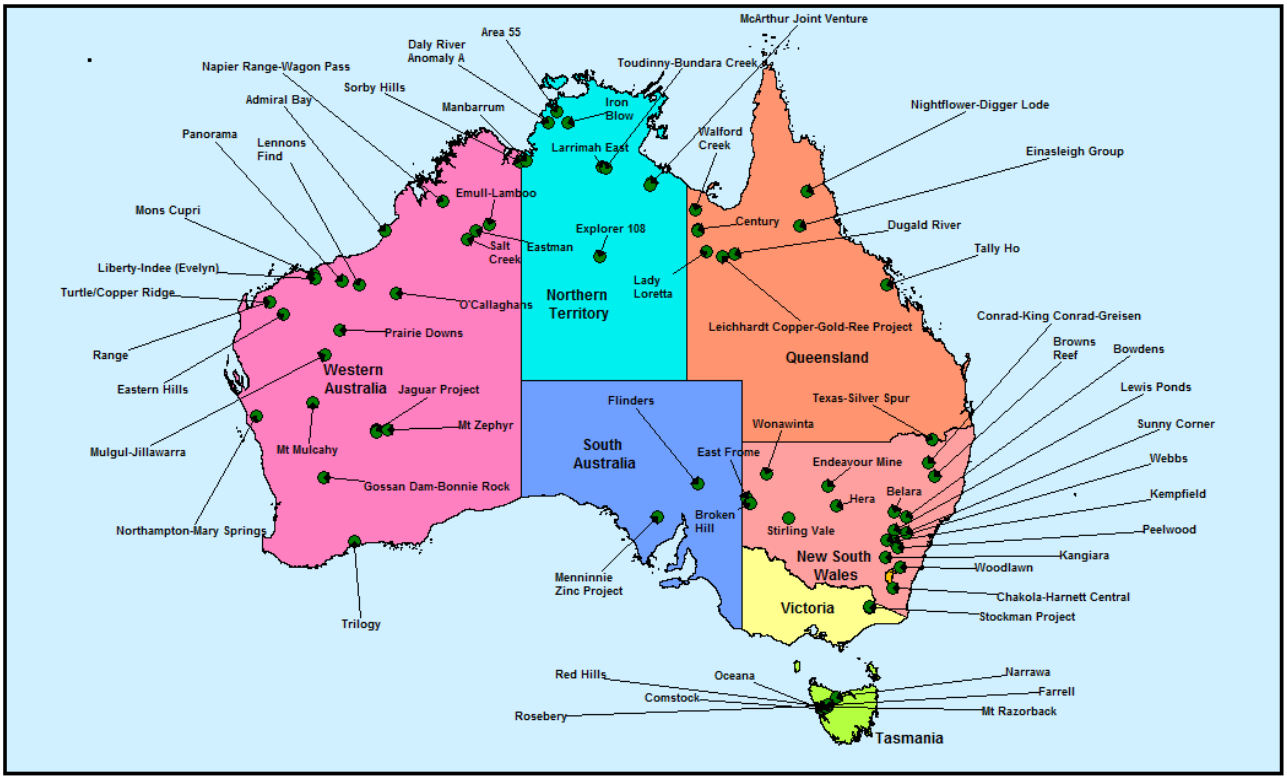


Australian Lead Mining Sites and Companies
in Longitude Order, West to East, noting which are Members of the Minerals Council of Australia (MCA)

Company and site information provided by Professor Gavin Mudd, Monash University, Longitude and Membership of MCA researched by Filip Szczepanski, LEAD Group mapping volunteer.

Site_name	State	Company	MCA Member
Golden Grove	WA	Minerals and Metals Group	Yes
Magellan Mine	WA	Enirgi Group, comprising Ivernia & Magellan Metals	No
Teutonic Bore Deposit	WA	Jabiru Metals Limited	Yes
Jaguar Deposit	WA	Jabiru Metals Limited	Yes
Bentley Deposit	WA	Jabiru Metals Limited	Yes
Mt Zephyr	WA	Heron Resources Limited	Yes
McArthur River	NT	McArthur River Mining Xstrata Zinc	Yes
Century	QLD	Minerals and Metals Group	Yes
Angas Zinc Mine	SA	Terramin Australia	No
Mt Isa	QLD	XSTRATA Queensland Limited / Mount Isa Mines Limited	Yes
Dugald River	QLD	Minerals and Metals Group	Yes
Karumba Port	QLD	Minerals and Metals Group	Yes
Cannington	QLD	BHP Billiton	Yes
Broken Hill	NSW	Perilya	No
Broken Hill North Mine Deeps	NSW	Perilya	No
Broken Hill Potosi	NSW	Perilya	No
Mungana	QLD	Kagara Mining	No
Balcooma	QLD	Kagara Mining	No
Mt Garnet	QLD	Kagara Mining	No
Rosebery	TAS	Minerals and Metals Group	Yes
Endeavour Mine	NSW	CBH Resources Limited	No
Thalanga	QLD	Kagara Mining	No
Wilga Deposit	VIC	Jabiru Metals Limited	Yes
Currawong Deposit	VIC	Jabiru Metals Limited	Yes

4. Map of Australian Lead Exploration Sites



Lead Exploration Sites in Australia

Mapping & GIS by Filip Szczepanski,
using MapInfo Professional.

Scale: 1,250,000,000

Australian Lead Exploration Sites and Companies
in Longitude Order, West to East, noting which are Members of the Minerals Council of Australia (MCA)

Company and site information provided by Professor Gavin Mudd, Monash University, Longitude and Membership of MCA researched by Filip Szczepanski, LEAD Group mapping volunteer.

Site_name	State	Company	MCA Member
Prairie Downs	WA	Enirgi Group, comprising Ivernia & Magellan Metals	No
Teutonic Bore Deposit	WA	Jabiru Metals Limited	Yes
Jaguar Deposit	WA	Jabiru Metals Limited	Yes
Bentley Deposit	WA	Jabiru Metals Limited	Yes
Admiral Bay	WA	Kagara Mining	No
Mt Zephyr	WA	Heron Resources Limited	Yes
Larrimah East	NT	Western Desert Resources	Yes
Toudinny-Bundara Creek	NT	Western Desert Resources	Yes
McArthur Joint Venture	NT	Minerals and Metals Group	Yes
Menninnie Zinc Project	SA	Terramin Australia	No
Century	QLD	Minerals and Metals Group	Yes
East Frome	NSW	Alliance Resources Limited	Yes
Broken Hill	NSW	Perilya	No
Rasp Mine	NSW	CBH Resources Limited	No
Comstock	TAS	Creat Resources Holdings	Yes
Oceana	TAS	Creat Resources Holdings	Yes
Mt Razorback	TAS	Creat Resources Holdings	Yes
Rosebery	TAS	Minerals and Metals Group	Yes
Red Hills	TAS	Unity Mining Limited	Yes
Farrell	TAS	Unity Mining Limited	Yes
Endeavour Mine	NSW	CBH Resources Limited	No
Wilga Deposit	VIC	Jabiru Metals Limited	Yes
Currawong Deposit	VIC	Jabiru Metals Limited	Yes
Bowdens	NSW	Kingsgate Consolidated Pty Ltd	No

5. Australian Major Lead Mining & Exploration References & Extracts

Found online, selected and collated by Filip Szczepanski, Volunteer Map-maker; Ardhika Wira, Administrator; and Elizabeth O'Brien, Manager, Global Lead Advice and Support Service (GLASS), Sydney, Australia

1. **Alliance Resources** - East Frome Base Metal Project (100%); ALLIANCE RESOURCES LIMITED; http://www.allianceresources.com.au/IRM/content/project_eastfrome.html

   INVESTOR PRESENTATION, Mining 2011, Brisbane, Queensland, including exploration at East Frome Pb-Zn-Ag-Cu-Au Project, Located 30km NW of Broken Hill, NSW.

2. **BHP Billiton** - About Base Metals (A Leading global producer of Copper, Silver, Lead and Zinc); BHP Billiton resourcing the future; http://www.bhpbilliton.com/home/businesses/basemetals/Pages/default.aspx

   Located in North West Queensland, Cannington (BHP Billiton 100 per cent) is a fly-in fly-out mining and processing operation that has grown to become the world's largest and lowest cost producer of silver and lead. The operation consists of an underground mine and metallurgical processing facility.

3. **CBH Resources Limited** - Company Profile; CBH Resources Limited; http://www.cbhresources.com.au/company-profile/contact-us.htm

   CBH is a resource company which involves in underground mining (zinc, lead, silver) in Cobar, NSW and CBH also has base metal development projects in Western Australia and Broken Hill, a concentrate ship loading facility at Newcastle and major exploration positions in both Western Australia and NSW.

4. **Creat Resources Holdings** - About the Company; Creat Resources Holdings Limited (CRH); http://www.creatresources.com/index.php?option=com_content&view=category&layout=blog&id=57&Itemid=58

   Initially incorporated in Tasmania, Australia in 1999 and trading as Zeehan Zinc Limited, Creat Resources Holdings Limited is a mining, exploration and development company seeking to mine and process certain zinc, lead and silver deposits in Western Tasmania, Australia.

5. **Enirgi Group, comprising Ivernia & its wholly owned Magellan Metals** - The Magellan Mine; Ivernia; http://www.ivernia.com/projects/magellan.html

   The Magellan Mine ("Magellan" or the "Mine"), in Western Australia, is the world's largest lead carbonate mine. On April 7, 2011, Ivernia announced that it had placed the Magellan Mine on care and maintenance. Three lead deposits have been discovered on Magellan Hill, namely the Magellan, Cano and Pinzon deposits. Initial discovery of the Magellan deposit was in 1993, followed by Cano in 2001 and Pinzon in 2004. Two outlying deposits, Drake and Pizarro were discovered approximately 20 km to the south of Magellan Hill.

   PRAIRIE DOWNS BASE METAL PROJECT; IVERNIA Inc; http://www.ivernia.com/projects/prairie-downs.html

   In June 2010 Ivernia entered into an earn-in agreement on the Prairie Downs Base Metal Project (Prairie Downs" or the "Project") in Western Australia. This is the first joint venture undertaken as part of the Company's corporate growth strategy to acquire and explore a portfolio of base metal projects. Under the terms of the earn-in agreement, a wholly owned subsidiary of Ivernia may earn up to an 80% interest in Prairie Downs, as outlined below. The Project is located in an area with good infrastructure, in the Pilbara, a prolific mining region in Western Australia. The

majority of past exploration at Prairie Downs was focused on a limited area, in which previous operators outlined a small JORC-compliant resource, the Prairie Deposit (the PD"). Potential exists to enlarge the PD and for the discovery of additional zones of lead-zinc+/-silver mineralization along the 20 kilometer long Prairie Downs Fault System, a regional-scale structure associated with base metal mineralization on the Project.

6. **Heron Resources Limited** - Heron Resources Limited Quarterly Report (including exploration on LEICHHARDT COPPER-GOLD-REE PROJECT, NORTHWEST QUEENSLAND (Mt Isa) of lead); Heron Resources Limited, ABN 30 068 263 098; http://www.heronresources.com.au/downloads/reports/quarterly/hrrqr2011_jun.pdf

The Company's wholly owned Mt Zephyr Project is located 70km north-east of Leonora. The project is targeting Volcanogenic Massive Sulphide (VMS) deposits similar to those found at the Teutonic Bore copper-zinc-lead mine located 60km west. RC drilling was completed during the Quarter with 15 holes for 2,176m.Seven diamond holes completed for 3,227, sulphides intersected in all holes, with most significant intersection of 9m @ 0.67% zinc and 0.16% lead.

LEICHHARDT COPPER-GOLD-REE PROJECT, NORTHWEST QUEENSLAND The Company commenced tenement pegging in the Mt Isa Inlier of Northwest Queensland, targeting copper-gold-rare earth mineralization in Iron Ore Copper Gold (IOCG) settings. In terms of exploration potential, Mt Isa Inlier is a very well mineralised Cu-Au, Pb-Zn-Ag, U-REE and Mo-Re province, with one or two world class deposits discovered virtually each decade (Ernest Henry 1991 discovery, 122Mt at 1.14% Cu and 0.55g/t Au; Mt Elliott 2009 discovery, 570Mt at 0.44% Cu and 0.26g/t Au, both IOCG deposits).

7. **Jabiru Metals Limited** - JABIRU METALS LIMITED - ASX: JML; Australian Shares (The complete Online Database of Australian Shares); http://www.australian-shares.com/mining/JML

Jabiru Metals Limited (Jabiru) is an Australian resources company whose key products are zinc and copper sold to refineries in the form of zinc concentrate and copper concentrate. Jabiru's copper concentrate also contains significant silver credits and a small amount of gold. The Jaguar Exploration Project encompasses 3 high grade VMS deposits, Teutonic Bore, Jaguar and Bentley, centred on the Jaguar mine approximately 300km north of Kalgoorlie and equidistance between Leonora 65km by road to the south and Leinster to the north. Production began from Jaguar in 2007 and in late 2008 Jabiru Metals discovered the Bentley deposit 4km to the south. The Bentley high grade resource remains open at depth and is currently being developed with production planned for 2011.

The Stockman Project is located in the Victorian Alps region 470km by road north-east of Melbourne and 60km by road north east of Omeo. The project contains two copper-zinc-lead-silver-gold rich VMS deposits, Wilga and Currawong. Wilga was discovered by a WMC /BP joint venture in 1978 and Currawong in 1979. Denehurst mined the copper rich core of Wilga deposit from 1992 to 1996. In 2006 following rehabilitation of the plant site and tailings dam by the Victorian Department of Primary Industries the project was put out for public tender as part of an exploration incentive program. Jabiru was awarded the project in March 2007.

8. **Kagara Mining** - Overview; Kagara Limited (ASX: KZL); http://www.kagara.com.au/irm/ShowStaticCategory.aspx?CategoryID=222&HideTopLine=True&masterpage=4

Kagara Zinc Ltd is a mining company in Western Australia which mines zinc, lead oxide, copper, silver and gold. Kagara has completed a pre-feasibility study on the world-class, potentially Tier One Admiral Bay zinc-lead-silver-barite project in Western Australia. The Company is currently seeking equity or joint venture partners to underpin an externally funded Bankable Feasibility Study.

Operations - North Queensland; Kagara MINING (growing more than our business); http://www.kagara.com.au/irm/ShowStaticCategory.aspx?CategoryID=281&HideTopLine=True&masterpage=48

Kagara Ltd has four operational hubs at Mungana, Mt Garnet, Balcooma and Thalanga in North Queensland. Mt Garnet, which was the Company's first operation in the region, is its administrative and processing centre with two operating treatment facilities – a polymetallic plant that treats high-grade ore sourced from the Mungana underground mine and nearby Mt Garnet underground mine, and a copper circuit that treats ore sourced predominantly from the Balcooma underground mine. The Mungana operations include a partially completed polymetallic concentrator which, if completed, has the potential to underpin a substantial increase in Kagara Ltd's zinc production, which would be driven by the development of new deposits in the region such as King Vol and The Thalanga operations include a treatment facility capable of treating both polymetallic and copper ore which currently processes ore from the high-grade Vomacka open pit. These mines supply ore to Kagara Ltd's copper and polymetallic plants at Mt Garnet, as well as the polymetallic treatment facility at Thalanga. In the FY 2011, Kagara Ltd produced: • 22,530t copper, targeting an increase of more than 30,000tpa by FY 2015. • 40,125t zinc-lead, targeting an increase to 71,000tpa by FY 2014.

9. **Kingsgate Consolidated Pty Limited** - Bowdens Project; Kingsgate Consolidated Limited; http://www.kingsgate.com.au/australia/bowdens.htm

Kingsgate entered into an agreement in August 2011 to purchase the Bowdens silver project in Lue, New South Wales, from a wholly-owned subsidiary of Silver Standard Resources Inc., subject to the satisfaction of certain conditions precedent. Bowdens, located some 240 km west of Sydney, is an epithermal silver deposit with a resource of approximately 100 Moz silver reported in line with JORC guidelines. Bowdens has the potential to be developed as an open pit operation with the capacity to sustain a 3 - 4 Mtpa ore processing rate over a minimum 10 year mine life. Silver mineralisation is associated with lead [0.3%] and zinc sulphides [0.4%].

10. **McArthur River Mining Xstrata Zinc** - 3rd Edition of Memorandum (Production Statistics of total 13.5million tonnes of ore at an average grade of 5.8percent Pb was extracted between 1995 and 2006); McArthur River Mining Xstrata Zinc; http://www.mcarthurrivermine.com.au/en/publications/memorandum/memorandum_issue3.pdf

11. **MMR Limited (Minmetals Resources Limited) comprises the MMG (Minerals and Metals Group) Ltd group of companies** - Company Overview; MINMETALS RESOURCES LIMITED; http://www.mmg.com/en/About-Us/Company-Overview.aspx

Our major development projects include the Dugald River undeveloped zinc-lead-silver deposit located in north-western Queensland, Australia, and a suite of base metals in the Nunuvut Territories in north-west Canada.

