

Safety Message for January 2026

Presented by:

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Sponsored by:

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Restoration Services in Idaho Falls | Eco Shield Restorations

Topics:

The Blood Brain Barrier (BBB)

How much lead is on that wall?

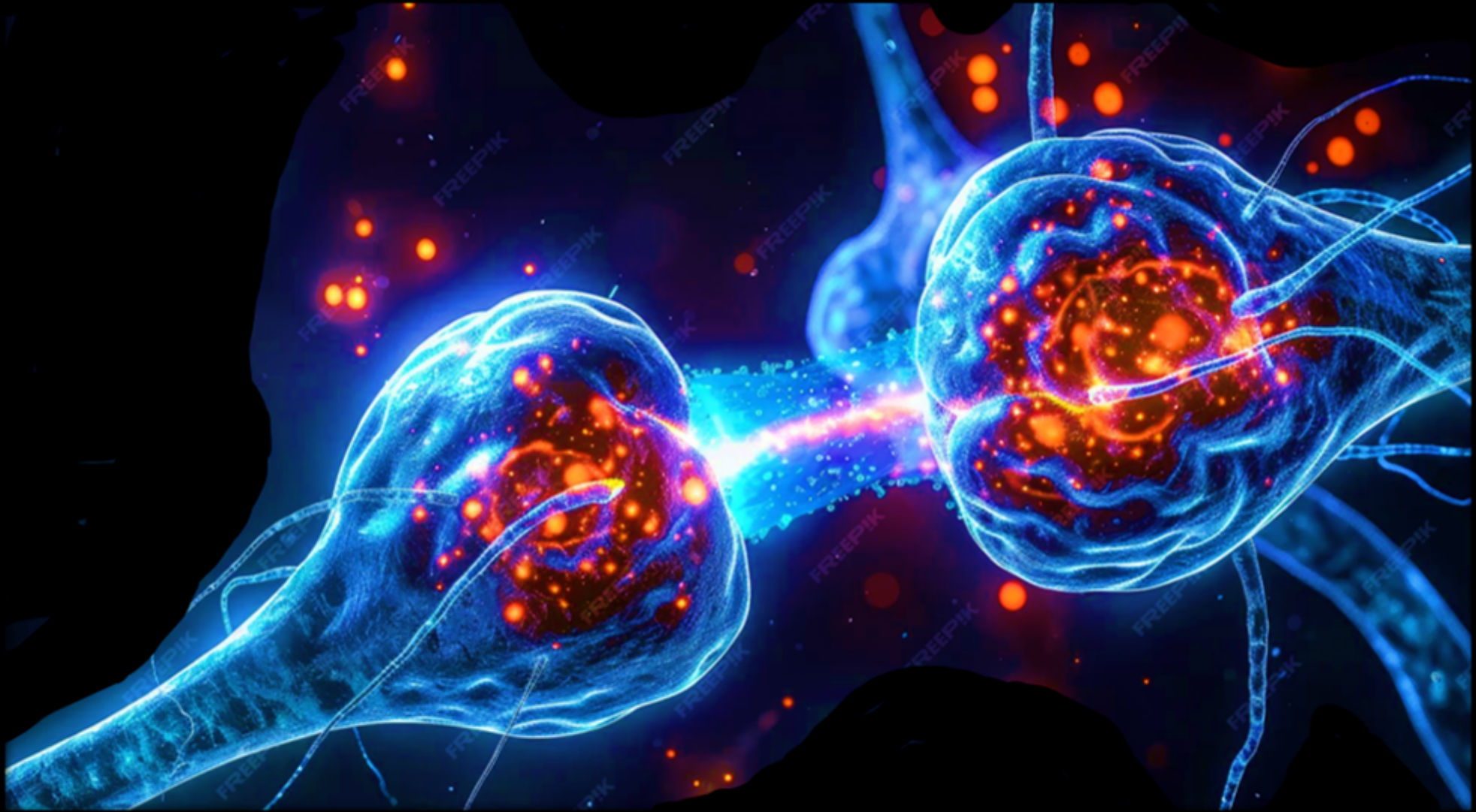
The Blood Brain Barrier (BBB)

“Every person who has contact with Lead-Based Paint on a regular basis should be aware of the Blood Brain Barrier”

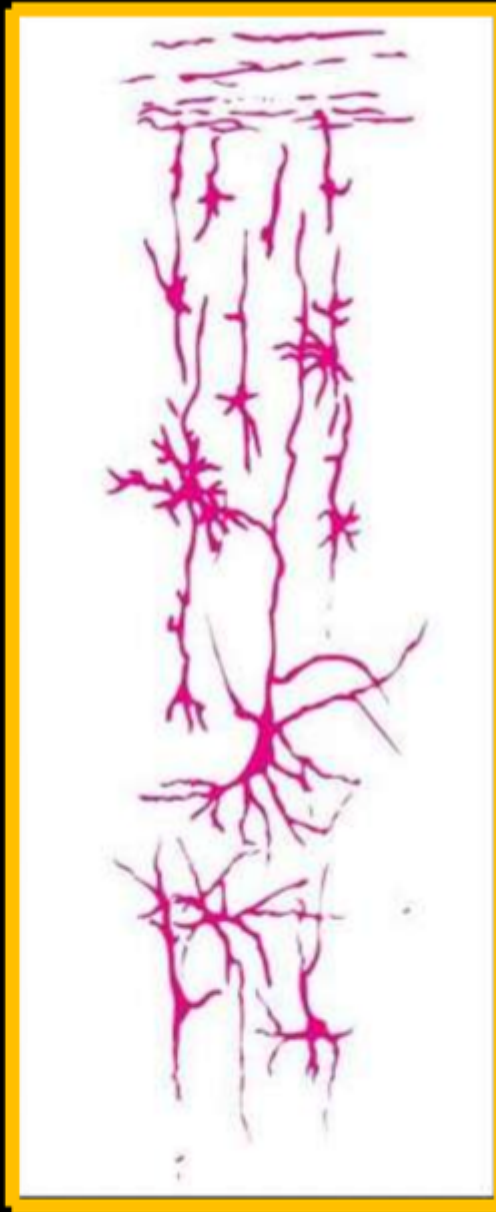
Jerry Royster
Director Pacific NW HUD Healthy Homes

