

HEALTHY HOMES AND LEAD POISONING PREVENTION PROGRAM

February 23, 2022

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Healthy Homes and Environment Section



NH DIVISION OF
Public Health Services

Improving health, preventing disease, reducing costs *for all*
Department of Health and Human Services



Agenda

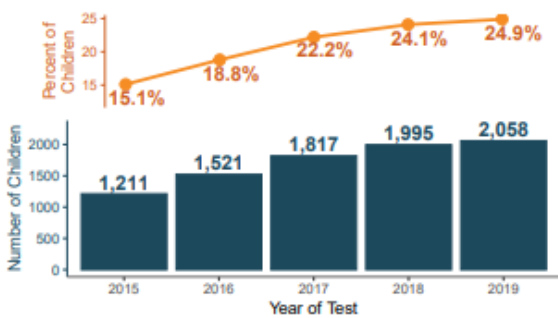
- Why are we concerned about Lead?
- What are common sources for lead and how can we take steps to reduce exposure?
- How do we test for lead in children and adults?
- What happens when elevated levels are found in children's blood?
- How can we test for lead in their water?
- Any pertinent legislation happening right now?
- What are the gaps in lead regulations and blood testing and what needs improvement?

2019 LEAD EXPOSURE DATA BRIEF FOR THE SEACOAST REGION

Lead poisoning is entirely preventable. However, nearly 1 million children living in the United States have blood levels high enough to impair their ability to think, learn, and concentrate.

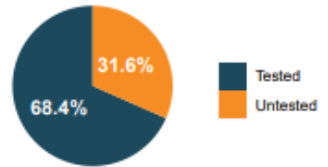
In 2019, 40 children (0 – 72 months old) in the Seacoast Region were identified with elevated blood lead levels of 5 ug/dL or higher.

Annual Number (and Percent) of Children, 0 to 72 Months Old, Tested for Blood Lead in the Seacoast Region 2015 – 2019



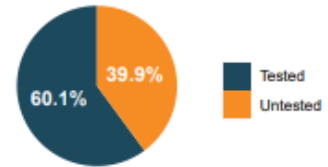
Percent of Children Tested per New Hampshire Screening and Management Guidelines

Percent of One-Year-Old Children Tested for Blood Lead



In 2019, 68.4% of one year-old (12–23 month-old) children residing in the Seacoast Region were tested for lead in their blood (968 of an estimated 1,415 children).

Percent of Two-Year-Old Children Tested for Blood Lead



In 2019, 60.1% of two year-old (24–35 month-old) children residing in the Seacoast Region were tested for lead in their blood (804 of an estimated 1,337 children).

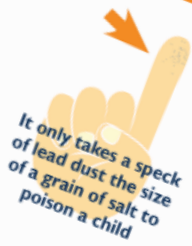
In 2018, New Hampshire passed a state law requiring providers to conduct blood lead level tests for all one and two year-old children.

Childhood Lead Exposure by Town

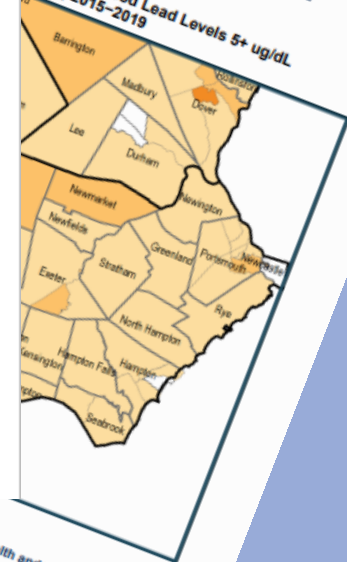
TOWN	AGE GROUP (IN MONTHS)	POPULATION CIVIS ESTIMATE 2018	NUMBER TESTED 2019	PERCENT TESTED (%) 2019	NUMBER WITH ELEVATED BLOOD LEAD (5+ ug/dL) 2019
BRENTWOOD	0 to 72	244	46	19	16
	12 to 23	27	19	70	47
EFFING	0 to 72	478	149	31	31
	12 to 23	97	62	64	75
EXETER	0 to 72	865	217	25	25
	12 to 23	139	100	72	75
FREMONT	0 to 72	305	30	10	70
	12 to 23	53	30	57	70
GREENLAND	0 to 72	256	63	25	63
	12 to 23	44	22	50	22
HAUGHTON	0 to 72	57	109	189	189
	12 to 23	57	75	132	75
KINGSTON	0 to 72	652	84	13	84
	12 to 23	117	86	74	86
NEWMARKET	0 to 72	327	56	17	56
	12 to 23	58	55	95	55
NEWTON	0 to 72	698	125	18	125
	12 to 23	117	125	107	125
NOTTINGHAM	0 to 72	328	57	17	57
	12 to 23	49	40	82	40
PORTSMOUTH	0 to 72	396	57	14	57
	12 to 23	7	7	100	7
RAYMOND	0 to 72	241	1	0	1
	12 to 23	241	1	0	241
RYE	0 to 72	241	1	0	1
	12 to 23	241	1	0	241
SEABROOK	0 to 72	241	1	0	1
	12 to 23	241	1	0	241
STRATHAM	0 to 72	241	1	0	1
	12 to 23	241	1	0	241
SEACOAST	0 to 72	241	1	0	1
	12 to 23	241	1	0	241