12. **Perilya** - By approaching opportunities with a fresh set of eyes, using innovative approaches to tap into the rich seam of past knowledge, and introducing new practices and technologies, we believe that we can unlock the considerable latent value at Broken Hill; Paul Arndt; http://www.perilya.com.au/our-business/operations/broken-hill

Perilya Limited is a mining and exploration Company which owns and operates the Broken Hill mine in New South Wales, Australia and is one of Australia's largest zinc-lead-silver miners. Perilya is also a gold producer at its Daisy-Milano gold mine in Western Australia and has interests in exploration for gold and base metals and investments in the energy and minerals sectors.

13. **Terramin Australia** - Angas Zinc Mine; ANGAS ZINC MINE (TERRAMIN AUSTRALIA); http://www.terramin.com.au/projects/angas/default.aspx

The Angas Zinc Mine is 100% owned and operated by Terramin.
Production at Angas commenced in July 2008. The initial Probable Reserves of 2.15 million tonnes at 10.5% Pb+Zn were sufficient for a seven year operation. Drilling results from the near mine area show strong indications of further shoots that would extend mine life. The mine is located in an historical mining belt where the Company holds over 1000km2 of tenements with encouraging exploration results, offering further potential for deposits that could be processed at Angas or developed into new mines.

Terramin identifies significant lead-zinc targets at Menninnie Dam; TERRAMIN AUSTRALIA; http://www.terramin.com.au/lib/pdf/media/ASXreleases/%20_SET_MEmf844.pdf

Terramin, via its wholly-owned subsidiary, Menninnie Metals Pty Ltd, owns and operates four contiguous exploration tenements in the southern Gawler Ranges, South Australia, collectively known as the Menninnie Zinc Project. The tenements are: Menninnie Dam EL3640; the Nonning JV EL3535; Kolendo EL4285; and Taringa EL4669.

14. **Unity Mining Limited** - Henty Gold Mine Exploration Targets (September 2011); UNITY Mining Limited; http://www.unitymining.com.au/activities/henty/exploration.htm

Henty Gold Mine Exploration Targets (September 2011) Previous drilling in The Red Hills Prospect, which 4km to the NE of Henty, has delineated a thin base metal horizon, with a best down hole intercept of 2.8 m at 34.5 % zinc, 11.3 % lead, 250 g/t silver and 6.5 g/t gold. The Farrell field consists of vein-hosted silver-lead and zinc mineralisation, which was extracted from a number of mines up until 1973. A combined production of 731,000 t at 12.8 % lead)

15. **Western Desert Resources** - Overview; Western Desert Resources; http://www.westerndesertresources.com.au/page/view_by_id/30

Western Desert Resources is a diversified resources business with a portfolio of quality assets in the Northern Territory, including gold and copper tenements near Pine Creek and Tennant Creek, uranium and other base metal projects.

16. **Xstrata Queensland Limited/Mt Isa Mines Limited** - Welcome to Xstrata Mount Isa Mines; Xstrata Mount Isa Mines; http://www.mountisamines.com.au/EN/Pages/MtIsaMinesHome.aspx

Xstrata Mount Isa Mines operates two separate mining and processing streams, copper and zinc-lead-silver. Together the company's mines form one of the largest underground mining operations in the world, and employ more than 5,700 employees and contractors.

6. Pie Graph of Corporate Ownership of Australian Lead Reserves and Mines

Information provided by Dr Gavin Mudd, Institute for Sustainable Water Resources,Department of Civil Engineering, Monash University, Victoria, Australia. Pie-Graph created by Zac Gethin-Damon, Campaigner for the End of Australian Lead in Petrol, and Filip Szczepanski and Daniel Kim, Volunteers, The LEAD Group Inc., NSW, Australia.

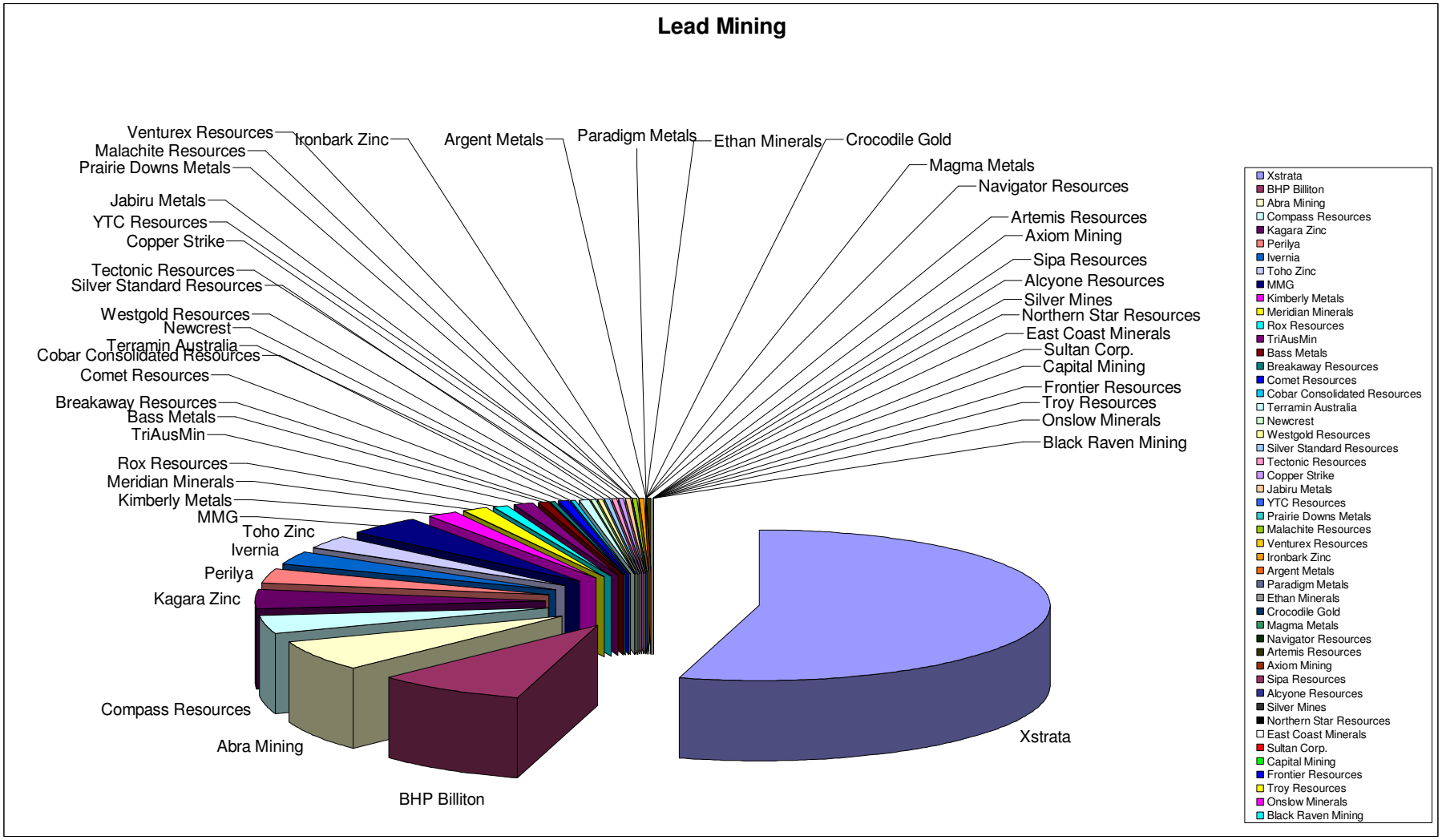


Table of Corporate Ownership of Australian Lead Reserves and Mines – in Pb (lead) tonnage order

Data table provided by Professor Gavin Mudd, Monash University

	count	*84*	1,820	3.11	56,606	
State	Mine / Deposit	Status	Mt ore	%Pb	kt Pb	Company
QLD	Mt Isa (Open Cut)	Deposit	312.6	3.1	9,570.4	Xstrata
NT	McArthur River	Operating	175.1	4.7	8,177.3	Xstrata
QLD	Mt Isa-George Fisher North	Operating	154.6	4.3	6,602.0	Xstrata
QLD	Cannington	Operating	72	6.5	4,680.0	BHP Billiton
QLD	Mt Isa-George Fisher South (Hilton)	Operating	71.5	5.9	4,184.0	Xstrata
WA	Mulgul-Jillawarra (Abra)	Deposit	107	3.49	3,739.0	Abra Mining
NT	Brown's-Brown's East	Care & Maint.	70.5	3.13	2,203.5	Compass Resources
WA	Admiral Bay	Deposit	72	2.9	2,088.0	Kagara Zinc
NSW	Broken Hill	Operating	23.702	7.3	1,730.2	Perilya
WA	Magellan	Operating	32.5	4.58	1,489.3	Ivernia
QLD	Mt Isa-Black Star	Operating	38.5	3.2	1,243.4	Xstrata
NSW	Endeavour	Operating	26.2	4.1	1,074.2	Toho Zinc
QLD	Dugald River	Deposit	53.0	1.9	983.0	MMG
QLD	Lady Loretta	Deposit	13.6	5.8	792.2	Xstrata
WA	Sorby Hills	Deposit	16.87	4.59	774.7	Kimberley Metals
TAS	Rosebery-South Hercules	Operating	17.9	3.8	685.2	MMG
WA	Lennard Shelf Group	Care & Maint.	16.64	3.89	647.4	Meridian Minerals
QLD	Century-Century East	Operating	37.0	1.5	561.9	MMG
NSW	Rasp (Broken Hill)	Development	5.477	9.9	542.2	Toho Zinc
NT	Myrtle	Deposit	43.6	0.94	411.3	Rox Resources
NSW	Woodlawn Underground	Deposit	10.1	4.0	404.0	TriAusMin
QLD	Mt Isa-Handle Bar Hill	Operating	9.8	3.1	301.1	Xstrata
TAS	Hellyer Tailings	Care & Maint.	9.5	2.8	266.0	Bass Metals
QLD	Altia	Deposit	5.78	3.96	228.9	Breakaway Resources
NSW	Browns Reef	Deposit	20.5	1.1	225.5	Comet Resources
NSW	Wonawinta	Deposit	21.9	0.97	212.4	Cobar Consolidated Resources
SA	Menninnie Dam	Deposit	7.7	2.6	200.2	Terramin Australia

State	Mine / Deposit	Status	Mt ore	%Pb	kt Pb	Company
WA	O'Callaghans	Deposit	78	0.25	195.0	Newcrest
QLD	Mt Garnet Field	Operating	18.249	1.03	188.6	Kagara Zinc
NT	Explorer 108	Deposit	8.733	2.0	174.7	Westgold Resources
NSW	Woodlawn Tailings	Deposit	11.65	1.35	157.3	TriAusMin
NSW	Bowdens	Deposit	47.6	0.29	139.8	Silver Standard Resources
WA	Trilogy	Deposit	6.24	2.0	124.8	Tectonic Resources
NT	Manbarrum	Deposit	33.5	0.36	120.0	Kimberley Metals
QLD	Silver King	Deposit	0.7	15.1	105.7	MMG
QLD	Walford Creek	Deposit	6.5	1.6	104.0	Copper Strike
QLD	Einasleigh Group (PbZnCu)	Deposit	5.5	1.85	101.8	Copper Strike
WA	Golden Grove	Operating	36.6	0.26	95.3	MMG
TAS	Que River-Fossey-Hellyer	Operating	2.23	4.2	93.7	Bass Metals
NSW	Lewis Ponds	Deposit	6.6	1.4	92.4	TriAusMin
VIC	Stockman	Deposit	12.501	0.7	87.5	Jabiru Metals
NT	Area 55	Deposit	**12.2**	**0.56**	**68.3**	Compass Resources
NSW	Hera	Deposit	2.18	2.8	61.0	YTC Resources
NSW	Parkers Hill (Mineral Hill)	Care & Maint.	3.0	1.97	59.1	Kimberley Metals
SA	Angas	Operating	2.35	2.47	58.1	Terramin Australia
WA	Prairie Downs	Deposit	2.98	1.59	37.92	Ivernia
WA	Prairie Downs	Deposit	2.98	1.59	9.48	Prairie Downs Metals
WA	Napier Range-Wagon Pass	Deposit	0.59	8	47.2	Meridian Minerals
NSW	Conrad-King Conrad-Greisen	Deposit	3.13	1.26	39.5	Malachite Resources
WA	Panorama-Sulphur Springs	Deposit	19.3	0.2	38.6	Venturex Resources
NSW	Belara	Deposit	3.8	1.0	38.0	Ironbark Zinc
NSW	Sunny Corner	Deposit	1.5	2.1	31.5	Argent Minerals
NSW	Kangiara	Deposit	2.75	1.0	27.5	Paradigm Metals
WA	Northampton-Mary Springs	Deposit	0.394	6.44	25.4	Ethan Minerals
WA	Mons Cupri	Deposit	4.944	0.50	24.8	Venturex Resources
NT	Iron Blow	Deposit	3.175	0.76	24.1	Crocodile Gold
WA	Salt Creek	Deposit	1.832	1.20	22.1	Venturex Resources
WA	Eastman	Deposit	3.4	0.65	15.4	Magma Metals
WA	Eastman	Deposit	3.4	0.65	6.6	Navigator Resources

State	Mine / Deposit	Status	Mt ore	%Pb	kt Pb	Company
NSW	Kempfield	Deposit	4.62	0.43	19.9	Argent Minerals
WA	Bentley	Deposit	3.046	0.6	18.3	Jabiru Metals
WA	Lennons Find	Deposit	0.853	1.8	15.4	Jabiru Metals
WA	Eastern Hills	Deposit	0.607	2.4	14.6	Artemis Resources
QLD	Nightflower-Digger Lode	Deposit	0.216	4.91	10.6	Axiom Mining
NSW	Henry George	Deposit	1.29	0.8	10.3	Perilya
WA	Panorama-Bernts	Deposit	0.6	1.7	6.12	Toho Zinc
WA	Panorama-Bernts	Deposit	0.6	1.7	4.08	Sipa Resources
QLD	Texas-Silver Spur	Deposit	0.808	1.25	10.1	Alcyone Resources
NSW	Webbs	Deposit	1.23	0.79	9.7	Silver Mines
WA	Emull-Lamboo	Deposit	4.7	0.2	9.4	Northern Star Resources
SA	Flinders	Deposit	0.484	1.4	6.8	Perilya
WA	Gossan Dam-Bonnie Rock	Deposit	0.45	1.5	6.8	East Coast Minerals
NSW	Peelwood North/South	Deposit	0.895	0.73	6.5	Sultan Corp.
WA	Jaguar	Operating	0.823	0.7	5.8	Jabiru Metals
NSW	Chakola-Harnett Central	Deposit	1.22	0.4	4.9	Capital Mining
TAS	Narrawa	Deposit	0.209	1.32	2.8	Frontier Resources
NT	Daly River Anomaly A	Deposit	0.762	0.3	2.3	Troy Resources
WA	Liberty-Indee (Evelyn)	Deposit	0.657	0.34	2.2	Venturex Resources
WA	Whim Creek	Care & Maint.	1.026	0.20	2.1	Venturex Resources
WA	Range	Deposit	0.04	3.9	1.6	Onslow Minerals
NSW	Stirling Vale	Deposit	0.22	0.6	1.3	Perilya
WA	Turtle/Copper Ridge	Deposit	0.091	1	0.9	Onslow Minerals
QLD	Tally Ho	Deposit	0.733	0.09	0.7	Alcyone Resources
WA	Mt Mulcahy	Deposit	0.227	0.17	0.4	Black Raven Mining

7. Can you help?
What is the raison d'être of this lead bar?

This photo of a lead bar with "Broken Hill Australia" and "Special" stamped on it was sent in by Glenn Campbell of Blacktown, New South Wales (NSW), Australia. Glenn's father was born in 1923 and travelled to Broken Hill NSW, home of the largest lead mine in the world, around 1941, at age 18, while in the army. After his father's death in 2006, Glenn found the bar in his father's shed where it had probably resided for some 40 years. The bar can be lifted by one person, but it's very heavy. It is approximately 2 feet (60 cm) long, 5 inches (13 cm) wide and 2 inches (5 cm) deep. Glenn is interested to know when and why it was made and what was "special" about it. Has anyone seen anything like it in a museum or as a display item at the Minerals Council of Australia offices or in a lead mining corporation building? Please use the form at http://www.lead.org.au/cu.html to send in your suggestions.

8. Blood Lead Levels for 1-5 Year Olds in the US over Time, compared to in Australia in 1995

By Elizabeth O'Brien, BSc, Grad Dip in Educational Studies (Health Educ'n), Manager, Global Lead Advice & Support Service (GLASS) run by The LEAD Group Inc. Australia

Only one study has been done in Australia to indicate what "normal levels" / average blood lead levels are for all ages but it was only done for children aged 1-4 yrs and it has not been repeated to find out the trend over time nor in response to public health policies such as the phasing out of leaded petrol.