Brain Neural Development

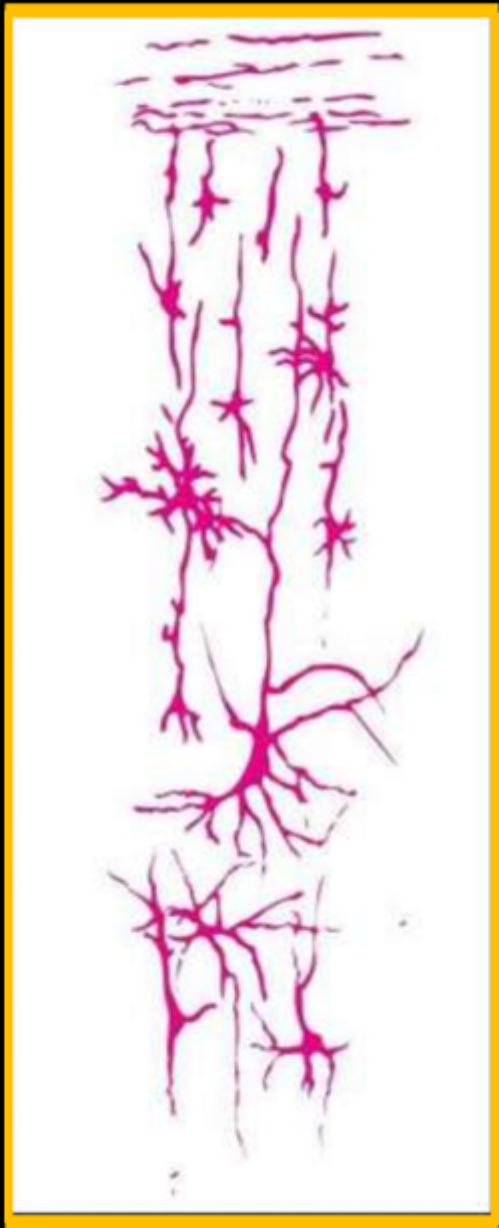
- At birth – brain is $\frac{1}{4}$ size of adult
- Brain grows by forming synaptic connections
- 0 to 5 years rapid development
over 1 million new neural connections per second.