Childhood Lead Exposure

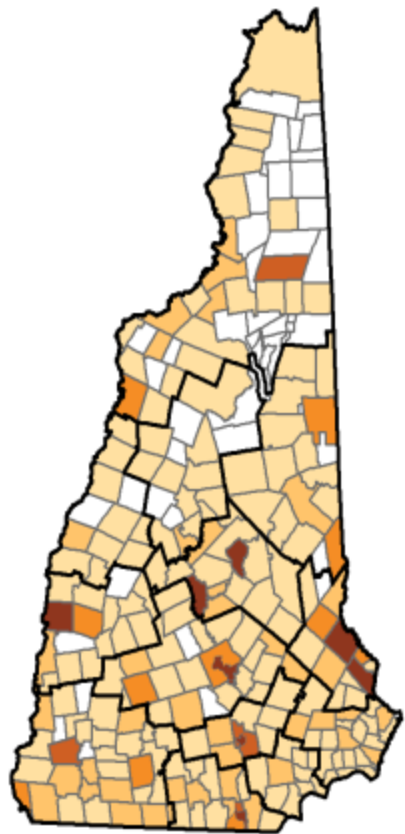
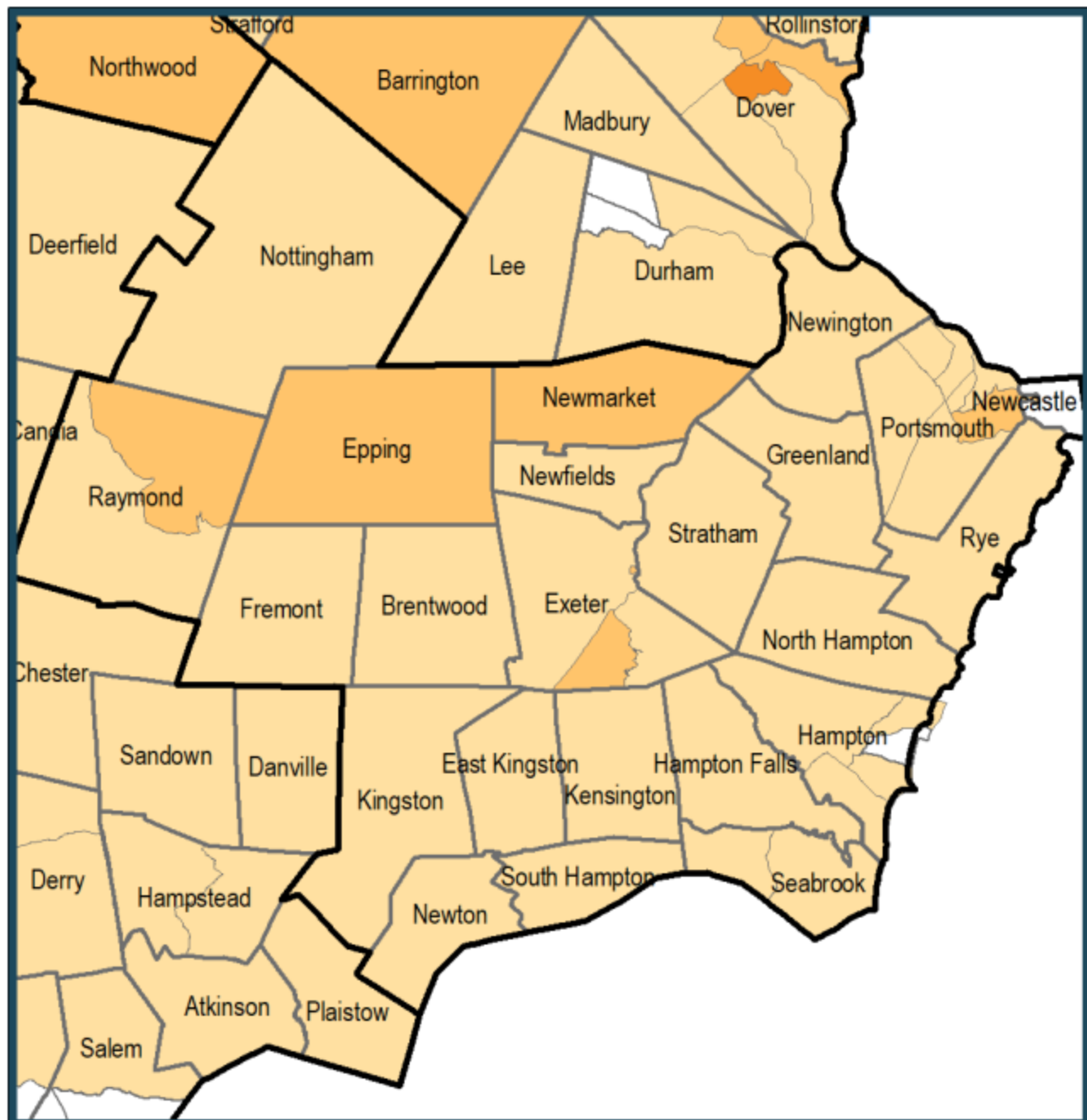
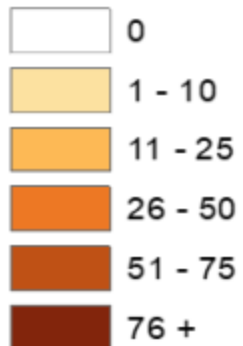
Children 0 to 72 Months Old with Elevated Blood Lead Level (5+ ug/dL) or Higher, 2018-2019