The blood sampling for that study was done in 1995 and the results published in 1996. A summary of the results was originally web-published by the Australian federal environment agency at www.ea.gov.au/atmosphere/airquality/lead/leadsurvey.html , but now can only be found on The LEAD Group's (a non-government charity) website, at http://www.lead.org.au/Summary_Lead_in_Australian_Children.pdf and includes the following summary by Donovan et al:

> *"The average value (mean) for all samples was 5.8 µg/dL [micrograms per decilitre] (0.28 µmol/L [micromoles/litre). There was a slight variation in the mean values for different States/Territories with the lowest value recorded in the Australian Capital Territory and highest in the Northern Territory, although the sample size was much lower in both these Territories."*

The full report "Lead in Australian Children: Report on the National Survey of Lead in Children" was only ever published in hard copy by the government and is only web-published, again by The LEAD Group Inc, at http://www.lead.org.au/Lead_in_Australian_children.pdf and reveals:

> *"the arithmetic mean blood lead level was 0.277 umol/L (5.72 ug/dL)...The geometric mean blood lead level was 0.244 umol/L (5.05 ug/dL)...The lowest mean levels were found in the Australian Capital Territory, where the areas sampled were mainly newly settled, and only one CD [Census Collector District] had been settled when significant concentrations of lead was used in house paint. The mean levels were lower in Queensland and Victoria than in other States. The highest mean blood lead levels were from the Northern Territory and South Australia."*

Table 10 in the full report shows the [arithmetic] mean blood lead level for Australian 1-4 year olds in 1995 was 0.28 umol/L [equivalent to 5.8 ug/dL] and for the ACT was 0.22 umol/L [equivalent to 4.6 ug/dL] and for the Northern Territory was 0.30 umol/L [6.2 ug/dL].

In the USA, the National Health And Nutrition Examination Surveys (NHANES) - a series of large-scale national blood lead surveys, has found a trend of decreasing blood lead levels in all ages over time, and the updated tables of blood lead levels for the most recent NHANES testing, show that 1-5 year olds in the US had the following geometric mean blood lead levels in the stated survey (blood collection) years:

1999-2000 – 2.23 ug/dL
2001-2002 – 1.70 ug/dL
2003-2004 – 1.77 ug/dL
2005-2006 – 1.46 ug/dL
2007-2008 – 1.51 ug/dL

(See page 136 of the free full article downloadable as a pdf from http://www.cdc.gov/exposurereport/pdf/FourthReport_UpdatedTables_Feb2012.pdf)

The most recent **analysis** of blood lead trends in the NHANES series, for which blood lead sampling was done between 1999 and 2002, found a geometric mean blood lead level for children aged 1-5 yrs of 1.9 ug/dL (1.8 ug/dL for white non-Hispanic children) compared to the geometric mean of 2.7 ug/dL (2.3 ug/dL for white non-Hispanic children) from NHANES 1991-1994 (sampling years). (Reference: Table 2 in "Blood Lead Levels --- United States, 1999--2002 [NHANES IV] at www.cdc.gov/mmwr/preview/mmwrhtml/mm5420a5.htm)

This compares to an average level of 0.66 umol/L [13.7 ug/dL]) for non-Hispanic white children and 0.97 umol/L [20.2 ug/dL]) for non-Hispanic black children geometric mean blood lead levels for 1-5 yr olds in the first (1976-1980) NHANES round.

According to Pirkle et al (1998), in the USA:

"Mean blood lead levels of children aged 1 to 5 years declined 77% (0.66 to 0.15 umol/L [13.7 to 3.2 micrograms/dL]) for non-Hispanic white children and 72% (0.97 to 0.27 umol/L [20.2 to 5.6 micrograms/dL]) for non-Hispanic black children... From 1976 to 1990, the amount of lead in gasoline decreased by 99.8% (18). In 1980, 47% of food and soft-drink cans were lead soldered. By 1991, lead-soldered food and soft-drink cans were no longer manufactured in the United States (20,21). In addition, treatment of water to make it less corrosive to pipes, regulations to protect workers from lead exposure, and childhood lead poisoning prevention programs have helped to decrease lead exposure."

And they further concluded (in 1998), that:

"Lead poisoning prevention programs should target high-risk persons, such as children who live in old homes, children of minority groups, and children living in families with low income... The major cause of the observed decline in blood lead levels is most likely the removal of 99.8% of lead from gasoline and the removal of lead from soldered cans. Although these data indicate major progress in reducing lead exposure, they also show that the same sociodemographic factors continue to be associated with higher blood lead levels, including younger age, male sex, non-Hispanic black race/ethnicity, and low income level. Future efforts to remove other lead sources (e.g., paint, dust, and soil) are needed but will be more difficult than removing lead from gasoline and soldered cans."
(See the free full article downloadable as a pdf from http://ehp03.niehs.nih.gov/article/fetchArticle.action?articleURI=info:doi/10.1289/ehp.98106745)

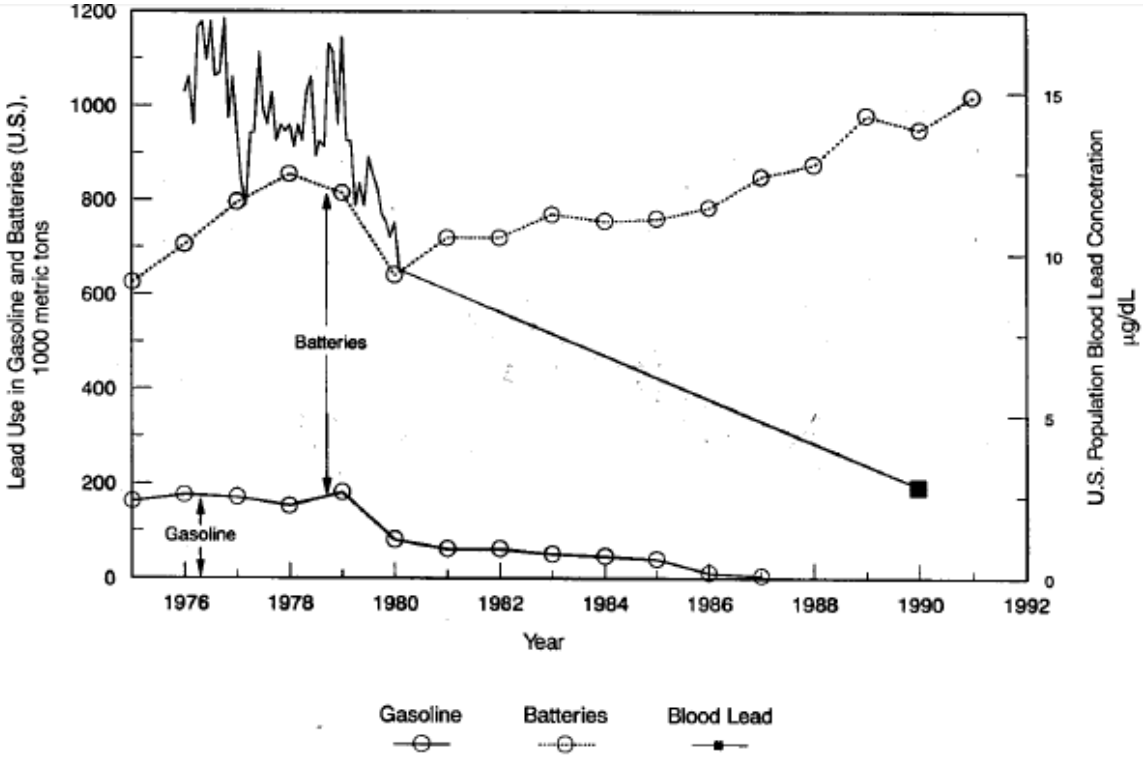


Figure 5 Annual U.S. lead use in gasoline and batteries and U.S. population blood lead levels from 1975 to 1990. Battery data are from U.S. Bureau of Mines 1993 and 1995. Gasoline data are from Nriagu 1990. Both the battery and the gasoline data are referenced to the x-axis: they are not shown additively. Blood lead data are from NHANES-II (Annest et al. 1983) and NHANES-III (Pirkle et al. 1994). NHANES-II data are 28-day averages from February 1976 to February 1980 (Annest et al. 1983, figure 1). The single NHANES-III blood-lead data point at 1990 is an average for 1988 to 1991. The dotted line connecting the NHANES II time series with the single NHANES III data point is a only a guide to the eye: there are no intermediate data points.

"Figure 5 summarizes the record from 1975 to 1990 for the United States, showing the consumption of lead in gasoline additives and batteries, along with the average blood lead levels in the population. The use of lead in batteries has increased, although not steadily, and lead in automotive gasoline has disappeared, while population blood lead levels have plummeted."

Reference for above graph and quote:
Socolow and Thomas *The Industrial Ecology of Lead and Electric Vehicles* (1997)
http://www.princeton.edu/pei/energy/publications/texts/Socolow_97_Industrial_Ecology_Lead.pdf

Of all the lead-related government policies mentioned above, the only other one which can be graphed for both the USA and Australia, is the phase-out of leaded petrol, because it is the only one with clear start and finish years in both countries:

1970 – US Environmental Protection Agency (EPA) orders introduction of unleaded gasoline and issues an order for lead-gasoline-free cars by 1975, thus beginning the world's first national phase-out of leaded petrol.

1995 - US phases out leaded gasoline for road-use vehicles.

1985 – unleaded petrol is introduced in to Australia. By 1986, all new vehicles were required to have a catalytic converter and run on unleaded petrol (to prevent lead poisoning of the catalytic converter).

2002 – Australia phases out leaded petrol for road-use vehicles.

I am certain that an analysis of blood lead trends in the US in relation to regulations and other policies controlling lead in paint, soil and dust, will demonstrate that they too have had a significant impact on US blood lead levels, especially of pre-schoolers.

Please refer to the graph on page one above.

Based on the rate of decrease of blood lead levels of US 1-5 yr old children over the period of lead gasoline phase-out, and cessation of manufacture in the US of lead-soldered food cans, and knowing that leaded petrol was phased out in Australia by 1st January 2002, I would therefore guess that Australia's 1-5 yr old children's mean blood lead levels today are lower than they were in 1995, but higher than the mean in the USA where leaded paint, soil and dust are highly regulated. See for instance,
http://www.epa.gov/lead/pubs/renovation.htm

But we'd need another national survey to confirm that Australian blood lead levels have declined, and to determine that lead paint, soil and dust management should continue to be as unregulated as they are at present.

Looking at the blood lead levels of people older than 5 years in the USA, and the research on health effects of even low blood lead levels like 2 ug/dL, I am also highly concerned to know the range and mean blood lead levels of all ages of Australians, and for this we need a national blood lead survey of all ages.

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9. Australian Elevated Blood Lead Level Notification / Follow-up, by Environmental Health Officers

A Compilation of State and Territory Government Health Department Emails, with References

The following emails were sent in reply to Elizabeth O'Brien's request for jurisdictional policy, and were compiled, with full references, by Zac Gethin-Damon, The LEAD Group

Northern Territory (NT):

From: Department of Health, NT
Sent: Monday, April 02, 2012 3:46 PM
To: The LEAD Group Inc.
Subject: RE: Case management of notified blood lead levels

Dear Elizabeth,

Thank you for your email.

The Environmental Health Program is updating the 'Environmental Health Standard Operating Procedure on Complaints Issues' to include appendices which will provide further practical guidance to our Environmental Health Officers (EHOs) on how to investigate and respond to a range of public health issues.

As part of this update, a draft EHO Guidance Note relating to investigating elevated blood lead levels and/or lead poisoning has been prepared, and will be finalised in the near future.

If you would like, I can forward you the final version of that EHO Guidance Note once it is available.

If any further information is required, please feel free to call, or email me.

Kind Regards,

Environmental Health Branch | Department of Health
2nd Floor, Casuarina Plaza, 258 Trower Rd, CASUARINA NT 0810 | PO Box 40596, CASUARINA NT 0811
p... (08) 892 27433 | f... (08) 892 27334
www.nt.gov.au/health/envirohealth

Queensland (QLD)

From: Department of Health, QLD, Environmental Health Branch
Sent: Friday, March 30, 2012 4:12 PM
To: The LEAD Group Inc.
Subject: Fwd: Case management of notified blood lead

Dear Elizabeth

It was a pleasure talking with you this morning.

Unfortunately, we are not able to provide you with a copy of our internal guidelines for general circulation. Blood lead levels equal to or greater than 10ug/dL (0.48 umol/L) are a notifiable condition under the Public Health Act 2005. Queensland Health conducts risk based investigations in response to these notifications which may include environmental sampling to determine source of exposure. In addition, Queensland Health also publishes reports detailing non-occupational exposure for inclusion on our internet site [http://www.health.qld.gov.au/health_professionals/environment/default.asp]. Please note that the reports for 2008, 2009 and 2010 are expected to be published on this site in the near future.

I hope this is of help to you.

Kind regards,

Environmental Health Science and Regulation Unit
Environmental Health Branch
Ph: 07 3328 9011

References:

Investigations of Cases of Elevated Blood Lead Levels - Guidelines for Environmental Health Officers (1997), NSW Health Dept Environmental Health Branch, and LRC - NSW EPA

Environmental Health Guidance Note - The Investigation of Environmental Sources of Excessive Lead Exposure (1999), Environmental Toxicology, Environmental Health Unit, Queensland Health

Environmental Health Officer Guidance Material for the Investigation of Environmental Sources of Excessive Lead Exposure (1999), Environmental Toxicology, Environmental Health Unit, Queensland Health.

Lead Exposure (Notifiable) - 1998 Notifications In Queensland, July 2000, Queensland Health Dept

Lead Exposure Notifications For 1999 [Queensland], House to House - The Newsletter of the Environmental Health Unit, July 2000, Queensland Health Dept.

Data on Queensland lead poisoning deaths and notifications, by age, sex, source (including paint) from 1995 to 2001, 18 April 2002, Wendy Edmond, Minister for Health Qld.

The following references can all be accessed via
http://www.health.qld.gov.au/health_professionals/environment/default.asp :

BLOOD LEAD NOTIFICATIONS IN QUEENSLAND 2002, Queensland Health, March 2006, http://www.health.qld.gov.au/ph/documents/ehu/31752.pdf

BLOOD LEAD NOTIFICATIONS IN QUEENSLAND 2003, Queensland Health, March 2006, http://www.health.qld.gov.au/ph/documents/ehu/31751.pdf

BLOOD LEAD NOTIFICATIONS IN QUEENSLAND 2004, Queensland Health, March 2006, http://www.health.qld.gov.au/ph/documents/ehu/31750.pdf

BLOOD LEAD NOTIFICATIONS IN QUEENSLAND 2005, Queensland Health, March 2006, http://www.health.qld.gov.au/ph/documents/ehu/31749.pdf

BLOOD LEAD NOTIFICATIONS IN QUEENSLAND 2006, Queensland Health, January 2007, http://www.health.qld.gov.au/ph/documents/ehu/32497.pdf

Non-Occupational Blood Lead Notifications in Queensland 2007, Queensland Health, January 2008, http://www.health.qld.gov.au/ph/documents/ehu/bl-notif-2007.pdf

Non-Occupational Blood Lead Notifications in Queensland 2008, Queensland Health, April 2012, http://www.health.qld.gov.au/ph/documents/ehu/bl-notif-2008.pdf

Non-Occupational Blood Lead Notifications in Queensland 2009, Queensland Health, April 2012, http://www.health.qld.gov.au/ph/documents/ehu/bl-notif-2009.pdf

Non-Occupational Blood Lead Notifications in Queensland 2010, Queensland Health, April 2012, http://www.health.qld.gov.au/ph/documents/ehu/bl-notif-2010.pdf

Tasmania (TAS):

From: Department of Health and Human Services, TAS
Sent: Friday, March 23, 2012 1:00 PM
To: The LEAD Group Inc.
Subject: Case management of notified blood lead levels

Dear Elizabeth

Please find attached a couple of documents from Tasmania for the investigation of blood lead levels.

Kind Regards,

Public & Environmental Health | Department of Health and Human Services
3/25 Argyle St Hobart GPO Box 125 Hobart Tas 7001
Phone (03) 6222 7777
A fair and healthy Tasmania

References:

Tasmanian Notifiable Disease - Lead Case Investigation Draft Form (2005), Public & Environmental Health, Department of Health and Human Services Tasmania

Tasmanian Notifiable Disease Lead Exposure Draft (2005), Public & Environmental Health, Department of Health and Human Services Tasmania

South Australia (SA)

From: SA Health Department
Sent: Thursday, March 22, 2012 5:51 PM
To: 'The LEAD Group Inc.'
Subject: RE: Case management of notified blood lead levels

Hi Elizabeth,

In South Australia, elevated lead levels is not a notifiable condition (unlike Queensland, New South Wales, Victoria, Western Australia and Tasmania), therefore local Environmental Health Officers do not follow up these results.