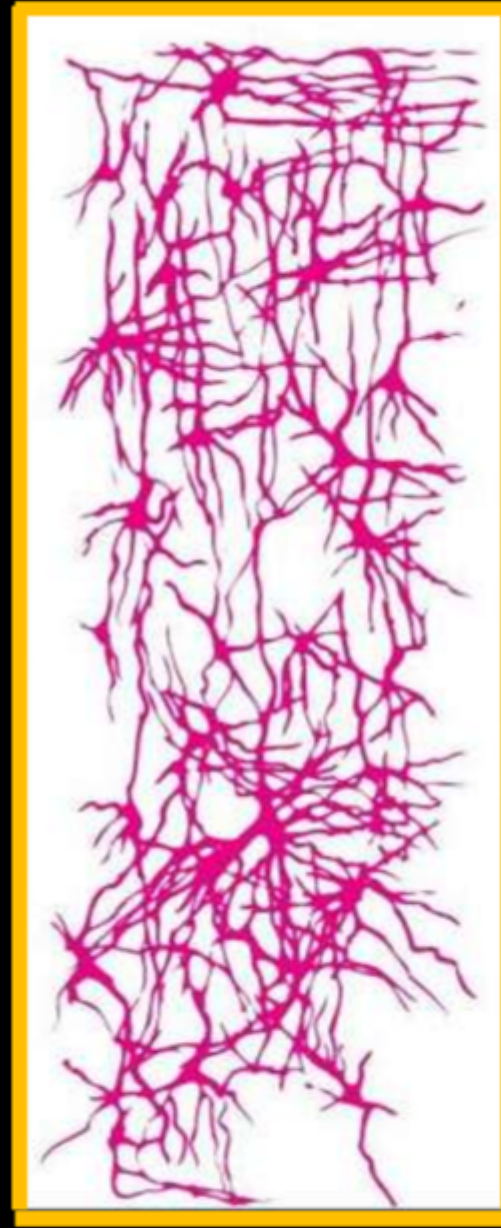
Synaptic Connection



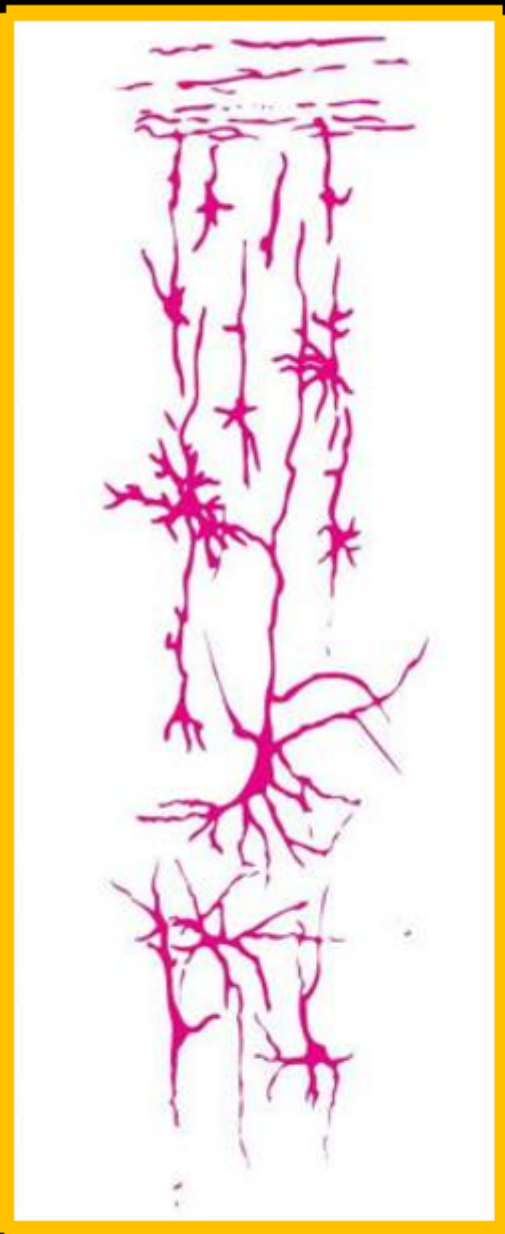
At Birth



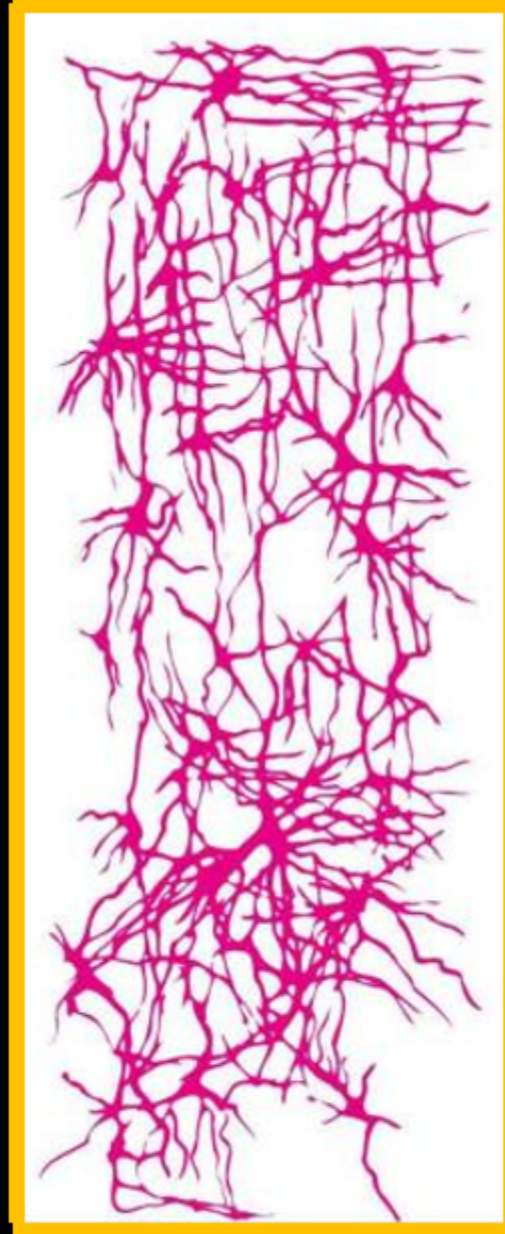
At Birth



At 3 Months



At Birth



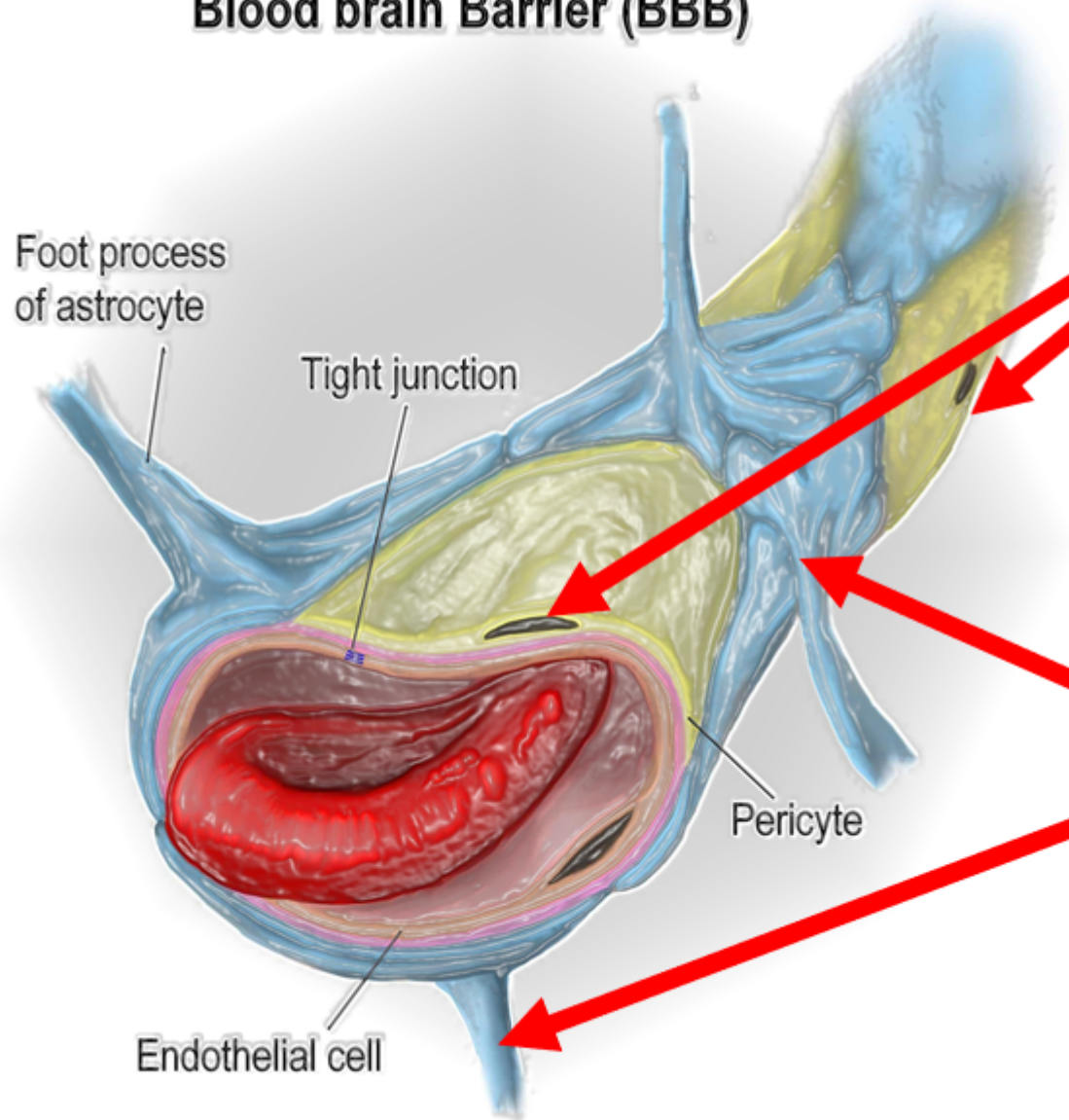
At 3 Months



At 15 Months

**Blood Brain Barrier
Development starts at
birth**

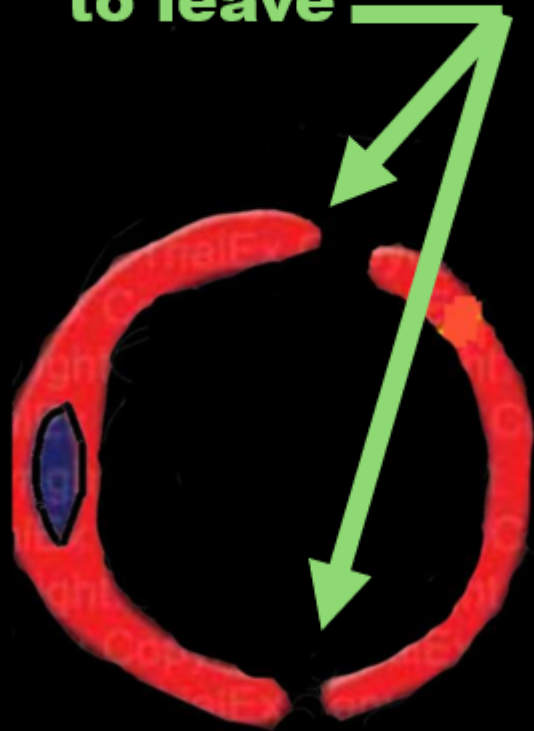
Blood brain Barrier (BBB)