Children with Elevated Blood Lead Levels 5+ ug/dL, 2015-2019



Number of Children 0 to 72 Months Old with Elevated Blood Lead Levels 5+ ug/dL by Town (or Census Tract) in the Seacoast Region, 2015–2019



TOWN	AGE GROUP (IN MONTHS)	POPULATION DPHS ESTIMATE 2018	NUMBER TESTED 2019	PERCENT TESTED (%) 2019	NUMBER WITH EBLL 5+ ug/dL 2019 ONLY	NUMBER WITH EBLL 5+ ug/dL 2015-2019	NUMBER WITH EBLL 10+ ug/dL VENOUS TESTS 2015-2019
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PORTSMOUTH	0 to 72	1111	277	25	12	25	1 - 4
	12 to 23	218	135	62	1 - 4	8	0
	24 to 35	170	90	53	1 - 4	6	1 - 4



- NH is a ‘universal’ testing state. 100% of your one and 2 year old should be tested.
- Thirty-nine children with EBLL during this five year time period

TOWN	POPULATION UNDER 6 YO PERCENT (%)	HOUSING UNITS BUILT PRE-1950 PERCENT (%)	HOUSEHOLDS MOVED IN LAST YEAR PERCENT (%)	RENTED HOUSING UNITS W/ CHILDREN UNDER 6 YO PERCENT (%)	UNDER 6 YO LIVING BELOW FED. POVERTY LEVEL PERCENT (%)	UNDER 6 YO IN WITH NO HEALTH INSURANCE PERCENT (%)
PORTSMOUTH	4.9	43	5.6	41	7.2	1.1

● Compared to other communities in your PHR

- High percentage of homes built pre-1950 (43%)
- Transient population (5.6%)
- High percentage of homes rented with young children (41%)
- High percentage of children living in poverty (7.2%)

How are Children Getting Lead Poisoned?

Lead Paint, DIY Projects, Soil, Spices, Take Home, Cosmetics, Water, Firing Ranges, Toys & Jewelry, & Baby Food



What is the Primary Source of Lead?

High Percentage of housing stock was built before lead in residential was banned.



Don't be misled about lead.

Did you know?

It only takes
this much

lead →
to **poison**
a child.¹



In the absence of state policy,
the American Academy of Pediatrics
recommends that **all children be
tested at age one and again
at age two.** Yet only a fraction are
ever tested.²

When it comes to lead exposure, it's best to test.

Perfect Storm

Don't see deficits and impact until older

No Brain-Blood

Developing Brain

Sweet Tasting

Trace Amounts

Oral Stage

No Immediate
Symptoms



Crawl on Floors and Pull to Standing - Surfaces Where Lead Dust Collects

Perfect Pediatric Poison

Potent Neuro-Toxicant

Lead's Neurobehavioral Signature

Lead Exposure's Negative Impact On Specific Abilities

- **Attention** – inattentive, impulsive, Hyperactive/ADD, distractibility, poor organization, lack of persistence in completing tasks
- **Executive Function** – deficits in areas of strategic planning, control of impulses, flexibility of thought, self-monitoring of one's own behaviors and emotions
- **Visual/Spatial** – poor memory and organization abilities, reasoning with visually presented - non-verbal problems. Presents as deficits in reading and math

Lead's Neurobehavioral Signature

Lead Exposure's Negative Impact On Specific Abilities

- **Behavior Challenges** - impulsivity, emotional regulation, anti-social behaviors, oppositional, aggression, destructive behaviors.
- **Speech and Language** - delays and deficits. Language processing deficits, hearing deficits
- **Fine and Gross Motor** - Poor balance, poor coordination, lack of bilateral coordination, clumsiness and unsteadiness, higher rate of injury.