Should a physician find an elevated lead level, a public health practitioner from Public Health Services or the Environmental Health Centre, Port Pirie, would follow up the case if warranted. The practitioner would use their professional knowledge to do so, which essentially uses a questionnaire not dissimilar to Victoria.

NHMRC are working on a national document for health practitioners.

Thank you for your e-mail,

Communications Division, SA Health, Government of South Australia

Victoria (VIC):

From: Department of Health, Vic
Sent: Friday, March 23, 2012 3:58 PM
To: The LEAD Group Inc.
Subject: Attention Elizabeth: responding to elevated blood lead notifications

Dear Elizabeth,

Further to your enquiry, attached is the article 'Elevated blood lead notifications: the first six months' written in the Victorian Infectious Diseases Bulletin (VIDB), vol. 14, issue 1, March 2011. The section under "Public health action as a result of notifications", summarises how we respond to elevated blood lead notifications. This bulletin can also be found at:

http://docs.health.vic.gov.au/docs/doc/Victorian-Infectious-Diseases-Bulletin-March-2011

The Victorian Department of Health promotes awareness of potential exposure to lead through health forums, provision of resources to doctors &/or concerned members of the public, and through our website and Better Health Channel. The available resources include:

National Health & Medical Research Council's (NHMRC) information paper and public statement about blood lead levels for Australians, which may be sent to doctors and patients respectively (see attached).

'The six step guide to painting your home', 3rd edition, Lead Alert, Australian Government. [http://www.environment.gov.au/atmosphere/airquality/publications/pubs/leadpaint.pdf]

Department of Health (Victoria) website:
http://www.health.vic.gov.au/environment/home/asbestos.htm#lead

Better Health Channel information about blood lead poisoning, found at:
http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Lead_poisoning

The Department aims to minimise exposure to lead in the community through raising awareness of potential sources of lead.

Regards,

Healthy Environments Program Area | Environmental Health Unit | Health Protection Branch
Department of Health | 15/50 Lonsdale Street, Melbourne VIC 3000
p. 03 9096 5619

References:

Victorian Infectious Diseases Bulletin (March 2011),Victoria Department of Health http://docs.health.vic.gov.au/docs/doc/Victorian-Infectious-Diseases-Bulletin-March-2011

Blood lead levels for Australians INFORMATION PAPER, An Information Paper for practitioners and policy makers (August 2009) National Health and Medical Research Council (NHMRC)
http://www.nhmrc.gov.au/_files_nhmrc/file/publications/synopses/gp02-lead-info-paper.pdf –

NHMRC Public Statement,- Blood lead levels: Lead exposure and health effects in Australia (August 2009), National Health and Medical Research Council (NHMRC) http://www.nhmrc.gov.au/_files_nhmrc/file/publications/synopses/gp03-lead-pub-stmnt.pdf

Healthy Homes - A Guide to Indoor Air Quality in the Home for Buyers, Builders and Renovators (2002) Department of Health and Ageing, http://www.nphp.gov.au/enhealth/council/pubs/pdf/healthyhomes.pdf

Environmental Health - Chemical Risks: Lead Poisoning (2012) Better Health Channel, State Government of Victoria, Department of Health, http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Lead_poisoning

Australian Capital Territory (ACT)

From: Health Directorate, ACT
Sent: Friday, March 30, 2012 3:52 PM
To: The LEAD Group Inc.
Subject: FW: Case management of notified blood lead levels

Dear Elizabeth,

Elevated blood lead levels are not a notifiable condition in the ACT, and as such, the ACT does not have any public health management guidelines for this condition. In the event that we became aware of cases of elevated blood lead levels, a public health investigation would be initiated and we would utilise the NSW Health Guidelines for lead poisoning which can be found here: http://www.health.nsw.gov.au/factsheets/guideline/lead.html

You may have seen the National Health and Medical Research's website, which includes some interesting information regarding lead exposure and associated health effects in Australia. This information can be found here: http://www.nhmrc.gov.au/your-health/lead-exposure-and-health-effects

I hope this information is of use to you and answers your query.

Kind regards

Communicable Disease Control, Health Directorate, ACT Government,
Ph 6205 2052

References:

Lead Poisoning: Response protocol for NSW Public Health Units, (Last updated 24/1/12) NSW Government, Department of Health, http://www.health.nsw.gov.au/factsheets/guideline/lead.html

Lead Exposure and Health effects in Australia – NHMRC position (last reviewed 2/3/12), National Health and Medical Research Council (NHMRC), http://www.nhmrc.gov.au/your-health/lead-exposure-and-health-effects

Western Australia (WA)

From: Environmental Health Directorate, WA
Sent: Thursday, March 22, 2012 3:05 PM
To: The LEAD Group Inc.
Subject: Lead resources from WA Dept of Health website

Dear Elizabeth

Thank you for your phone query re: Lead resources from the Western Australia Department of Health (DOH) Website. I have attached below the web links to our public health website which will provide you with the appropriate information.

The web link to the WA DOH Public Health website is:
http://www.public.health.wa.gov.au/

Please note that the WA Public Health web link can be accessed from the DOH website http://www.health.wa.gov.au/ which is located on the right column under Health Topics A-Z.

Once you are in the WA Public Health website (http://www.public.health.wa.gov.au/), you will be able to access lead resources by clicking on the A-Z Topics and Diseases link and by clicking on the letter 'L' to search for Lead. You can also enter the word 'lead' in the search box located at the top right hand corner of the website. This will give you access to general information on lead, any lead issues in Western Australia e.g. in Esperance and Geraldton, as well as information on lead poisoning notification.

I hope the information above addresses your queries. Please do not hesitate to contact me if you have any further questions.

Kind Regards

Environmental Health Hazards Unit
T 9388 4977
A Environmental Health Directorate | PO Box 8172 | Perth Business Centre | WA 6849
Work days 8-4pm Tuesday & Thursday

References:

Health hazards: Lead (Last updated June 2011), Government of WA, Department of Health http://www.public.health.wa.gov.au/3/1141/2/lead.pm

Minimising the health risks of lead (June 2011), Government of WA, Department of Health, http://www.public.health.wa.gov.au/cproot/3987/2/Minimising_the_health_risks_of_lead.pdf

New South Wales (NSW)

From: BURCHETT, Martyn
Sent: Monday, April 30, 2012 4:00 PM
To: The LEAD Group
Subject: RE: NSW Lead Response Protocol

Dear Ms O'Brien

As requested please find below useful lead related URLs

1) Guidance for DIY renovators – DIY Safe – Dust and Fume Hazards

http://www.health.nsw.gov.au/publichealth/environment/diy/index.asp

http://www.health.nsw.gov.au/resources/publichealth/environment/diy/pdf/diysafely.pdf

2) Factsheet on environmental exposure of children to lead

http://www.health.nsw.gov.au/factsheets/environmental/lead.html

Environmental Health Branch (EHB) has noted the information provided in your email and will be updated when it's due for review.

3) Blood lead notifications by year can found in NSW Public Health Bulletin, Notifications - year in review edition

http://www.health.nsw.gov.au/publichealth/phb/sub_n.asp

4) NSW Health Statistics can be accessed under the appropriate indicator, which is generated for the NSW Chief Health Officers Report.

http://www.health.nsw.gov.au/publichealth/chorep/

5) NSW Health Response Protocol for Lead Poisoning

http://www.health.nsw.gov.au/factsheets/guideline/lead.html

Martyn Burchett
Policy Support Officer | NSW Ministry of Health, Population and Public Health, Environmental Health Branch
Postal Address: PO Box 798, Gladesville, NSW, 1675
Tel 02 9816 0234
www.health.nsw.gov.au

References:

NSW Health Factsheet - DIY Safe (2005), Environmental Health, NSW Department of Health, http://www.health.nsw.gov.au/publichealth/environment/diy/index.asp

DIY Safely Booklet (2005) NSW Government: Department of Environment and Conservation (NSW), NSW Health Department, NSW Commerce Office of Fair Trading, WorkCover Authority, Local Government Association of NSW, Shires Association of NSW, Department of Local Government, http://www.health.nsw.gov.au/resources/publichealth/environment/diy/pdf/diysafely.pdf

NSW Health Factsheet - Lead Exposure in Young Children (2007), NSW Department of Health, http://www.health.nsw.gov.au/factsheets/environmental/lead.html

NSW Government Public Health Statistics Searchable Database Application (2011), Public Health, NSW Department of Health, http://www.healthstats.nsw.gov.au/

Control Guideline: Lead Poisoning - Response Protocol for NSW Public Health Units (2012), Ministry of Health, NSW Department of Health, http://www.health.nsw.gov.au/factsheets/guideline/lead.html

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10. Lead Knowledge Dissemination by GLASS: Samples of Info Packs

By Elizabeth O'Brien, BSc, Grad Dip in Educational Studies (Health Educ'n), Manager, Global Lead Advice & Support Service (GLASS) run by The LEAD Group Inc. Australia

The Global Lead Advice & Support Service (GLASS) would be happy to update the information in any of our Info Packs and tailor it to any jurisdiction prepared to provide a grant for the purpose. There follows a sample of the types of Info Packs which we have put together over the past two decades, and which we regularly disseminate and update. In the old days, most items in the Info Packs were not online and were colour printed by government or companies, or photocopied in black on white by us, and posted. Today, Info Packs are entirely made up of online articles, and they are emailed. Once they are ripened by regular updating and disseminating, receiving feedback and revising, they are web-published.

GLASS usually creates an Info Pack in response to an identified need – a request or multiple requests for the same information, or they can be commissioned. For instance, if the World Health Organisation (WHO) and United Nations Environment Programme (UNEP) contracted us to write an Info Pack on Substitutes for Lead in Paints and Inks for its Global Alliance to Eliminate Lead in Paint (GAELP), we would gladly do so.

I am currently working on an Info Pack on Substitutes for Lead Weights for Fishing, Diving, Wheel Balancing, Ballast, etc; and another Info Pack on Steps to Creating a Lead-Safe World. If what is already online on the subject is inadequate or incomplete, we research and write items for the Info Pack.

Our Info Pack on Lead Information for NSW Councils, is an example of an Info Pack commissioned by the NSW Government. All the information in it is online at http://www.lead.org.au/clp/clp.htm . For as little as $50,000 we could hire an environmental lawyer in any state or territory outside of NSW, to review, update and "jurisdictionalise" the very useful information in our "LEAD SAFETY TOOL KIT FOR COUNCILS" (http://www.lead.org.au/clp/toolkit.pdf). As the WHO acknowledges (in the booklet at http://www.who.int/ceh/publications/childhoodpoisoning/en/index.html), each dollar spent on lead poisoning prevention, returns a benefit to individuals and to society, worth between US$17 and $220 – depending on what the intervention is. Council or State or Territory money spent on lead testing, lead abatement or awareness-raising provides one of the best cost/benefit ratios of any money spent on government programs.

Knowledge dissemination is what GLASS is all about. We can literally turn lead management knowledge into gold benefits for individuals and for society: through higher IQ leading to higher lifetime earnings, healthier and longer life, reduced crime and reduced education and medical costs.

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11. Info Pack - Case Management After Earlier-in-Life Lead Poisoning

By Elizabeth O'Brien, BSc, Grad Dip in Educational Studies (Health Educ'n), Manager, Global Lead Advice & Support Service (GLASS) run by The LEAD Group Inc. Australia

The LEAD Group is a Health Promotion Charity aiming to eliminate lead poisoning globally and all the information we put together in these Info Packs has been collated or written by myself or volunteers.

It is ALWAYS useful to know the current blood lead level even when you suspect that a person is no longer exposed to much lead today. A blood lead test result can demonstrate that despite no obvious sources or pathways of current lead poisoning, lead is indeed currently being taken up. Additionally, the movement of lead out of the bone stores and back into the bloodstream is a complex business and not all the provocations for that movement are fully understood. So in every situation where a person may have been lead poisoned earlier, there should always be a blood lead test done now.

Anyone who has ever had a job or hobby involving lead could very usefully fill in the questionnaire at http://www.lead.org.au/fs/Medical_Evaluation_For_Lead_Exposure_Modified_by_The_LEAD_Group_20101102.pdf as much as you can and take it to a doctor to complete. A blood lead test result can demonstrate that despite no obvious sources or pathways of current lead poisoning, lead is indeed currently being taken up. Additionally, the movement of lead out of the bone stores and back into the bloodstream is a complex business and not all the provocations for that movement are fully understood. So in every situation where a person may have been lead poisoned earlier, there should always be a blood lead test done now, measures taken to determine if recent lead exposure is likely, clean-up if so and then a retest of the blood lead.

Depending on the result, and the person's (or other family members') known previous blood lead results, and the known history of lead exposure, there will be differing recommended responses in following up the current blood lead result.

The official policy coming from all the doctors and professors on The LEAD Group's Technical Advisory Board is that apart from nutritional intervention and identifying sources and removing the sources or removing the person from the sources (in order to prevent further poisoning), nothing else can safely be done for a lead poisoned person unless they need chelation because the blood lead level of a child is above 45 ug/dL or of an adult is above 70 ug/dL. This position is well-supported by the following guidance documents from the United States - the centre of the universe when it comes to lead poisoning prevention policies:

1. Table 3.1. Summary of Recommendations for Children with Confirmed (Venous) Elevated Blood Lead Levels, and Table 3.4. Schedule for Follow-Up Blood Lead Testing in "Managing Elevated Blood Lead Levels Among Young Children: Recommendations from the Advisory Committee on Childhood Lead Poisoning Prevention" at http://www.cdc.gov/nceh/lead/CaseManagement/chap3.pdf (also accessible via www.cdc.gov/nceh/lead/CaseManagement/caseManage_main.htm)

2. Table 1. Health-Based Management Recommendations for Lead-Exposed Adults and Table 2. Health-Based Medical Surveillance Recommendations for Lead-Exposed Workers in "Recommendations for Medical Management of Adult Lead Exposure" by Michael J. Kosnett; Richard P. Wedeen; Stephen J. Rothenberg; Karen L. Hipkins; Barbara L.

Materna; Brian S. Schwartz; Howard Hu; and Alan Woolf, National Institute of Environmental Health Sciences (US) (11/4/07) at http://www.medscape.com/viewarticle/554718_print
Australia's federal health department has had NO public health policy on lead since the 1993 policy was rescinded on 31/12/05. (See http://www.nhmrc.gov.au/publications/synopses/withdrawn/eh8.pdf) Sadly, all the fuss in the media over the Mt Isa legal case has stirred the policy-setting body within the federal Department of Health and Aging - the National Healh and Medical Research Council (NHMRC) - to finally try to replace their policy and they have done, but it's so pathetic I'm not even bothering to give you the link to it. In disgust, I wrote a better policy for individuals to follow, called "Blood lead testing: who to test, when, and how to respond to the result" at http://www.lead.org.au/fs/fst46.html; or http://www.lead.org.au/fs/Blood_lead_testing_20090810.pdf

I have the pragmatic approach that, IF you can find a doctor you trust (preferably one who has experience treating lead poisoned people), then you should work with them to further manage the blood lead level and possibly get some of the lead out of the body, in the hope that you might do no harm and you might reduce the risks of the various adverse health effects associated with elevated blood lead levels.

To this end, I have noted in the database, every doctor who has ever been of use to one of our inquirers, and I advise people to see one of these doctors as well as any doctor trained by ACNEM (Australasian College of Nutritional and Environmental Medicine) to carry out chelation therapy and/or urine chelation challenge testing. For example, Dr Emmanuel Varipatis, YourHealth Clinic at Manly, ph clinic 0299777888.

ACNEM's website has a list of graduates of the ACNEM Primary Course - which covers the nutritional, environmental and biochemical factors in physical and mental health. State Referral Lists (in alphabetical order of suburb) of doctors or dentists including those who do chelation are at http://www.acnem.org/modules/mastop_publish/?tac=23 - for instance, for instance, YourHealth Clinic at Manly (ph 0299777888 - www.yourhealth.com.au) has three other chelating doctors on the ACNEM list: Dr Michael Beilby, Dr Joachim Fluhrer, and Dr Peter Lewis.

As for the extra-hard cases of people who weren't blood lead tested at the time of their lead exposure, we always recommend having a blood lead test NOW to determine that the worst lead exposure has indeed ended - as demonstrated by a blood lead level below 2 ug/dL - and secondly, if baby teeth have fallen out and are available, these can be sent to the NSW Health Department lab at Lidcombe (ph 0296460424). As of June 2005, Lidcombe lab has offered tooth lead testing to the public. The cost at that time was $40 per tooth, aim is one week turnaround, there is no interpretive report, no identification of the tooth by a dentist and no guarantee that the lead is not on the outside of the tooth due to contamination in storage or transit. As at May 2008, for less than 10 samples the cost is $40 per tooth but the minimum invoice is $100 so people are best to send at least 3 teeth in one consignment.