**Pores allowing
waste & toxins out
of Capillary**

**Blood Brain Barrier
forming to block
pores**

**Pores allow waste & toxins
to leave**

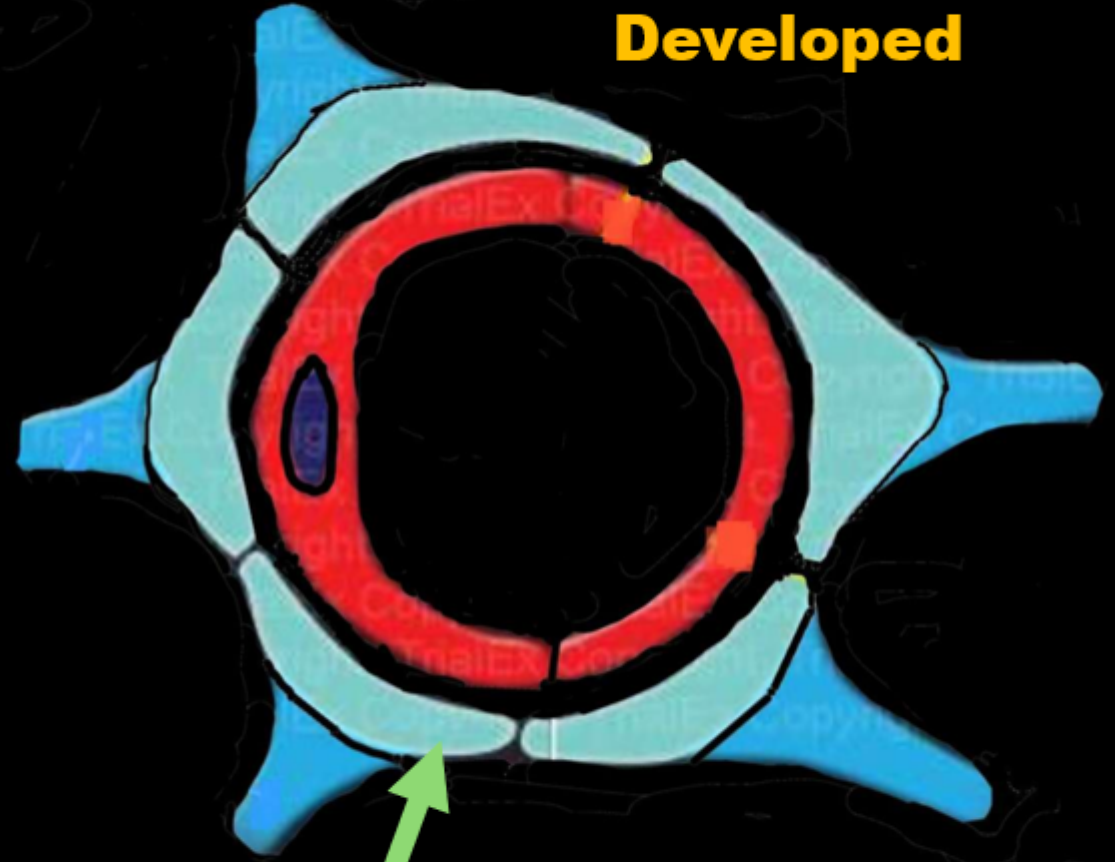


Newborn Brain Capillary

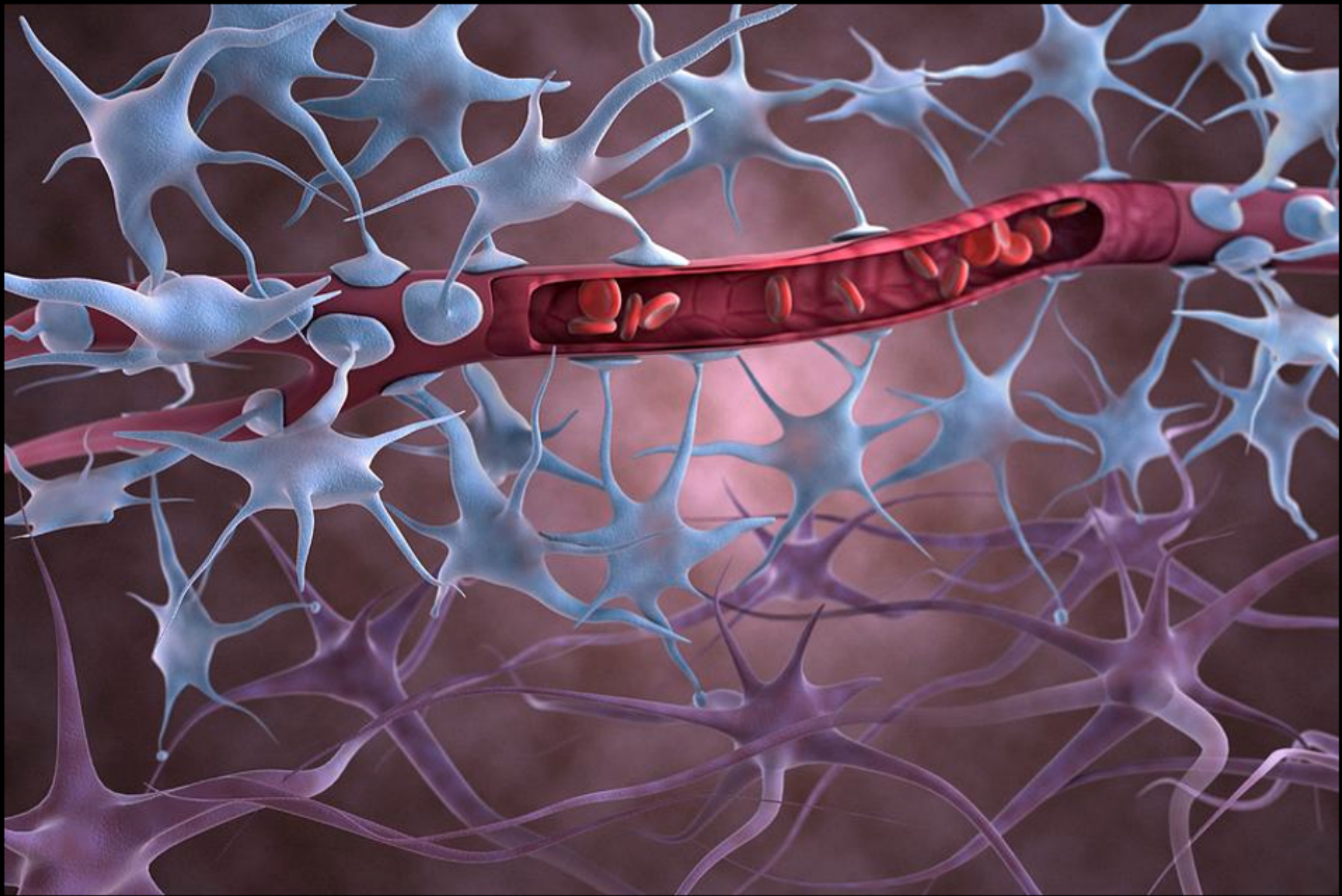