Long Term Societal Costs on Your Community

- Special Education
- Risky Behaviors
- Teen Pregnancy
- School Suspensions
- High School Drop Out
- Substance Abuse
- Juvenile Delinquency/Detention
- Child Abuse and Neglect
- Adult Criminal Activity

Lead Testing is a Simple Finger Prick 1 & 2 Year Old 'Well Child' Visit



NH 'Action Limit' is 5 ug/dL Children 72 mos. and younger

- **RSA 130-A Lead Paint Poisoning Control & Prevention**
 - Protects young children 72 months & younger living in rental units
 - Provides Nurse Case Management
 - Environmental Assessment for children living in 'owner occupied' homes
 - Where are the hazards?
 - How can I safely DIY?
 - Environmental Investigation for children living in rentals
 - Administrative Order of Lead Hazard Reduction
 - Only licensed lead professionals can work on these properties

RSA 540-A:3-a

Testing for Lead in Drinking Water

● DPHS collects a stagnant water test during home visit.

● Samples analyzed at State Lab **\$15.**

● If results are ≥ 5 ppb, a referral is made to DES for education.

● If results are ≥ 15 ppb in a rental, landlord is required to install and maintain a water filtration system.

LEAD POISONING & LEAD IN DRINKING WATER

HEALTHY HOMES & LEAD POISONING PREVENTION PROGRAM

What does my water test result mean?

Non-Detect (ND) or less than 1 ppb (ug/L) or .001 ppm (mg/L)

- No action needed

1 to 5 ppb (ug/L) or .001 to .005 ppm (mg/L)

- Flush the tap every morning by running cold water for one minute before using. This clears out water that has been sitting in the pipes overnight. Also flush the tap when you have been away from home.
- Use only cold water for drinking and cooking. If you need hot water for drinking or cooking, run cold water from the tap first, then heat it.
- Use bottled water for baby formula and food. If you must use tap water, make sure you only use cold water and flush the tap for a full minute first.

5 to 15 ppb (ug/L) or .005 to .015 ppm (mg/L)

Take steps listed above, AND

- Install a water filter that is certified to remove lead. There are pitcher and faucet filters that remove lead, but read the package carefully. It must say it is certified by NSF/ANSI under Standard 53 for lead removal.
- Test water for lead after you have taken all the steps above to see how effective these steps were in removing lead.

Greater than 15 ppb (ug/L) or .015 ppm (mg/L)

Take steps listed above, AND:

- If a second water test shows there is still lead in your water above 5 ppb, try to determine the source of lead in your home. Replace any lead plumbing parts. Drink bottled water until the lead is removed.

NIH Department of Environmental Services, Drinking Water & Groundwater Bureau
1-603-271-2516

540-A:3-a Testing for Presence of Lead in Drinking Water. – Any time a child tests positive for lead which exceeds the standards established shall test the water in the unit for lead. If the presence of lead in the drinking water exceeds the action level established by the Environmental Protection Agency and shall install on the kitchen faucet a filtering device certified to reduce lead by NSF International/American National Standards Institute and cartridges. The landlord shall not be required to maintain or install water filters where the source of the lead has been removed and the water to the Environmental Protection Agency, as verified by the department of health and human services.

Current Legislation Underway

- **SB 371** – to replenish \$3M in NH's State Loan Fund overseen by the NHHFA for Removal of Lead Hazards
- **HB 1642** – Requiring blood test on File for Entry into Public School and Childcare (opt out available)
- **HB 1421** – Lead in School Drinking Water
- **SB452** – Lead in Drinking Water in Schools & Daycares

Lead Poisoning is a Housing Problem, Not a Health Problem.

What Can Portsmouth Do to Make a Difference?

- **Know where the Lead is!**
 - At risk housing
 - Lead pipes
- **Proactive Rental Inspections** Annual or at least every 3 years
- **EPA RRP Certificate** required to gain a building permit of a pre-1978 property
- Educate Landlords on **Essential Maintenance Practices**
- **Increase testing rates** – test all your children at 1 & 2.



New Hampshire 2015 – 2019

3,402

Average of *646 children* annually
with EBLL greater than 5 $\mu\text{g}/\text{dl}$.

Fewer than 25% of children under 6 years
in NH have had a BLL test.

Questions?

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