Thirdly, if a person happens to be going to the United States or Canada, or if they can convince anyone to put up the funding to get Australia's own bone-XRF machine working again, (we're hopeful that a Melbourne GP will organise to import one into Melbourne early next year) they can undergo x-ray fluorescence (XRF) testing of their bones for lead. Contact details are:

1. Prof David Chettle, Program Director for Health and Medical Physics, Department of Physics and Astronomy, McMaster University, 1280 Main St West Hamilton ON L8S 4L7, Canada, PH 001119055259140 ext 27340 FAX: 001119055461252

WEB: www.physics.mcmaster.ca/research/HRM/HRMed.html; www.physics.mcmaster.ca/people/faculty/Chettle_DR_h.html

2. Dr Howard Hu, Channing Laboratory, Harvard University, Boston, Maryland, PH 001116175252736 FAX: 001116175250362

Fourthly, I refer people to an ACNEM-trained doctor or dentist who knows how to interpret and respond to the results and who will carry out urine chelation challenge testing.

Once a person has been found to be lead poisoned, isotopic fingerprinting is an invaluable tool in identifying the mine source and to an extent the pathways of the lead exposure. See for example "Report on Lead Isotopic Analyses of Samples Associated with the Esperance Lead Investigation" by Access Macquarie Limited: Professor Brian Gulson & Michael Korsch, CSIRO Division of Petroleum Resources, at http://www.health.wa.gov.au/envirohealth/home/docs/Draft_DoH_report_22_5_07_de-identified.pdf

Contact (now retired) Professor Brian Gulson, Professorial Fellow, Graduate School of the Environment, Lead Working Committee of the NHMRC (2008), Head of The LEAD Group's Technical Advisory Board, PH 0298507983.

Fifthly, if there is a current blood lead level above 2 micrograms per decilitre, or any elevated heavy metal level in hair, nails, teeth, urine or blood, The LEAD Group sells a heavy metal test kit which involves the client or their health practitioner or knowledgeable public health officer sampling any of a range of sample types in the home or relevant hobby or workplace, eg soil, dust wipes, drinking water, paint, jewellery, ceramicware, toy paint, etc, and sending the samples to a lab for analysis of the specific heavy metal/s you are concerned about. The 8 sample Comprehensive kit costs $250 for testing just one heavy metal in each of the 8 samples. You can see some Rosebery-specific info about our Heavy Metal Test Kits web-published at http://tasmaniantimes.com/images/uploads/LEAD3(3).pdf - but that info needs to be re-written for any Australian and because the kit is actually adaptable to being used to test any one (or more than one) heavy metal, as you require. And for that situation (eg requesting the lab test arsenic instead of lead) the kits are actually the same prices as noted at http://www.lead.org.au/fs/DIY_sampling_lead_analysis_kits_flyer_20090715.pdf

The addition of the second (or third metal) to be tested for each sample, adds $9 to the total price of the kit. And as mentioned on the Tasmanian Times website, there's a discount for bulk testing, such that if you want all 8 samples in the Comprehensive kit tested for five metals, the price is $450, and for both samples in the Basic kit to be tested for five metals, the price is $172 (compared to $100 for testing for only one metal and $9 for each additional metal, per sample).

Lastly, having advised so many people who have to deal with earlier lead poisoning, I have found that many of them benefit from being in an egroup with other people who are in a similar situation. Egroup members can email all the other members via one simple email address, and ask each other questions and relate their case histories in order to get support and advice on whatever issues are relevant at the moment. The following egroups have been set up for this purpose and you are very welcome to go to the website and join (using your YahooID), any that are relevant:

1. LeadWorkers E-group http://health.groups.yahoo.com/group/LeadWorkers

2. Lead Poisoned Adults Egroup (LPAE) http://health.groups.yahoo.com/group/LPAE

3. LPSCs - The Lead Point Source Communities egroup for people living or concerned about lead exposure in lead mining, smelting, manufacturing or recycling communities http://health.groups.yahoo.com/group/LPSCs/

Alternatively, if you don't have a (free) YahooID and don't want to get one, you can contact me and I will happily join you up to any of our egroups.

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12. Info Pack – Reproductive Health and Lead

By Elizabeth O'Brien, BSc, Grad Dip in Educational Studies (Health Educ'n), Manager, Global Lead Advice & Support Service (GLASS) run by The LEAD Group Inc. Australia

The Hertz-Picciotto 2000 (see below) article about miscarriage concludes that "lead exposures in the range of 10-25 ug/dL could have adverse effects on pregnancy" and "the odds ratio for spontaneous abortion was 1.8 (95% confidence interval 1.1-3.1) for every 5 ug/dL increase in blood lead".

Another Mexican lead and miscarriage study found that "Maternal blood lead levels during the first 12 weeks of gestation were associated with spontaneous abortion." (Borja-Aburto 1999)

Our volunteer researcher Robert Taylor is going to start on an article about mothers passing lead to their unborn babies, after he completes another article he's researching (on leaded aviation fuel) and since he has written "Fact Sheet: Alcohol's link to higher lead and iron levels" at http://www.lead.org.au/fs/Alcohol_link_to_higher_lead_and_iron_levels_20110831.pdf and "Fact Sheet: Cigarette Smoking & Lead Toxicity" at http://www.lead.org.au/fs/Taylor_Cigarette_Smoking_and_Lead_20101005.pdf.

The National Toxicology Program (NTP), US Department of Health and Human Services (DHHS) has published a DRAFT NTP MONOGRAPH ON HEALTH EFFECTS OF LOW-LEVEL LEAD including: APPENDIX E: HUMAN STUDIES OF REPRODUCTIVE AND DEVELOPMENTAL EFFECTS OF LEAD CONSIDERED IN DEVELOPING CONCLUSIONS at http://ntp.niehs.nih.gov/NTP/ohat/Lead/AppendixE-ReproductiveAndDevelopmentalEffects.pdf

It's a crying shame that all these topics are not part of medical training or Continuing Medical Education, and the health department don't seem to make any effort to educate doctors about lead and reproductive effects or lead exposure in general.

No Australian state health department has ever to my knowledge had a policy on the target blood lead level to be reached prior to attempting conception or during the pregnancy.

Until a state or national Australian policy can be developed, a very useful document from the US is: "Medical Management Guidelines for Lead-Exposed Adults" at www.aoec.org/documents/positions/MMG_FINAL.pdf

You will see that on page 8 of the US Guidelines, the target blood lead level (BLL) for a woman (and presumably also for a man) wishing to conceive is given as 0.24 micromoles per litre (umol/L) which is equivalent to 5 micrograms per decilitre (5 ug/dL):

"Because fetal blood contains approximately 80% of the blood lead concentration of the mother, and because of the risk of spontaneous abortion, the panel's recommendation is

that the mother's BLL should be kept below 5 ug/dL (0.24 umol/L) from the time of conception through pregnancy."

The US Guidelines have other useful recommendations and are well worth a read by a couple wishing to conceive or already pregnant, and by their doctors.

It is my understanding that Medicare will cover the cost of up to 4 blood lead tests in any 6 month period so if you have a result which exceeds the target blood lead level, you can have the first retest as soon as lead sources have been eradicated and nutrition attended to, then you will know how close you are to the target blood lead level.

Calcium, iron and zinc are recommended for couples wishing to conceive and for pregnant women although the doctor would likely want to order iron studies before recommending an iron supplement. See the articles in our Nutrition Info Pack (following) for further details.

The components of our Info Pack 6 on Reproductive Health and Lead which are available in electronic format are as follows:

www.lead.org.au/lanv4n3/lanv4n3-13.html - This article is useful but it states: "Both partners should aim to have their blood lead levels below normal (readings of 5 micrograms per decilitre (5 µg/dL) or 0.24 micromoles per litre (0.24 µmol/L)) prior to conception" and no study has been done in Australia indicating what exactly "normal levels" are. In the USA, the most recent in a series of large-scale national blood lead surveys found a geometric mean blood lead level for women aged between 20 and 59 of 1.7 micrograms per decilitre and for men in the same age range, the mean was 2.9 ug/dL. [Reference: Table 2 in "Blood Lead Levels --- United States, 1999--2002 [NHANES IV] at www.cdc.gov/mmwr/preview/mmwrhtml/mm5420a5.htm]
www.lead.org.au/lanv5n3/lan5n3-5.html - "Lead and pregnancy" published in Lead Action News LANV5N3 p 5.

www.lead.org.au/lanv6n2/update005.html - "Pregnant or Planning a Pregnancy?"

www.lead.org.au/lanv6n2/update002.html - "Breastfeeding And Lead - What do Mothers Need to Know?"

"Declining Sexual Health - a victim of modern day diets and lifestyles" by Janette Roberts [The Foresight Association, Australian Branch, AND Balmain Wellness Centre], at http://www.articleslog.com/2008/01/16/90764-declining-sexual-health--a-victim-of-modern-day-diets-and-lifestyles.html

"Preconception Care: What can our preconception plan do for you?" by Lane Cove Wellness Centre, at http://www.wellnesscentre.com.au/site/index2.php?option=com_content&do_pdf=1&id=13

"The evidence that lead increases the risk for spontaneous abortion" by Irva Hertz-Picciotto, published in AMERICAN JOURNAL OF INDUSTRIAL MEDICINE 38:300±309 (2000), AVAILABLE FOR PURCHASE AT http://onlinelibrary.wiley.com/doi/10.1002/1097-0274(200009)38:3%3C300::AID-AJIM9%3E3.0.CO;2-C/pdf

13. Info Pack – Nutrition to Fight Lead Poisoning, Victoria

By Elizabeth O'Brien, BSc, Grad Dip in Educational Studies (Health Educ'n), Manager, Global Lead Advice & Support Service (GLASS) run by The LEAD Group Inc. Australia

In response to blood lead levels above 2 micrograms per decilitre (2 ug/dL) [which is equivalent to 0.1 micromoles per litre (0.1 umol/L)], we recommend a two-pronged approach:

1. identify the lead source/s and remove the person from the source/s or the source/s from their environment; and

2. institute nutritional intervention by following the advice in this Info Pack.

If anyone in the family has a blood lead above 10 ug/dL the Environmental Health Unit ; Health Protection Branch - Dept of Health should step in and send out their own lead assessor (at no cost to you) to your house. If they refuse to send someone (I can not think of any reason that they might refuse except for a lack of experienced and knowledgeable staff) purchasing one of our DIY-Sampling lab-analysis lead test kits (see http://www.lead.org.au/fs/DIY_sampling_lead_analysis_kits_flyer_20090715.pdf) is your best option, (or asking the Environmental Health Unit to purchase one for use at your home) as the samples are collected by you (or the Environmental Health Officer) but posted to a lab for analysis (the cost of analysis and an interpretive report is included in the kit price).

Note that the most usual exposure pathway for lead poisoning in young children is ingestion (from the fingers or objects that go in the mouth) of dust or soil, so dust wipe samples and soil samples from areas in the home and yard that are accessed by the child/ren, are the best samples to test for lead. But for adults, the most usual exposure pathway (excluding lead-contaminated medicines, beverages, food or cosmetics) is inhalation - most often during renovation or demolition activities on older buildings, but also during many hobby and occupational exposure scenarios. You should go through all the sources and pathways of lead poisoning that we have managed to list (it is by no means including ALL lead sources as new sources are created regularly) at http://www.lead.org.au/lasn/lasn006.html before determining what to test (if anything needs testing once you get the blood lead test results).

Our Info Pack 23 on "Nutrition to Fight Lead Poisoning" is online! For the full newsletter on the topic (including links to all references) please go to:

A. LEAD Action News Vol 10 No 2 (LANv10n2) Food, Nutrition and Lead Absorption - newsletter including articles on veganism and nutrition to fight lead poisoning:

http://www.lead.org.au/lanv10n2/LEAD_Action_News_vol_10_no_2.pdf

AND

B. Fact sheet: Nutrients that reduce lead poisoning (a summary of the above newsletter article):

http://www.lead.org.au/fs/Fact_sheet-Nutrients_that_reduce_lead_poisoning_June_2010.pdf

If it turns out that iron deficiency is a problem in any of the family members, then you will also want to look at:

C. LEAD Action News Vol 9 No 3 (LANv9n3) Iron Nutrition and Lead Toxicity (major article) http://www.lead.org.au/lanv9n3/Iron_Nutrition_and_Lead_Toxicity_Full.pdf

AND

D. Fact Sheet - Iron Nutrition and Lead Toxicity (a summary of the above newsletter): http://www.lead.org.au/fs/Iron_Nutrition_&_Lead_Toxicity_Fact_Sheet_20090630.pdf

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14. Info Pack – NSW Lead Poisoning Prevention

Due to requests from NSW Health Department staff and other health and childcare professionals across Australia, the *Lead Safe* series, originally published between 1997 and 1999, by the NSW Lead Reference Centre, a now defunct part of NSW Environment Protection Authority (EPA), and out-of-print for many years, is now online at:

Lead in ceiling dust
http://www.lead.org.au/fs/fst37.html; www.lead.org.au/fs/Lead_in_Ceiling_dust.pdf

Lead, Your Health & the Environment-English PDF -
http://www.lead.org.au/fs/lead_safe/Lead_Your_Health_&_the_Environment-English.pdf

Lead, Your Health & the Environment-Arabic PDF
http://www.lead.org.au/fs/lead_safe/Lead_Your_Health_&_the_Environment-Arabic.pdf

Lead, Your Health & the Environment-Chinese PDF
http://www.lead.org.au/fs/lead_safe/Lead_Your_Health_&_the_Environment-Chinese.pdf

Lead, Your Health & the Environment - Korean PDF
http://www.lead.org.au/fs/lead_safe/Lead_Your_Health_&_the_Environment-Korean.pdf

Lead, Your Health & the Environment - Macedonian PDF
http://www.lead.org.au/fs/lead_safe/Lead_Your_Health_&_the_Environment-Macedonian.pdf

Lead, Your Health & the Environment - Spanish PDF
http://www.lead.org.au/fs/lead_safe/Lead_Your_Health_&_the_Environment-Spanish.pdf

Lead, Your Health & the Environment - Turkish PDF
http://www.lead.org.au/fs/lead_safe/Lead_Your_Health_&_the_Environment-Turkish.pdf

Lead, Your Health & the Environment - Vietnamese PDF

http://www.lead.org.au/fs/lead_safe/Lead_Your_Health_&_the_Environment-Vietnamese.pdf

Lead Safe Housekeeping PDF
http://www.lead.org.au/fs/lead_safe/Lead_Safe_Housekeeping_Lead_Safe.pdf

Old Lead Paint PDF
http://www.lead.org.au/fs/lead_safe/Old_Lead_Paint_Lead_Safe.pdf

Working safely with lead PDF
http://www.lead.org.au/fs/lead_safe/Working_safely_with_lead_Lead_Safe.pdf

A Renovator's Guide To The Dangers Of Lead (Brochure 30 pages) PDF
http://www.lead.org.au/fs/lead_safe/A_Renovator_Guide_To_The_Dangers_Of_Lead_Lead_Safe.pdf

A Guide For Health Care Professionals (Brochure 34 pages) PDF
http://www.lead.org.au/fs/lead_safe/A_Guide_For_Health_Care_Professionals_Lead_Safe.pdf

A Guide To Keeping Your Family Safe From Lead (Brochure 20 pages) PDF
http://www.lead.org.au/fs/lead_safe/A_Guide_To_Keeping_Your_Family_Safe_From_Lead_Lead_Safe.pdf

Lead Hazard Management In Children's Services (Brochure 15 pages) PDF
http://www.lead.org.au/fs/lead_safe/Lead_Hazard_Management_In_Childrens_Services.pdf

Lead and Home Renovations (Factsheet 2 pages) PDF
http://www.lead.org.au/fs/lead_safe/LRC_Fact_Sheet-Lead_and_Home_Renovations.pdf

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15. Info Pack – Renting and Lead, NSW

By Elizabeth O'Brien, BSc, Grad Dip in Educational Studies (Health Educ'n), Manager, Global Lead Advice & Support Service (GLASS) run by The LEAD Group Inc. Australia

Enviro Check, Airsafe, SESA and New Environment [a subsidiary of HEGGIES] are the only four lead assessors we know of in NSW. Please see their entries at http://www.lead.org.au/clp/assessorsnsw.html if you wish to contact them or you can pass their details on if you wish to request that your real estate agent organise a home lead assessment (sampling for laboratory analysis, report-writing) after the peeling paint cleanup. Alternatively, your real estate agent could arrange to bring Martin Bagnall of Sampling Technologies and his X-Ray Fluorescence machine for on-the-spot lead assessment by XRF and a print-out of the results. See www.sampletech.com.au

Mentioning the expensive home lead assessment by a lead assessor is often a good preparatory move to then suggesting the use of a DIY-sampling lead assessment kit which is half to quarter the cost of a lead assessor. See http://www.lead.org.au/fs/DIY_sampling_lead_analysis_kits_flyer_20090715.pdf - the samples can be sent in two batches if preferred so that you have both pre- and post-repainting dust wipe and soil results to check on whether the painting contractor has done a lead-safe job and finally whether the home and yard is lead-safe for a child or pet.