**No Blood Brain Barrier
Development**

Around Age 6 Brain Capillary

**Blood Brain Barrier Fully
Developed**



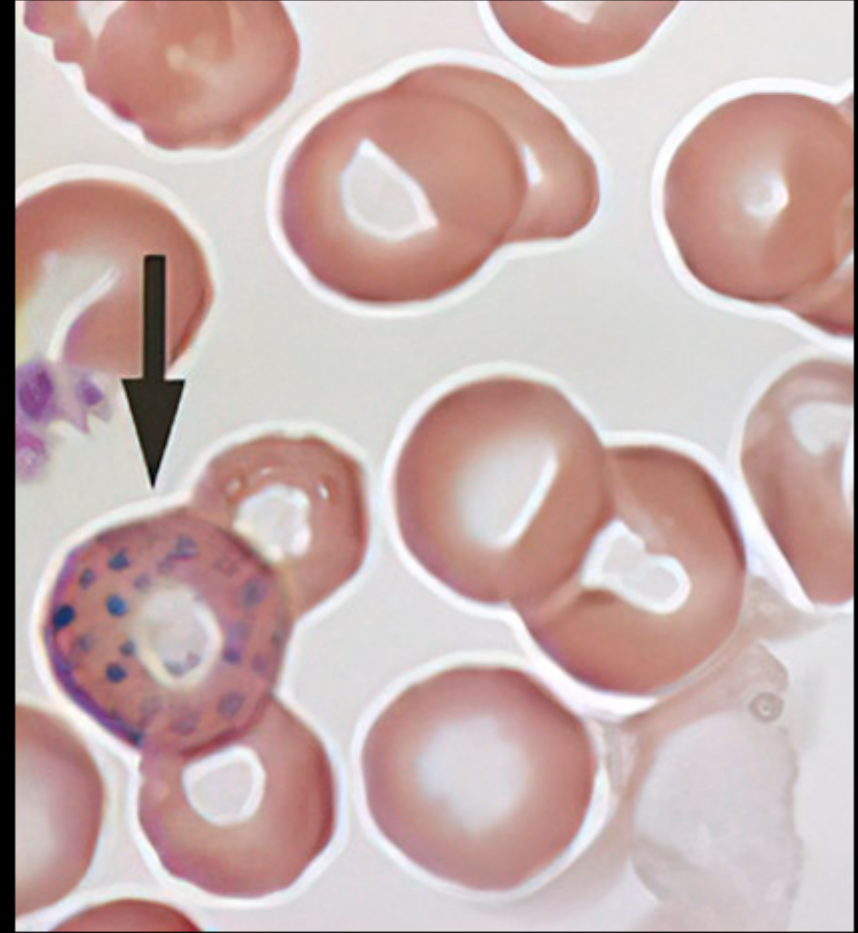
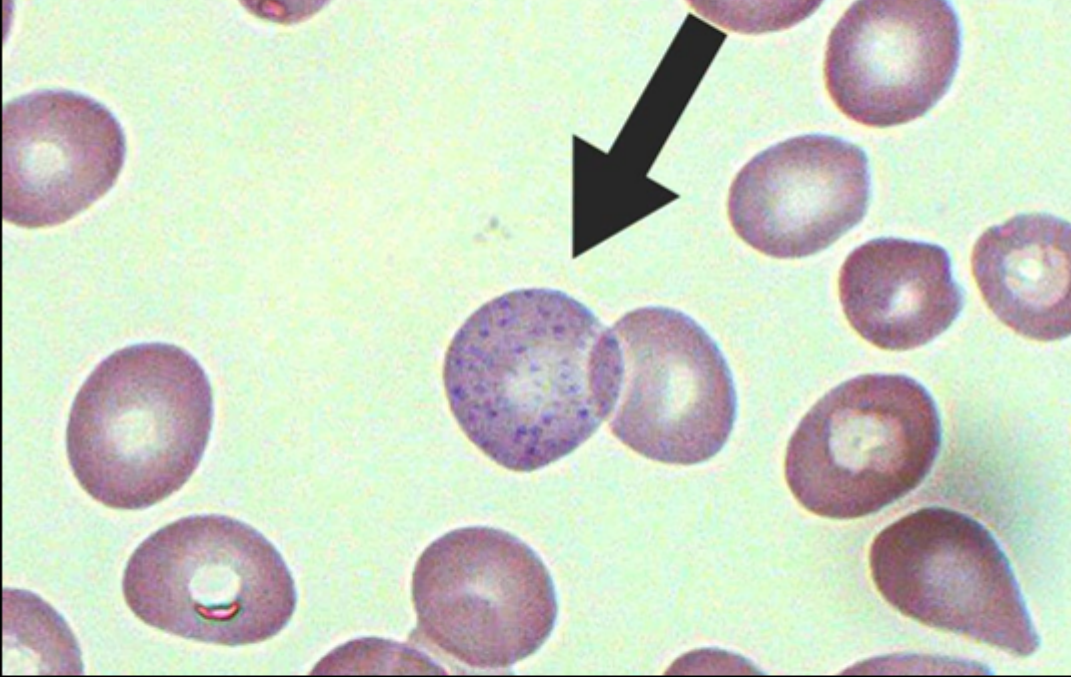
**Blood Brain Barrier
prevents leakage of wastes
& toxins**