Mentioning the DIY-sampling kit ($250 for LEAD Group members or $275 for non-members) is a good preparatory move to then discussing the option that, at the very least, they reimburse you for the cost of testing the flaking paint and paint dust with the spot test kit (eg Lead Check). Note that if the colour on the tip of the tester turned pink when you used it on paint dust, then the dust must contain at least 0.5% lead, which is equivalent to 5000 parts per million (ppm) lead - a very high figure indeed!

When dealing with your agent or landlord, put everything in writing! That's the key.

In addition to the factsheet "Lead paint & ceiling dust management - how to do it lead-safely [Info Pack 3]" at http://www.lead.org.au/fs/fst38.html, please find our info pack for tenants below and follow the links.

Unfortunately the NSW Department of Environment & Climate Change has, for no good reason, taken the part of the Lead Safe Renovator's Guide that they did web-publish, off their website, so you need to go to the Google Archive to find it: Part of A Renovator's Guide to the Dangers of Lead is available on-line at http://web.archive.org/web/20070830233627/www.epa.nsw.gov.au/leadsafe/leadinf4.htm

Please find in a recent newsletter at http://www.lead.org.au/lanv9n4/LEAD_Action_News_vol_9_no_4.pdf, a letter to a real estate agent, written by a tenant who had to move his family out of a lead-contaminated home but who was later compensated for various costs and refunded his rent.

I hope this helps but please re-contact if you have any further questions.

No 1 - Residential Tenancies Act - Tenants Rights Fact sheet - Your Rights Under The Residential Tenancies Act Tenants Advice And Advocacy Service
http://intranet.tenants.org.au/print/fs01-2010.pdf

No 6 – Repairs and Maintenance - Tenants Rights Fact sheet - Your Rights Under The Residential Tenancies Act Tenants Advice And Advocacy Service
http://intranet.tenants.org.au/print/fs06-2010.pdf

No 9 - You Want To Leave - Tenants Rights Factsheet - Your Rights Under The Residential Tenancies Act Tenants Advice And Advocacy Service
http://intranet.tenants.org.au/print/fs09-2010.pdf

No 11 – Consumer, Trader and Tenancy Tribunal - Tenants Rights Fact sheet - Your Rights Under The Residential Tenancies Act Tenants Advice And Advocacy Service
http://intranet.tenants.org.au/print/fs11.pdf

AS 4361.2 Lead - Guide To Lead Paint Management - Preventing Lead Poisoning In Australia Specifier Vol 7 Issue 2 http://www.lead.org.au/clp/AS4361.2.html

No 26 –Asbestos and Lead - Tenants Rights Factsheet - Your Rights Under The Residential Tenancies Act, Tenants Advice And Advocacy Service
http://intranet.tenants.org.au/print/fs26-2010.pdf

Lead Alert - The Six Step Guide To Painting Your Home - Third Edition Environment Australia
http://www.environment.gov.au/atmosphere/airquality/publications/pubs/leadpaint.pdf

Lead Safe Fact Sheet - Lead in Ceiling Dust LRC Publication Code LDE
http://www.lead.org.au:80/fs/fst37.html

Lead Safe Fact Sheet - Lead, Your Health and the Environment LRC Publication (see the Info Pack – Lead Poisoning Prevention, NSW in this newsletter).

Parents Of Lead-Poisoned Children & Tenants [Case Studies from LEADLINE (previous name for Global Lead Advice and Support Service)] LANv3n4 Spring 1995
http://www.lead.org.au/lanv3n4/lanv3n4-7.html ;
http://www.lead.org.au/lanv3n4/lanv3n4-8.html

Residential Tribunal Lead Paint Case: Fitness for Habitation - Reasons For Decision [EXTRACTS published in LEAD Action News vol 7 no 3, 1999] The LEAD Group
http://www.lead.org.au/Lanv7n3/L73-17.html

Do-It-Yourself Lead Safe Test Kits The LEAD Group
http://www.lead.org.au/clp/products/Do-It-Yourself-Lead-Safe-Test-Kits-20070526.html

Developer Contaminates Neighbour's Property Lead Aware Times Vol 1 No 1 ISSN 1440-4966 http://www.lead.org.au/lat/lat005.html

Exempt, Complying and Integrated Developments" in "LEAD SAFETY TOOL KIT FOR [NEW SOUTH WALES] COUNCILS: A Tool Kit for making your community safe from lead" The LEAD Group Inc page 41 of 64 [pdf p 47 of 70] at
http://www.lead.org.au/clp/toolkit.pdf

GUIDANCE NOTE FOR CEILING DUSTS CONTAINING LEAD WorkCover Authority NSW
http://www.workcover.nsw.gov.au/formspublications/publications/Documents/ceiling_dust_containing_lead_guidance_note_4955.pdf

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16. Info Pack – Renting and Lead, Queensland

By Elizabeth O'Brien, BSc, Grad Dip in Educational Studies (Health Educ'n), Manager, Global Lead Advice & Support Service (GLASS) run by The LEAD Group Inc. Australia

Once you have confirmed that the peeling house paint is leaded, Queensland tenancy regulations include a category of repairs that probably fits your situation: "urgent repairs that affect tenant health and safety", and you can either put your request for such repairs (eg lead-safe preparation of peeling paint, and overpainting with new paint) in writing (ie send a request by email) but it is advisable to fill in the Notice to Remedy Breach form, at http://www.rta.qld.gov.au/Resources/Forms/Forms-for-general-tenancies/Notice-to-remedy-breach-Form-11.aspx, save it, and then email the form to your agent or landlord.

In Queensland, you can ask the Environmental Health Division, Queensland Health Department to do free testing of house paint for lead, at their lab. Phone 33289310 or email ehb@health.qld.gov.au or check out the fact sheet at http://www.health.qld.gov.au/ph/Documents/ehu/5794.pdf but be sure to tell them that it is urgent and ask how soon you can expect the results. If there is a long delay in getting the paint test results, you would likely want to consider one of the following options.

There are only three lead assessors we know of in Queensland:

FullNameOrg	FullAddress	ContactDetails	TopicShort	WebSite
Anthony Preston, Heggies, Brisbane office	PO Box 844 Ashgrove QLD 4060	sw 0738584800 EMAIL: anthony.preston@heggies.com WEB: www.heggies.com	lead assessment	www.heggies.com

FullNameOrg	FullAddress	ContactDetails	TopicShort	WebSite
Greg Miller, Envirotest - Environmental Consultants	Mt Gravatt Research Pk Lot 12/ Don Young Rd Nathan QLD 4111	0733436066 EMAIL: envirotest@uq.net.au	lead assessment	

FullNameOrg	FullAddress	ContactDetails	TopicShort	WebSite
Bill Stavropoulous, Leeder Consulting	1498 Old Cleveland Rd Belmont QLD 4153	0733249744, 0417730359	lead assessment	

if you wish to contact them or you can pass their details on if you wish to request that your real estate agent organise a home lead assessment (sampling for laboratory analysis, report-writing) after the peeling paint cleanup.

Alternatively, your real estate agent could arrange to bring Martin Bagnall of Sampling Technologies and his X-Ray Fluorescence machine from Melbourne for on-the-spot lead assessment by XRF and a print-out of the results. See www.sampletech.com.au

Mentioning the expensive home lead assessment by a lead assessor is often a good preparatory move to then suggesting the use of a DIY-sampling lead assessment kit which is half to quarter the cost of a lead assessor. See http://www.lead.org.au/fs/DIY_sampling_lead_analysis_kits_flyer_20090715.pdf - the samples can be sent in two batches if preferred so that you have both pre- and post-repainting dust wipe and soil results to check on whether the painting contractor has done a lead-safe job and finally whether the home and yard is lead-safe for a child or pet.

Mentioning the DIY-sampling kit ($250 for LEAD Group members or $275 for non-members) is a good preparatory move to then discussing the option that, at the very least, they reimburse you for the cost of testing the flaking paint and paint dust with the spot test kit (eg Lead Check). Note that if the colour on the tip of the tester turned pink when you used it on paint dust, then the dust must contain at least 0.5% lead, which is equivalent to 5000 parts per million (ppm) lead - a very high figure indeed!

When dealing with your agent or landlord, put everything in writing! That's the key.

In addition to the factsheet "Lead paint & ceiling dust management - how to do it lead-safely [Info Pack 3]" at http://www.lead.org.au/fs/fst38.html, please find our info pack for tenants below and follow the links.

Please find in a recent newsletter at http://www.lead.org.au/lanv9n4/LEAD_Action_News_vol_9_no_4.pdf, a letter to a real estate agent, written by a NSW tenant who had to move his family out of a lead-contaminated home but who was later compensated for various costs and refunded his rent.

I hope this helps but please re-contact if you have any further questions.

INFO PACK ITEMS

Renting in Queensland - Tenants' Union of Queensland Inc

http://tuq.org.au/wp/wp-content/uploads/2010/03/Renting-in-Queensland_Feb-2010.pdf

Repairs and Maintenance - Tenants' Union of Queensland Inc

http://tuq.org.au/wp/wp-content/uploads/2009/12/Repairs-and-Maintenance-Nov-09-SD_NEW.pdf

You Want To Leave - Tenants' Union of Queensland Inc

http://tuq.org.au/wp/wp-content/uploads/2009/12/You-Want-to-Leave-Nov-09-SD_NEW.pdf

Resolving Tenancy Disputes - Tenants' Union of Queensland Inc
http://tuq.org.au/wp/wp-content/uploads/2009/12/Resolving-Tenancy-Disputes-SD_NEW.pdf

Information for tenants affected by floods and cyclones in Queensland - Tenants' Union of Queensland Inc http://tuq.org.au/wp/wp-content/uploads/2012/01/Info-for-tenants-affected-by-floods-cyclones-w-taas-contacts1.pdf

Notice to remedy breach Form 11 - Residential Tenancies Authority (RTA) Queensland

http://www.rta.qld.gov.au/Resources/Forms/Forms-for-general-tenancies/Notice-to-remedy-breach-Form-11.aspx; PDF File at
http://www.rta.qld.gov.au/Resources/Forms/Forms-for-general-tenancies/~/media/Forms/General%20tenancy%20forms/RTA-notice-to-remedy-breach-form11.ashx

AS 4361.2 Lead - Guide To Lead Paint Management - Preventing Lead Poisoning In Australia Specifier Vol 7 Issue 2 http://www.lead.org.au/clp/AS4361.2.html

Lead Alert - The Six Step Guide To Painting Your Home - Third Edition Environment Australia
http://www.environment.gov.au/atmosphere/airquality/publications/pubs/leadpaint.pdf

Lead Safe Fact Sheet - Lead in Ceiling Dust LRC Publication Code LDE
http://www.lead.org.au:80/fs/fst37.html

Lead Safe Fact Sheet - Lead, Your Health and the Environment LRC Publication Code LSE Removed from the web.

Please find modified version attached as filename: <LRC Lead, Your Health & The Environment UPDATED contact details 20081014.doc>

Parents Of Lead-Poisoned Children & Tenants [Case Studies from LEADLINE (previous name for Global Lead Advice and Support Service)] LANv3n4 Spring 1995
http://www.lead.org.au/lanv3n4/lanv3n4-7.html ;
http://www.lead.org.au/lanv3n4/lanv3n4-8.html

Residential Tribunal Lead Paint Case: Fitness for Habitation - Reasons For Decision [EXTRACTS published in LEAD Action News vol 7 no 3, 1999] The LEAD Group
http://www.lead.org.au/Lanv7n3/L73-17.html

Do-It-Yourself Lead Safe Test Kits The LEAD Group
http://www.lead.org.au/clp/products/Do-It-Yourself-Lead-Safe-Test-Kits-20070526.html

Developer Contaminates Neighbour's Property Lead Aware Times Vol 1 No 1 ISSN 1440-4966 http://www.lead.org.au/lat/lat005.html

Exempt, Complying and Integrated Developments" in "LEAD SAFETY TOOL KIT FOR [NEW SOUTH WALES] COUNCILS: A Tool Kit for making your community safe from lead" The LEAD Group Inc page 41 of 64 [pdf p 47 of 70] at http://www.lead.org.au/clp/toolkit.pdf

GUIDANCE NOTE FOR CEILING DUSTS CONTAINING LEAD WorkCover Authority NSW http://www.workcover.nsw.gov.au/formspublications/publications/Documents/ceiling_dust_containing_lead_guidance_note_4955.pdf

Insulation - installing ceiling insulation and your health and safety - Workplace Health and Safety Queensland

http://www.deir.qld.gov.au/workplace/resources/pdfs/alert-insulation_installing.pdf

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17. Environmental Health Officer Guidance Material for the Investigation of Environmental Sources of Excessive Lead Exposure

This Guidance Material was kindly provided to The LEAD Group by one of the state health departments, in the hope that it is useful throughout Australia and overseas

INTRODUCTION

This document has been developed as a resource for use by environmental health officers in the investigation of cases of excessive lead exposure of non-occupational origin. It identifies common environmental sources of lead exposure that should be considered in an investigation. Each section finishes with some prompt questions that should be considered by an environmental health officer during the investigation of a case.

The other aspect of follow-up is the provision of advice to cases or parents of cases about measures which need to be taken to reduce exposure to lead and the need for and suitable timing of further blood lead testing.

ASSESSING LEAD EXPOSURE IN THE HOME ENVIRONMENT

Natural levels of lead in environmental media such as air, water and soil are generally very low. However, many industrial and other activities over many years have resulted in contamination of the environment. Lead in the environment is both persistent and cumulative. Once contamination has occurred, it is difficult and often expensive to mitigate it.

The following are aspects to consider when assessing the possible sources of lead exposure for an individual case with an elevated blood lead level.

1. Ambient Air

Consider

- ***How far is the home from a major road?***
- ***Are there any lead industries close to the home?***
- ***Are local lead industries likely to be emitting significant lead to the air?***

2. Paint

The major cause of notifications of excessive blood lead levels in children is exposure to lead-based paint. This most commonly occurs when their home is undergoing renovation involving the mechanical sanding or stripping of lead-based paint. These activities generate large quantities of lead contaminated dust, which may be inhaled or ingested. Lead-based paint which is flaking or peeling is also a significant hazard for young children prone to pica behaviour ie. the eating of non-food items. The percentage absorption of ingested lead is greatest in young children and, in view of their tendency to mouth toys and their general hand-to-mouth behaviour, the dust from lead-based paint poses a major hazard. Other possible paint sources which might contain lead are toys which are frequently mouthed or played with, and bedroom furniture, especially old cots.

Consideration should also be given to the likelihood of lead exposure at a previous residence of the child, particularly if the move to the current home was recent eg. in the last 6-12 months.

The key factors in regard to the hazard posed by lead-based paint on homes are the age of the home and the type of material of which it is constructed. Homes built before the 1920s typically were painted with lead-based paint, some of which may still be present. Even if it has been stripped, the removal may have contaminated the house considerably. However, homes built up to the 1960s could well be painted with lead-based paint also. Naturally, the use of lead-based paint on brick and other earthen based homes would be less substantial, though the paint of window sills, doors etc. can be lead-based.

Consider

- ***How old is the house?***
- ***Is it likely to have been painted with lead-based paint?***
- ***What is the condition of the paintwork?***
- ***Has there been any sanding or stripping of paint recently?***
- ***Does the child chew on any painted objects (eg. cot, toys)?***
- ***In the last 2 years, has the child lived at another home which might have been the source of the lead exposure?***
- ***Has any neighbouring property been substantially sanded or stripped of paint recently?***

3. Soil and Dust

In smelter communities, soils may contain very high levels of lead from the spread of tailings or from natural mineralisation of the region.

Lead in household dusts (ie. indoor dust) is derived primarily from soil, paint and deposition from use of leaded petrol.

Lead in soil and dust is an important source of exposure for young children because of the frequency of their hand-to-mouth activity and their closer contact with soil through play.

Consider

- ***Was the land ever used for industrial purposes?***
- ***Has fill been brought onto the property?***
- ***Where did the fill come from?***
- ***Could the fill be contaminated by lead eg. tailings?***
- ***Are there areas of bare dirt in the yard?***
- ***Does the child play there regularly?***
- ***Does the child regularly eat dirt?***
- ***Has the child been observed eating dirt?***
- ***Does the sandpit contain contaminated sand?***

4. Water

Lead levels in drinking water can vary considerably from house to house, depending on the nature of the plumbing systems.

Use of lead in pipes, fittings or in solder used to seal joins, will increase lead concentrations in water depending on a number of factors including water pH and hardness, and the standing time of the water. Higher levels of lead are found in 'first flush' water, that is water that has been standing in the pipes overnight, compared to water from pipes that have been fully flushed.

Some people may collect and drink rainwater in which case sources of lead from roofs, guttering, downpipes and tanks may increase lead levels in the water.

Consider

- ***Is there a source of drinking water other than the reticulated supply?***
- ***Are there possible sources of lead contamination of this water?***
- ***How old is the plumbing system in the house?***
- ***Are there any lead pipes or lead-soldered joins?***

5. Food

Deposited airborne lead can contaminate fruit and vegetables. Produce grown in lead contaminated soil can also become contaminated, largely through particles on the surface rather than through lead uptake into the plants. Direct contact with contaminated soil presents a greater risk of lead exposure to children who play in it than to children who eat vegetables grown in it.