A baby eats Lead-Based paint

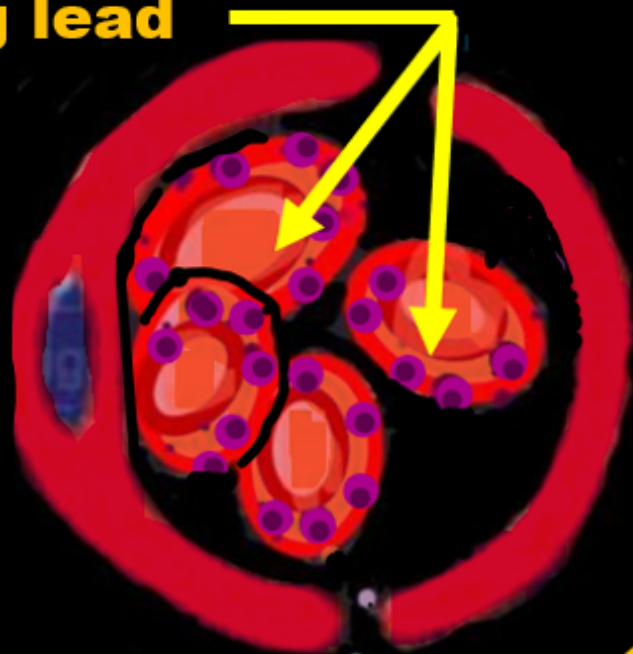


The lead is transported to the brain by red blood cells

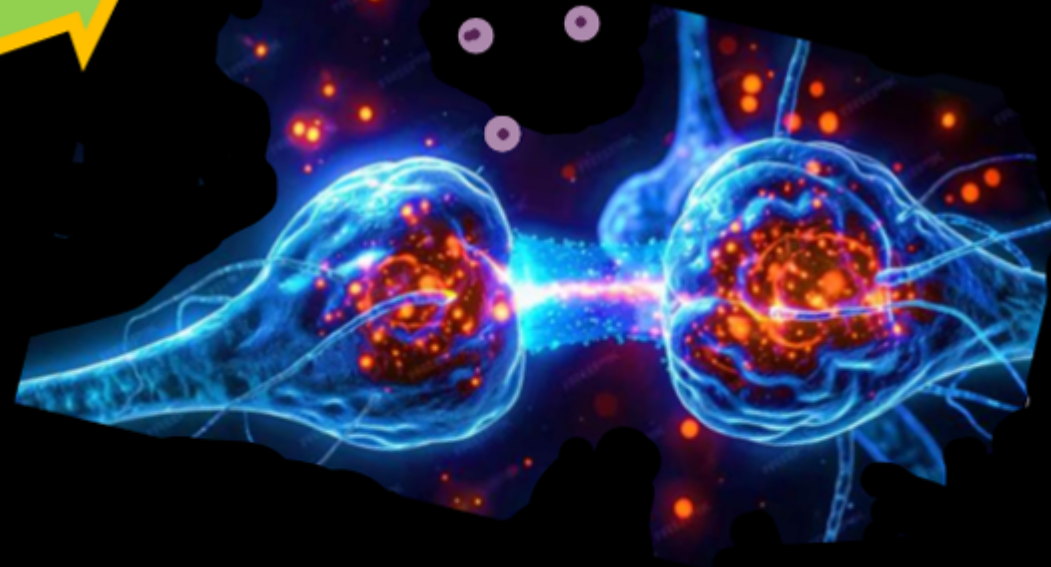


Newborn Brain Capillary no BBB developed

Red Blood Cells
carrying lead

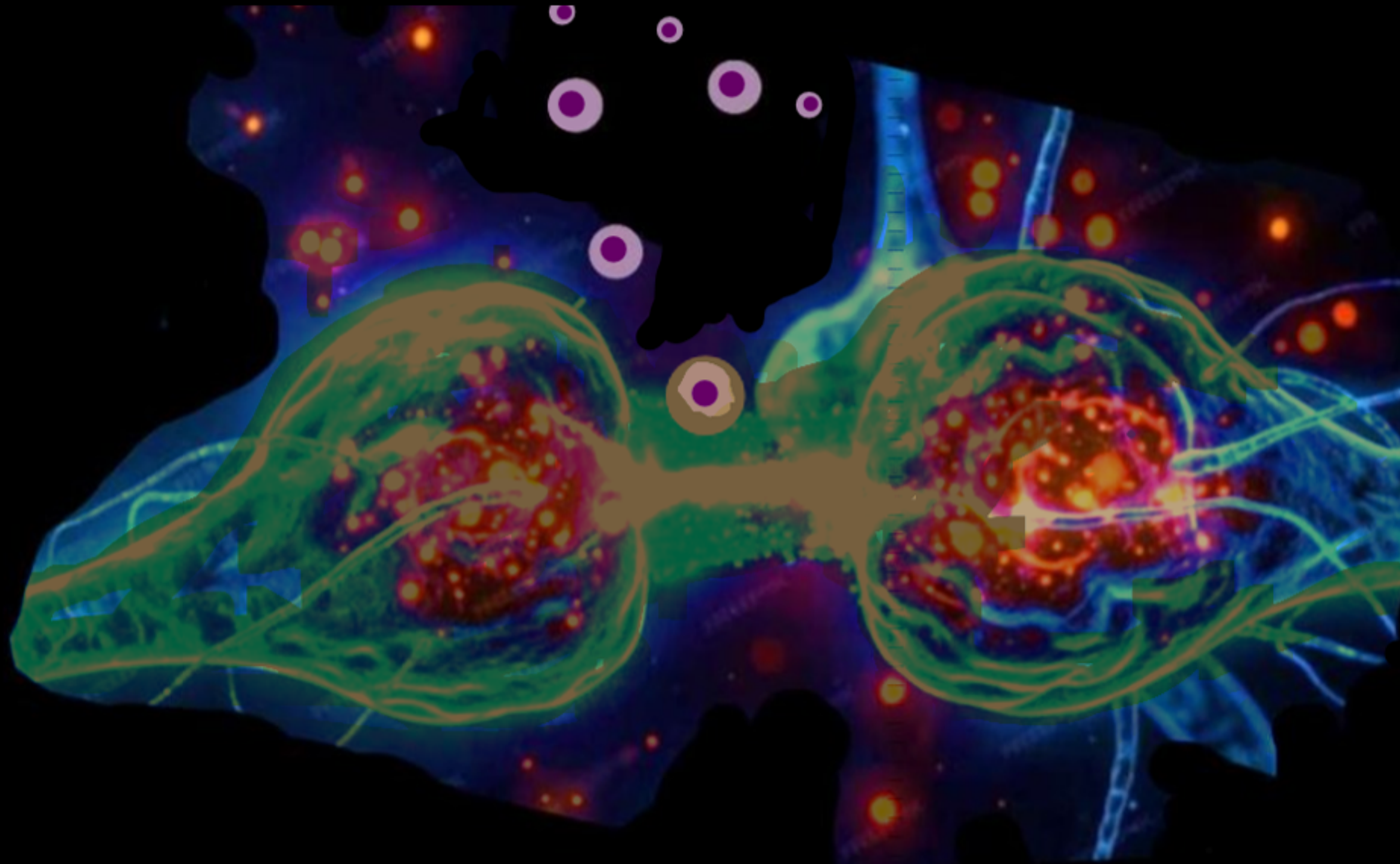


Lead leaves the
brain capillary
through uncovered
pores

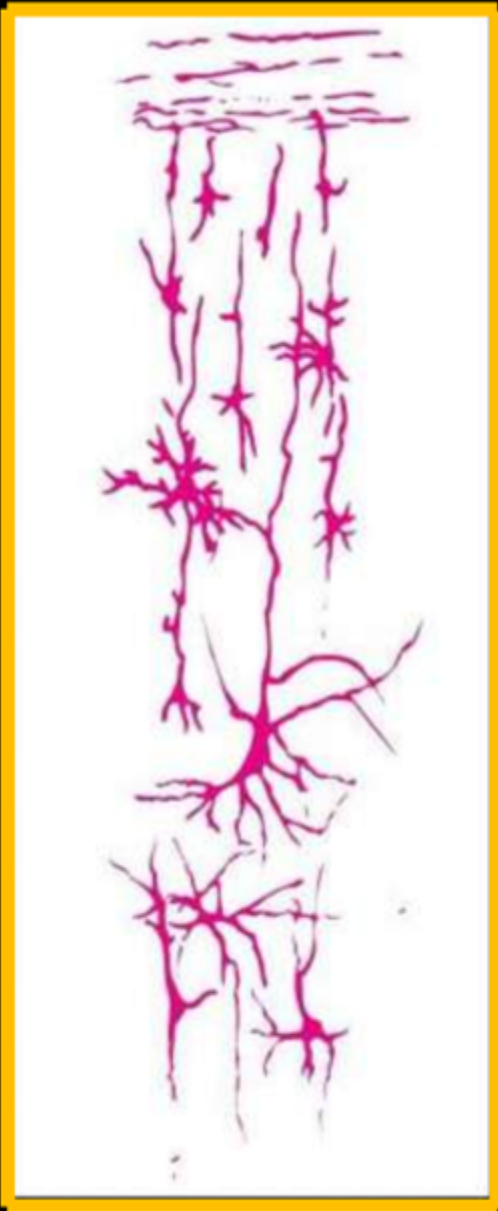


When lead is added to the electro-chemical bond...