The replacement of lead solder in cans by welded seams has markedly reduced the lead content of canned food. Lead levels in food in soldered cans vary depending on the acidity of the food. Australian produced canned foods are nearly always in welded cans, thus limiting this as a source of lead exposure. Lead may leach into food from lead crystal or from tableware, such as earthen ware, china and porcelain with lead glazes.

Consider

- ***Does the case eat imported canned food regularly?***
- ***Does the case use a particular glazed pottery cup or bowl****?*
- ***Having regard to deposition of lead from air, or the possibility of contaminated soil, are home grown vegetables eaten by the case?***

6. Occupational Exposure

Children of lead workers can incur significant lead exposure if the worker returns home contaminated by lead. This lead may be on work clothing, on the skin or perhaps deposited in the family car. Sometimes, a lead worker may have access to lead contaminated material which is brought home and used as landfill or in children's sandpits.

Consider

- ***Are any adults at the residence exposed to lead at work?***
- ***Do any adults who work with lead return home with contaminated clothing or skin?***

7. Cosmetics

Surma or kohl are eye cosmetics used in Israel, Middle Eastern countries and India. They can contain substantial quantities of lead. In addition, lead acetate is used in some hair dyes.

Consider

- ***Are any suspect cosmetics used by/on the case for cultural reasons?***

8. Traditional Medicines

On occasions, it has been found that the use of traditional medicines, in particular among Asian immigrants, has resulted in substantial lead exposure and toxicity. Often, these preparations are imported directly by the affected person or a relative or friend.

Consider

- ***Is the case taking any suspect or nondescript medicines or tonics?***

9. Hobby Activities

Hobbies including making and repairing lead-light windows, use of lead glazes in pottery, casting lead weights (sinkers) for fishing, furniture finishing and shooting in indoor firing ranges can be sources of lead exposure. Particular attention should be placed on any hobbies or activities in the home environment which involve the melting of lead, particularly if fumes containing lead are produced.

Consider

- ***Does any person engage in a hobby involving the melting of lead at home?***

CASE MANAGEMENT ACTIVITIES

To ensure that ongoing exposure is reduced, the investigating officer may provide the following information to the exposed individual:

- Lead education on environmental and dietary factors
- Results of investigations identifying the source of exposure
- Lead hazard reduction advice
- Advice on follow up blood lead monitoring within three months
- Lead Safety information to homeowners

18. Residential Lead-Based Paint Disclosure Program Section 1018 of Title X - USA

The following is a brief extract from http://www.epa.gov/lead/pubs/leadbase.htm

Recognizing that families have a right to know about lead-based paint and potential lead hazards in their homes, Congress directed EPA and HUD to work together to develop disclosure requirements for sales and leases of older housing. These requirements became effective in 1996. EPA has established hazard standards for paint, dust, and soil in most pre-1978 housing and child-occupied facilities. These requirements became effective in 2001.

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19. World's Best Practice Lead Assessment Advice for Australian Parents, and Health and Child-Care Professionals - based on extracts from the Centers for Disease Control's (CDC's) January 2012 recommendations on lead, with permission

Extracts chosen by, and Australian info added by Elizabeth O'Brien, Manager, Global Lead Advice & Support Service (GLASS) run by The LEAD Group Inc. 14th February 2012.

According to the "Low Level Lead Exposure Harms Children: A Renewed Call for Primary Prevention - Report of the Advisory Committee on Childhood Lead Poisoning Prevention of the Centers for Disease Control and Prevention" {Preliminary Draft 29th December 2011 which was approved on 4th January 2012} AT http://www.cdc.gov/nceh/lead/ACCLPP/Final_Document_010412.pdf :

The goal of primary prevention is that all homes will become lead-safe and not contribute to childhood lead exposure. Given the involuntary nature of lead exposures associated with housing and other sources, and the risks associated with lead exposure, all exposures should be kept as low as possible. Controlling potential lead exposures in a child's environment before they cause damage will be the only way to prevent childhood lead poisoning. Special vigilance is also needed around renovation and remodeling activities in older homes, when lead dust levels are known to spike.

Lead-contaminated dust, soil, paint, and water are all associated with blood lead levels above the reference value in children [in children 1-5 years old, that is, currently 10 µg/dL (10 micrograms per decilitre) in the USA and proposed, in January 2012, to be 5 µg/dL]*, as are other risk factors, such as parent's occupation, age of housing, poverty and ethnicity. Although most published research associating environmental lead exposures and BLLs* [blood lead levels] *for children was done with children who had significantly higher levels than is common today, there are notable exceptions, such as the recent NHANES* [US National Health and Nutrition Examination Survey] *analyses of dust and children's BLLs [75, 76].*

Multiple risk factors/ exposures contribute to BLLs less than 10 µg/dL. In fact investigations conducted in response to a child with a BLL greater than 15 µg/dL often fail to identify a single source or risk factor and the challenge is even greater for lower level exposures. The inability to identify a single source of exposure in these cases underlines the fact that lead remains a multi-media pollutant requiring integrated exposure assessment and reduction. However in the U.S., lead-based paint hazards,

including deteriorated paint, and lead-contaminated dust and soil still remain by far the largest contributors to childhood lead exposure on a population basis [56].

Although the U.S. Environmental Protection Agency has established recommended lead exposure limits for dust, soil, and water in homes, these levels are not health based and were not selected to be protective of exposures below 10 µg/dL. For example, the current hazard standard for dust lead levels for floors of 40 µg/ft2 [(micrograms per square foot), approx. 400 µg/m2 (micrograms per square metre)] *is associated with potential exposures among children above the* [1991 US, 1993 Australian] *reference value* [of 10 µg/dL lead in blood].

Significant research on children with BLLs greater than 25 µg/dL has focused on the efficacy of a range of lead hazard controls and abatement of lead hazards (including dust, soil, and paint) and in uncontrolled trials has shown statistically significant declines in BLLs in the range of 20-30 percent at follow up (reference [70] p. 95). Only very limited research has examined the efficacy of lead abatement techniques and interim controls for children with BLLs as low as 5-9 µg/dL [77]. Evaluation of the decline in BLLs following environmental interventions is problematic because bone lead stores may remain a significant contributor to BLLs for many years following removal from further exposure and/or chelation.

As we pursue and prioritize a primary prevention model, we move beyond the goal of interventions just aimed at lowering a child's BLL. The new emphasis must be on efforts that are successful at reducing exposures to known sources. Prevention requires that we reduce environmental exposures from soil, dust, paint and water before it contributes to a child's exposure. Because blood lead integrates all sources of exposure including lead released from bone stores, it should not be used as a sole measure to determine whether or not a specific environmental exposure has been successfully addressed. Instead, environmental measurements, e.g., soil, or dust testing, are a more direct and preferred means of assessing whether an intervention has succeeded.

Environmental testing is a useful means to focus limited hazard control resources…

Environmental investigations in housing built before 1978 [in 1978, residential paint lead was limited to ***0.06%*** *in the USA. The "best equivalent" year when residential paint lead was limited to* ***0.10%*** *(nearly twice the US level) in Australia, was* ***1997.*** *Residential paint lead in Australia as at January 2012 is still limited to* ***0.10%****] should include:*

- History of child's exposure and questionnaire on potential sources of exposure
- Visual inspection of the home or facility where the child spends considerable time to identify peeling paint, moisture damage, and other relevant housing conditions;
- Measurements of lead levels in dust (with single surfaces wipe samples), soil, water, and paint that is not intact or otherwise separating from the substrate should be conducted…

In addition, environmental assessments may include investigation of potential exposures from other sources including, but not limited to, toys and other products, pottery [ceramic tableware or ovenware], cosmetics, folk remedies, food and candy with significant lead content. The potential for take-home exposures must also be evaluated based on the parent's occupation and hobbies…

Environmental assessments in response to children with elevated BLLs are also appropriate in homes built after 1978 [Australian best equivalent year ***1997****] when the use of lead paint was restricted.*

Recent analysis of NHANES blood and dust lead data, for example, indicates that when floor dust lead is less than 12 µg/ft2 [approx. 120 µg/m2], the geometric mean BLL is 3.9 µg/dL [75, 76]. ***.*** *Water and dust lead levels are currently under review by EPA. (See* [*http://yosemite.epa.gov/sab/sabproduct.nsf/RSSRecentHappeningsBOARD/9c733206a*](http://yosemite.epa.gov/sab/sabproduct.nsf/RSSRecentHappeningsBOARD/9c733206a)

5d6425785257695004f0cb1!OpenDocument&TableRow=2.2 and *http://water.epa.gov/lawsregs/rulesregs/sdwa/lcr/index.cfm#LongTermRevisions*

A successful primary prevention strategy must start with an environmental assessment in order to set priorities and inform the selection of appropriate response actions. Environmental inspections and testing are also necessary responses to cases where a child has already been exposed …

Selected References from the CDC recommendations:

70. Centers for Disease Control and Prevention. *Managing Elevated Blood Lead Levels Among Young Children. Recommendations from the Advisory Committee on Childhood Lead Poisoning Prevention*. CDC, Atlanta: 2002.
http://www.cdc.gov/nceh/lead/CaseManagement/caseManage_main.htm

75. Dixon SL et al., *Exposure of U.S. children to residential dust lead, 1999-2004: II. The contribution of lead-contaminated dust to children's blood lead levels*. Environmental Health Perspectives, 38 2009. **117**:468-74.
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2661919/pdf/ehp-117-468.pdf

76. Gaitens JM et al., *Exposure of U.S. children to residential dust lead, 1999-2004: I. Housing and demographic factors*. Environmental Health Perspectives, 2009. **117**:461-7.
http://www.ehponline.org/members/2008/11917/11917.pdf

77. Clark S et al., *Effects of HUD-supported lead hazard control interventions in housing on children's blood lead*. Environmental Research, 2011. **111**:301-11.
http://www.sciencedirect.com/science/article/pii/S0013935110001842

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20. BEST News

Better Environmental Sustainability Targets (BEST)

Published by Occupational Knowledge International

May 2012 - Volume 12

[URL: reprinted from http://hosted-p0.vresp.com/302817/1e7ea270ac/ARCHIVE]

Historic Shift in Lead Poisoning Prevention Policy

The U.S. Centers for Disease Control (CDC) formally accepted the recommendations from its Advisory Committee on Childhood Lead Poisoning Prevention to respond to lower level exposures and eliminate the term "level of concern". The agency will now recommend follow-up for children with elevated blood lead levels above a reference value representing the top 2.5% of all children in the U.S. That level is currently 5 ug/dl but, the agency has agreed to update this every four years. This is the first substantive change in the agency's guidance on blood lead levels since 1991.

Perry Gottesfeld, Executive Director of OK International said, "That CDC's statement represents a historic shift that is long overdue." He co-chaired the sub-committee that drafted these recommendations along with Dr. Deborah Cory-Slechta at the University of Rochester School of Medicine. Gottesfeld said that "approximately 450,000 children in the U.S. have blood lead levels

above this reference value, and we estimate that globally several hundred million children are suffering from higher exposures -- primarily in developing countries."

In a letter to the CDC on May 14, 27 members of Congress had urged the agency to disregard politics and budgetary constraints and adopt these recommendations. On May 16, 2012, the CDC published their official response to the Committee in which they concur in principle with all 13 recommendations. However, the budget for the agency's childhood lead poisoning prevention program has been cut by 94% in the current fiscal year. CDC's full response can be viewed here: http://www.cdc.gov/nceh/lead/ACCLPP/CDC_Response_Lead_Exposure_Recs.pdf

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21. Leadnet debate re: historic shift in US CDC childhood lead poisoning prevention policy

Collated by Elizabeth O'Brien, Manager, Global Lead Advice and Support Service (GLASS)

Following on the announcement by the US Centers for Disease Control and Prevention (CDC) [later published at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6120a6.htm?s_cid=mm6120a6_e] noted above in the article "Historic Shift in Lead Poisoning Prevention Policy" - a debate ensued on Leadnet, the egroup / listserv for lead poisoning prevention advocates and professionals, based in the USA and run by the National Center for Healthy Housing (NCHH).

Leadnet members have been my greatest ally –LEAD Action News readers can join this free service by subscribing at http://www.nchh.org/Resources/Listserves.aspx

Thank you to the following Leadnetters for permission to web-publish their emails.

From: Tom Laubenthal
Sent: Friday, May 18, 2012 5:46 AM
To: leadnet@mail-list.com
Subject: [Leadnet] New CDC policy & the term blood lead "Level of Concern" (LOC)

CDC's Response to Federal Advisory Committee on Childhood Lead Poisoning Prevention

In January 2012, the Advisory Committee on Childhood Lead Poisoning Prevention (ACCLPP)* recommended that CDC change its "blood lead level of concern," which has been 10 micrograms of lead per deciliter.

The recommendation was based on a growing number of scientific studies showing that even low blood lead levels can cause lifelong health effects. Today, CDC is officially announcing our agreement with that recommendation and the change in CDC policy.

ACCLLP recommends that CDC eliminate the term "level of concern" and lower the blood lead level for remedial action. Instead, the committee recommends linking elevated blood lead levels to data from the National Health and Nutritional Examination Survey (NHANES) to identify children living or staying for long periods in environments that expose them to lead hazards. This new level, called a "reference value," is based on the population of children aged 1-5 years in the U.S. whose blood lead levels are in the highest 2.5% of children tested. Today, that level is 5 micrograms per deciliter (µg/dL) of lead in blood.

In future publications, "level of concern" will be replaced with the reference value and the date of the NHANES that was used to calculate it. The new value means that more children likely will be identified as having lead exposure and that parents, doctors, public health officials, and communities can take action earlier to prevent health effects. For more than 20 years, NCEH's [National Center for Environmental Health's] work to eliminate lead poisoning in children has been one of CDC's most visibly successful initiatives. It has contributed to lowering significantly the number of U.S. children ages 1-5 years old with elevated blood lead levels (EBLLs), to increasing the number of children tested for EBLLs, and to promoting state and local lead screening plans and abatement laws.

For more information, please visit: http://www.cdc.gov/nceh/lead/ACCLPP/activities.htm
*

The Advisory Committee on Childhood Lead Poisoning Prevention (ACCLPP) advises and guides the Secretary and Assistant Secretary of the U.S. Department of Health and Human Services and the Director of the Centers for Disease Control and Prevention regarding new scientific knowledge and technical developments and their practical implications for childhood lead poisoning prevention efforts.

Tom Laubenthal
The Environmental Institute
www.tei-atl.com

From: Strane, Doug [Director of Community Health, Michigan]
Sent: Monday, May 14, 2012 2:29 PM
To: leadnet@mail-list.com
Subject: [Leadnet] Cognitive recovery from lead poisoning

Hello all -

I've been looking for information on how parents can assist in their child's cognitive recovery from lead poisoning. We sometimes refer parents to early childhood learning programs, but I would like to give parents more information on activities they can do with their child to lessen the effects of lead poisoning and better prepare them for school. It can't take the place of special attention in school, but it's a way for parents to play an important role in the child's recovery.

Does anyone know of any resources for parents looking to assist with lessening the cognitive effects of lead poisoning? Any first-hand experience that you've had with this would be helpful as well. Thanks much!

Doug Strane
Michigan Department of Community Health
Healthy Homes Section

From: Walsh, Reghan O - DHS
Sent: Wednesday, May 16, 2012 1:18 AM
To: leadnet@mail-list.com
Subject: RE: [Leadnet] Cognitive recovery from lead poisoning

CDC has a webpage on developmental issues:

http://www.cdc.gov/ncbddd/actearly/index.html

Includes a 1-page flyer with parents' developmental questions and another with suggestions on talking with parents--may be helpful:
http://cirrus.mail-list.com/leadnet/83893034.html

http://cirrus.mail-list.com/leadnet/66484995.html

This is a resource in Wisconsin: http://www.actearly.wisc.edu/actearly.php

You may have something in your area as well.

Reghan O. Walsh
Member of the CDC workgroup called Education Assessment and Intervention
Health Education Specialist
Wisconsin Childhood Lead Poisoning Prevention Program
Madison, WI 53701-2659

Check out our website (http://dhs.wisconsin.gov/lead) OR call 1 800 LEAD
FYI to learn how to protect children from lead poisoning.

From: Mike Martin
Sent: Wednesday, May 16, 2012 1:07 AM
To: <leadnet@mail-list.com>
Subject: Re: [Leadnet] CDC

Don't forget that in 1999 when the GAO (federal Government Accountability Office) did an investigation that performed actual testing of children on Medicaid, they found that only 10 percent of the children they found to be lead poisoned at 10 micrograms had actually been screened by Medicaid. So when you see a statistic that says 500 kids were found to be lead poisoned at 10 micrograms, the reality is that 5,000 kids were actually lead poisoned and they only detected 10 percent. Even if you assume that things have improved since 1999, and I'm told they haven't, where maybe 20 percent are screened today, that 500 number becomes 2,500 kids actually lead poisoned.

[**For non-US readers:** "Medicaid was established in 1963 under Title XIX of the Social Security Act to help low-income families and children have access to health care. As written in the legislation, four categories of impoverished people can qualify for Medicaid--blind, disabled, aged, and families with dependent children. In 1967, Medicaid children under age 21 were granted Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) health services. EPSDT offers early screening for health problems. In 1986, Medicaid coverage for impoverished pregnant women and children under age one was added as a state option." www.ehow.com/about_4612428_what-is-medicaid.html]

On top of that, how many undocumented immigrants do you have in your community? They are not eligible for screening through Medicaid and are more likely to be lead poisoned for various reasons.

I looked at a couple of states that did publish incident rates at 5 percent a few years ago and I found that there were about 5 times as many kids at 5 micrograms than at 10 micrograms. So I have consistently told people over the past few years that you can

generally expect that the number of children actually lead poisoned is about 25 times the number reported, plus the undocumented immigrants.

This becomes important when you talk about interventions and support for school children, and for pre-school children. Even if you do not perform intervention to stop the lead poisoning, which society has decided costs too much, you still have to deal with the children who come to school with the cognitive problems triggered by lead poisoning. So when we have Maria Miranda's work showing test score declines below 10 micrograms, and the Canfield work showing a half standard deviation I.Q. loss by 10 micrograms, you know you have kids with cognitive problems well below the official level of concern.

I have suggested that we certify all children with lead poisoning levels of 5 micrograms and higher and give them a certificate that excuses them from school testing for life. If society has decided these kids are expendable and too expensive to prevent from being poisoned, then society should certify that they don't have to meet the normal requirements of cognitive development. In fact, research says they typically cannot meet the normal requirements of cognitive development, which is what "poisoned" means. If there are no consequences from being "poisoned" then why call it "lead poisoning" and if there are consequences, which research has heavily documented, then why ignore that the kids are not likely to meet normal cognitive development standards?

As I see it, the question is simple. Are we as a society going to prevent childhood lead poisoning, or are we as a society going to take responsibility for the consequences of not preventing childhood lead poisoning? So make the law simple: count any child with a lead level of 5 micrograms or greater as "lead poisoned" and certify that this child is likely not to meet cognitive development standards. The law already says that children with lead levels above 10 micrograms should be identified through I.D.E.A. outreach and receive special education services, which society pretty much ignores, so why not make the law apply to 5 microgram levels where we know from solid research that cognitive damage occurs, and ignore it at that level?

I think it is a little surreal to state that we have solid research showing that children suffer cognitive damage that results in an inability to learn at normal developmental levels with BLLs below 10 micrograms, but we are going to ignore this because we have political and financial reasons to make the problem go away by defining our "level of concern" at 10 micrograms. Teachers in Rhode Island's Central Falls school were fired because of low test scores, but a contemporaneous study showed that Central Falls was one of 4 Rhode Island cities where lead poisoning incidence approached 50 percent in children. This is the reality of Marie Miranda's research: lead poisoned children are NOT going to score at the same level on academic tests as children who are not lead poisoned. That is what "poisoned" means.

The real social cost of lead poisoning has repeatedly been shown to be about 25 times what we officially admit to. We don't screen the kids we officially say we do, we know there are more kids suffering cognitive damage than we officially say we have, and we ignore the laws that officially say we provide these kids with educational assistance. So do we admit to reality and do nothing about it, or do we ignore reality and claim success at solving the problem? I say we should do the former, admit to reality and officially give each lead poisoned child a certificate that admits we have chosen to do nothing about it and we know they will not have normal cognitive development.

Mike Martin
Phoenix, Az

From: Karl Hess
Sent: Wednesday, May 16, 2012 3:38 AM
To: leadnet@mail-list.com
Subject: [Leadnet] Cognitive recovery from lead poisoning - message from a pediatrician

There are assumptions in the way we have been dealing with lead when levels over 10 were common.

The data is now clear that levels over 2 reduce both intelligence and executive control - at enormous cost to the country.

It would cost a lot less to clean up the lead, but that would require thinking ahead and humans are not very good at that.

Recognizing this situation seems to me to require some changes in the way we think about things. (I'm thinking as a pediatrician.)

1. I think we have a moral obligation to tell parents if their child has been ingesting lead and will get significant damage if it continues. Wouldn't you want to know if your child were being exposed?

If we admit that all levels >2 cause damage we can tell them, and help them look for sources.

Some may be obvious once we start looking.

2. Calcium deficiency greatly promotes lead absorption, and most American children don't get recommended amounts of Calcium, which is cheap.

Getting plenty of Iron and Vit C probably helps as well.

My guess is that parents would be a lot more thorough with their child's nutrition if they know that stakes involved.

Dean is right that government agencies do not have the resources to take responsibility for this, so the only way to proceed at present is to shift to secondary prevention through the medical sector - and it is crucial to identify these kids as early as possible.

Millions of investigations will need to be done, as Dean says, but we have to face the facts that in the current political environment, they aren't going to be, so we have to adapt.

That's why we have such large brains. What do you think?

Karl Hess

From: Dr Perry Gottesfeld
Sent: Wednesday, May 16, 2012 4:40 AM
To: leadnet@mail-list.com
Subject: Re: [Leadnet] CDC

Dear All

This is a very useful debate that has come out on leadnet, but as one of the members of the ACCLPP Committee who played a role in the new recommendations to CDC, I did want to address some of the misconceptions.

1) First, I recommend that people in this field have a look at the entire document which is available on the CDC web site at:

http://www.cdc.gov/nceh/lead/ACCLPP/Final_Document_030712.pdf

2) The document calls for the elimination of the terminology "level of concern" as we are all clearly concerned about levels below 10 ug/dl.

To be clear, 5 is not the new 10!

3) The thrust of the recommendation is that we all move towards a primary prevention model. To quote "Primary prevention is a strategy that emphasizes the prevention of lead exposure, rather than a response to exposure after it has taken place."

In this effort we don't suggest waiting for health departments to respond, but instead we are calling for action on the part of pediatricians, parents, housing agencies, social service agencies, and others to play a role in prevention.

4) Some are turning this into a debate regarding costs of abatement or investigations but that is not part of the report.

Already many states and local governments are responding to children with blood lead levels less than 10 ug/dl.

We know that actions to prevent lead exposures are much more cost effective than responding to a child with an elevated blood lead level (e.g. improved nutrition, lead safe housing).

Regards

Perry Gottesfeld
Occupational Knowledge International
PS- Even Congress got the message wrong in the letter sent yesterday to CDC by suggesting that 5 is the new 10!

From: "Karl Hess"
Sent: Wednesday, May 16, 2012 6:54 AM
To: <leadnet@mail-list.com>
Subject: Re: [Leadnet] CDC

Dr Gottesfeld,

Thank you for entering the discussion.

You are probably aware that congress and the CDC have pretty much eliminated funds for primary prevention and cities and states have had their budgets decimated. That was where the money for primary prevention came from. No one else has the resources to deal

with this, so far as I know. Everyone prefers primary prevention (partisan statement deleted).

Given that reality, pediatricians can be much more pro-active by implementing the activities which I've mentioned today, and not waiting for more damage to occur. Since I'm retired I have time to read the literature and no political bosses to try to control me. When I talk to pediatricians, they have thought that the CDC recommended 10 as a threshold, telling parents that children with levels reported less than that there is no danger. I know what the documents say, but pediatricians in practice have lots of problems to worry about and aren't going to read 200-page discussions.

Please explain the rationale for using the statistical measure instead of the levels which multiple studies have documented damage to the child's brain - both IQ and executive function. It looks as though ACCLPP is being dragged kicking and screaming to stop its denial of the true danger of lead.

Regards,

Karl Hess, MD, FAAP

From: Karl Hess
Sent: Wednesday, May 16, 2012 11:42 AM
To: leadnet@mail-list.com
Subject: Re: [Leadnet] CDC

Perry,

So far as I can tell the only safe level is 0, which it was for most of human history.

Widely used equipment can measure lead down to 1.2 µg/dl with a std dev of 0.7, according to the Wisconsin Lead Proficiency studies. So it is impractical at this point to set a level below 2.

If we were as smart as we like to think we are, we would get a lead [in blood level] at the first prenatal visit, and if it is over 2, look for sources, and push the Ca in the diet to keep the lead in the bones as much as possible.

Then we would get a lead level at birth to see where things stand.

If the child is a preemie and needs transfusions, we would make sure the blood used has very low lead levels.

(Isn't that radical!)

Repeat lead levels at regular intervals till age 6.

If the level is going up, look for sources and push the calcium.
Most kids get too little anyway.

As a side benefit, the millions of parents who become aware of their kid's poisoning might make it necessary for the politicians to provide the funds to clean up the mess.

Then we would have primary prevention.

Does that make sense to you?

Karl

From: Lead Safe America Foundation
Sent: Wednesday, May 16, 2012 12:26 PM
To: leadnet@mail-list.com
Subject: Re: [Leadnet] Lead Safe America Foundation film "MISLEAD" due out Winter/Spring 2013

Hi Karl,

that's the idea behind our film - creating awareness in millions of parents ALL AT ONCE - as a first step that will then influence politics and funding! :-)

Can I quote your post (below) on our film's facebook page?

For those who have not yet seen the 16 minutes that is the rough-cut from our New Orleans presentation (with an emphasis on footage done in New Orleans) please watch. The link is below.

I wasn't going to share this with you all quite yet because I wanted to do some more editing - but it seems so timely to the conversation on leadnet over the past couple of days that I would really like you to see it.

This is not meant to represent the WHOLE MOVIE (there are many elements that will be included in the full film that are not addressed here)

- and is just a sneak peek - of the direction we are going in the film.

The first 12.5 minutes are mostly new material - footage from interviews with parents and experts (Rick Nevin, Dave Jacobs, Harrison Newton, Pierre Erville, Neil Leifer, Howard Mielke, Philip Shabecoff, Ronnie Levin, Joel Schwartz, Lee Wasserman, Sanjay Gupta, Philip Landrigan, Leonardo Trasande, Ted Lidsky, John Rosen, David Rosner, Mark Pokras, Jerry Markowitz, Rebecca Morley, Nabil Baddour, Beth Butler, New Orleans Sheriff Marlin Gusman, Senator J.P. Morrell and others) and the last 3.5 minutes are the trailer that you may have already seen (it's tacked on to the end.)

The voices of the parents in the film are the most compelling reason to watch AND the main concept behind the film: get millions of parents to realize this could be their child (encourage pre-natal and preconception testing too!)

Some people have had trouble viewing in Safari - if that happens to you, please try Firefox or another browser. http://misleadmovie.com/Mislead_Movie/PrivateNOLA.html

I'm having a second phone meeting with HBO tomorrow... fingers crossed everyone!

Our Facebook Page

- ("like" it if you want to get regular updates on the film)
http://www.facebook.com/MisleadMovie - We started the facebook page on April 16th and already have 350 "likes".

The intention is to use this film as a tool (for all of you!) to help spread the word - so please encourage people to "like" the film's facebook page as a first step in getting the word out - so when the full film is finally available for the public to view (Winter/Spring 2013), we already have an audience established.

Thank you everyone for all you are doing to protect children.

Tamara Rubin
Executive Director
Lead Safe America Foundation
http://www.leadsafeamerica.org

22. Australian Blood Lead Forum Flyer

Macquarie University
Public Health Network

Supported by

Faculty of Science
Genes to Geoscience Research Centre

Macquarie Law
Centre for Legal Governance

Invites you to attend a forum on

Eliminating Childhood Lead Toxicity in Australia – A Little is Still Too Much

Tuesday 5 June 2012, 9.45am to 4pm
Room – X5B 292 Music Room
Campus map: http://www.mq.edu.au/on_campus/maps/campus_map/
Followed by a reception from 4-5pm

Despite the decline in childhood lead poisoning, lead toxicity remains a major public health problem in Australia. In some communities, 3 in 10 children develop lead poisoning, defined as having a blood lead over 10 µg/dL. Moreover, new research has consistently found that blood lead concentrations below 5 µg/dL are associated with IQ deficits, learning problems and behavioral problems in children, such as ADHD. These studies confirm the National Health and Medical Research Council's view that there is no safe level of lead exposure, particularly for children who are most at risk."

This forum will examine the evidence for lowering the Australian blood lead goal of 10 µg/dL and the implications of such action. National and international speakers have been invited and we welcome all interested persons to contribute to the forum.

The forum will consist of a series of short talks followed by facilitated discussion. The themes covered will include: effects of exposure at blood lead levels below 10 µg/dL; the epidemiology of lead exposure in Australia; the impact of lead poisoning on families and; preventing lead poisoning in Australian communities. The day will conclude with the objective of trying to find a consensus on a way forward for better identifying those at risk and protecting them from preventable lead exposures.

A schedule for the day can be located at: www.mq.edu.au/public-health-research-network

Macquarie University's Public Health Research Network (PHRN): Launched in 2011, the PHRN brings together researchers from across Macquarie University who undertake research involving environmental health, global health, health communication and promotion, health psychology, emotional and mental health, health policy and economics, epidemiology and biostatistics. There is also considerable expertise in children's health across many of these areas.

Further information: www.mq.edu.au/public-health-research-network

Eliminating Childhood Lead Toxicity in Australia – A Little is Still Too Much

Macquarie University – June 5th 2012

9.45 am - 9.55 am
Welcome
(Professor Gail Whiteford, Pro Vice Chancellor, Macquarie University)

Session 1 - Overview of environmental lead exposures

9.55 am - 10.15 am
Lead toxicity: the ongoing search for a threshold.
Speaker - Professor B.P. Lanphear, Simon Fraser University, Vancouver.

10.15 am - 10.45 am
Environmental lead exposures in Australia.
Speaker - Professor M.P. Taylor, Environmental Science, Macquarie University.

10.45 am - 11.00 am
Morning Coffee break

Session 2 - Research and implications for Australia
Session facilitated by Professor Brian Gulson, Emeritus Professor, Macquarie University.

11.00 am - 11.20 am
Epidemiological lead research in Australian communities.
Speaker - Dr David Simon, SA Health, South Australia.

11.20 am - 11.40 am
Biomarkers of lead exposure in humans.
Speaker – Professor Manish Arora, Environmental and Occupational Medicine and Epidemiology, Harvard School of Public Health, Boston, & Institute of Dental Research, and Oral Pathology and Oral Medicine, Faculty of Dentistry, University of Sydney, NSW, Australia.

11.40 am - 12.00 noon
The efficacy of educational interventions for mitigating lead exposure.
Speaker - Dr Susan Woolfenden, Sydney Children's Hospitals Network, Sydney Children's Community Health Centre, Randwick, Australia.

12.00 noon - 12.30 pm
Discussion - facilitated by Professor Brian Gulson.

12.30 pm to 1.30pm
Lunch

Session 3 - Preventing Lead Poisoning
Session facilitated by Professor Peter Sly, Queensland Children's Medical Research Institute, University of Queensland.

1.30 pm - 1.45pm
Personal experience of lead poisoning in the community.
Speaker - Sergeant Jeff Farmer, Port Stephens, NSW.

1.45 am - 2.00 pm
The science of preventing childhood lead toxicity.
Speaker - Professor B.P. Lanphear.

2.00 pm - 2.30 pm
Standards and regulation for environmental lead exposure.
Speaker – Dr Alana Mackay, Research Scientist, Environmental Research Institute of the Supervising Scientist (ERISS), Supervising Scientist Division, Dept. of Sustainability, Environment, Water, Population and Communities (Federal Govt).

2.30 pm - 2.45 pm
Consumer products and lead exposures.
Speaker - Elizabeth O'Brien, Manager, Global Lead Advice & Support Service (GLASS), NSW.

2.45 pm - 3.15 pm
Discussion - facilitated by Professor Peter Sly.

3.15 pm - 3.30 pm
Afternoon tea

Session 4 - Concluding comments and a consensus for a way forward
3.30 pm - 4.00 pm
Session facilitated by Professor Chris Winder, Professor of Occupational Health, Safety and Environment, Faculty of Business, Australian Catholic University, Sydney.

Close of Meeting - 4.00 pm

23. Free Subscription to e-Newsletter Notifications / Membership & Donation Forms

You can receive a free emailed notification whenever a *LEAD Action News* has been web-published just by filling in the Subscription Form at http://www.lead.org.au/LEAD_Action_News_Subscription.html - you can choose whether you want just those in English, Spanish or Chinese or those in ANY of those languages.

You can become a member of The LEAD Group (which also entails emailed notification when a newsletter is web-published and entitles you to discounts when you purchase any of our DIY-sampling laboratory lead analysis kits) / or make a donation to the Lead Education and Abatement Fund (LEAF) by filling in the Form at http://www.lead.org.au/sb.html or http://www.lead.org.au/Donation%20LEAF.pdf

24. Acknowledgement and Disclaimer

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