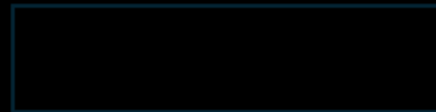
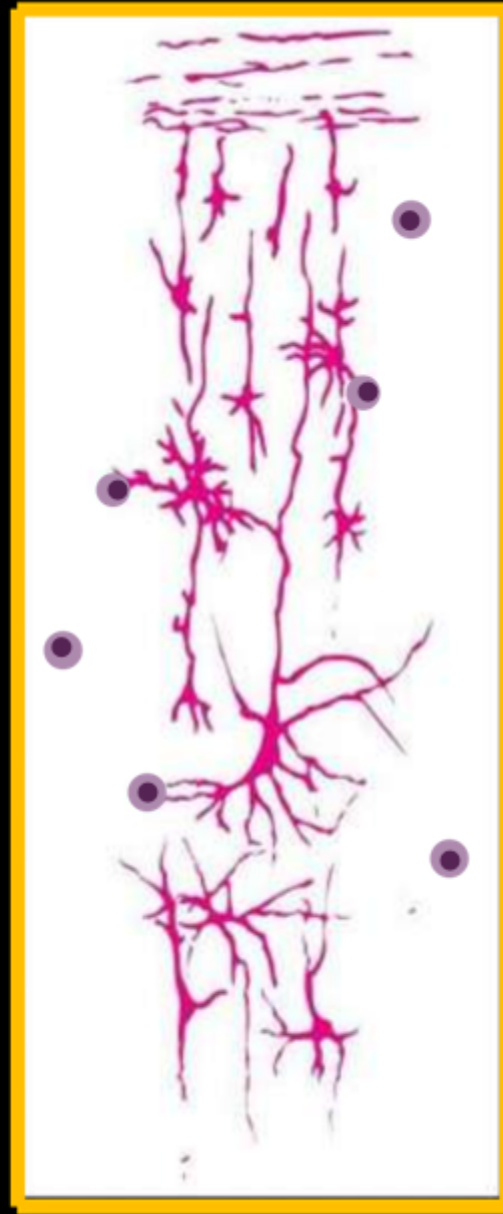


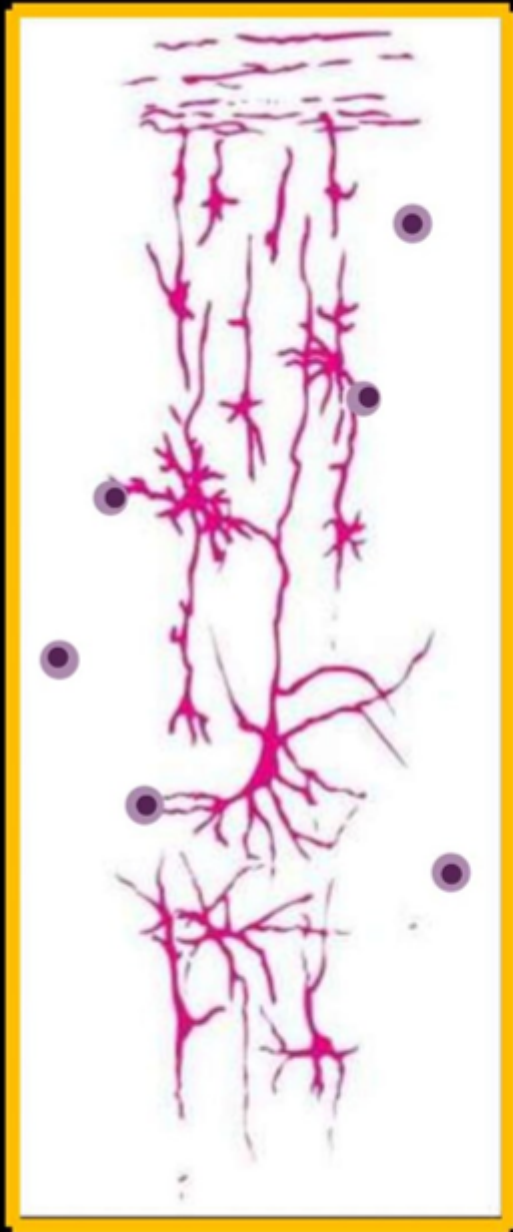
It kills the synaptic connection



At Birth

**When lead is
added to a
newborn
brain**



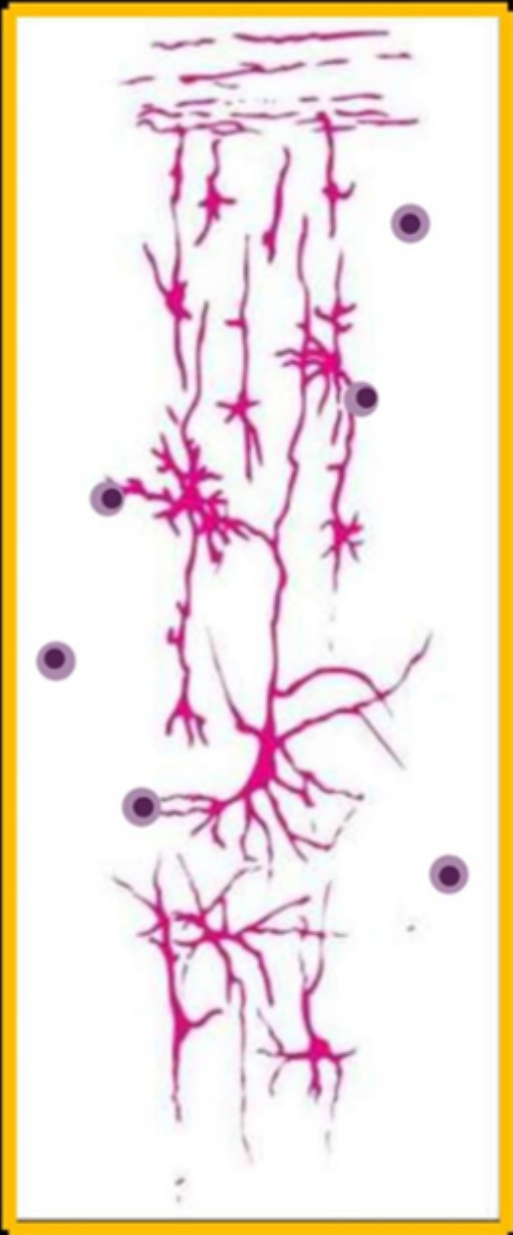


At Birth

**Instead of
this
development
at 3 months**

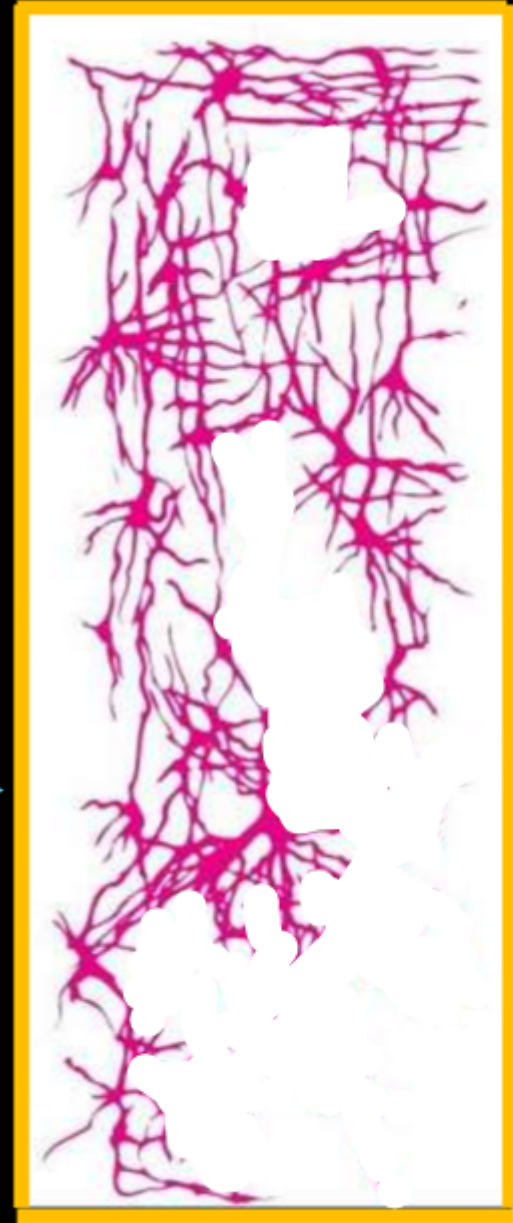


At 3 Months



At Birth

**This is the 3
months
development**



At 3 Months

**The younger the child, the more
devastating the damage**

**How much Lead does it take to
cause damage ?**

**The CDC's current
blood lead reference value (BLRV)
is 3.5 micrograms per deciliter ($\mu\text{g}/\text{dL}$)**

**There is no acceptable limit
for lead in a child's blood**

How much lead
is on that wall?

How much lead was put in the paint?



**DUTCH BOY
LIQUID LEAD**


*Paint Now with
this convenient
all-lead paint*

The newest form of the oldest paint—made of pure white-lead, ready for the painter's brush. Gives a weather-proof, elastic coat which wears down slowly and evenly—no dangerous or costly burning off necessary when a new coat is applied.

Dutch Boy Flat Wall Paint is convenient, ready-mixed white-lead for interior walls. The painter using this material produces a soft, dull-finished surface, which washes like porcelain. Easily tinted any color you want.

*Manufactured by
NATIONAL LEAD COMPANY*

Sold by Arthur C. Taber, Middlebury

A PAINT LESSON:
To a paste made of white lead and water, add linseed oil and stir.
Watch the oil drive out the water! Presto! an oil paste instead of water paste.

Dutch Boy White Lead and Dutch Boy Linseed Oil rush together and cling together just that way on the house painted with them.

What chance has rain or snow to dissolve such paint?

Dutch Boy White Lead—white in the keg—any color you want to make it on the house.

White lead and water, with layer of linseed oil.

Mixture of white lead, linseed oil and water.

Water poured off, leaving white lead and linseed oil.

Dutch Boy White Lead in steel kegs, 12½, 25, 50 and 100 lbs. Dutch Boy Linseed Oil, 1 and 5 gallon sealed cans. Ask your paint dealer.

Let us send you "Painting Helps 16," full of facts every house owner should know about painting. We will include our catalogue of 100 beautiful stencils for walls.

NATIONAL LEAD COMPANY

New York Boston Buffalo Chicago Cincinnati Cleveland San Francisco St. Louis
(John T. Lewis & Bros. Co., Philadelphia) (National Lead & Oil Co., Pittsburgh)



**Dutch Boy Paints
organized the
painters**





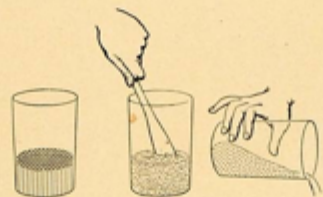
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**Dutch Boy Paints
encouraged
painters to mix
their own paints,
add extra lead for
that special
homeowner**



**8 PAINTERS IN EVERY 10
USE DUTCH BOY**
(According to an impartial, country-wide survey)

Back of the beauty of hundreds of homes right in your community — back of the paint protection that shields the dollars and cents investment in them — is Dutch Boy White Lead. For eight painters in every ten use Dutch Boy. Use it because they know it couples beauty with protection for a longer period of time — because it makes possible a wide variety of attractive tints and colors — because Dutch Boy never gives a home owner cause to complain about scaling and cracking and, for the same reason, it does not demand burning and scraping at repaint time. And, finally, eight painters in every ten use Dutch Boy because in every sense of the word it gives a custom-made paint mixed to order for your particular job. Write for free booklet . . . "The House We Live In" . . . which contains helpful suggestions on the decoration and protection of both the interior and exterior of the home. Please address the branch nearest you.

NATIONAL LEAD COMPANY

New York, 111 Broadway — Buffalo, 111 Oak Street — Chicago, 900 West 18th Street — Cincinnati, 459 Freeman Avenue — Cleveland, 820 West Superior Avenue — St. Louis, 722 Chestnut Street — San Francisco, 2240 24th Street — Boston, National-Boston Lead Co., 800 Albany Street — Pittsburgh, National Lead & Oil Co., 41 Pa. 366 Fourth Avenue — Philadelphia, John T. Lewis & Bros. Co., Widener Building.

AND NO ONE KNOWS PAINT LIKE A PAINTER

Impossible to know how much lead was in the paint

Testing with an XRF is the most accurate way to determine the amount of lead on the wall...



... if the amount is under 5 mg / cm²

Numbers

Human Health

ug / ft²

micrograms per square foot

Regulations

mg / cm²

milligrams per centimeter²

1 ug = 1/1,000,000 of a gram

1 mg = 1/1,000 of a gram

1 ft² = 929.03 cm²

ARGH!!!

Let's look at it from a Human Health perspective



Project: Sand & repaint piece of trim

Size: $0.5' \times 8' = 4 \text{ ft}^2$

Test Results: $2 \text{ mg} / \text{cm}^2$ of lead

This is a small unregulated project, no containment required

Let's look at it from a Human Health perspective



How much lead was disturbed?

Let's look at it from a Human Health perspective



**How much lead was
disturbed?**

7,432,240 ug !

**Now imagine a whole house
renovation!**

Numbers

$$1 \text{ ft}^2 = 929.03 \text{ cm}^2$$

$$4 \text{ ft}^2 = 3,716.12$$

$$3,716.12 \times 2 \text{ mg} = 7432.24 \text{ mg}$$

**There are 7,432,240 micrograms (μg) in
7,432.24 milligrams (mg)**

7,432,240 ug !

**In terms of human health, there
are mass quantities of lead on
that wall!**

Older homes often require maintenance & repairs



Older neighborhoods have a high risk for lead exposure



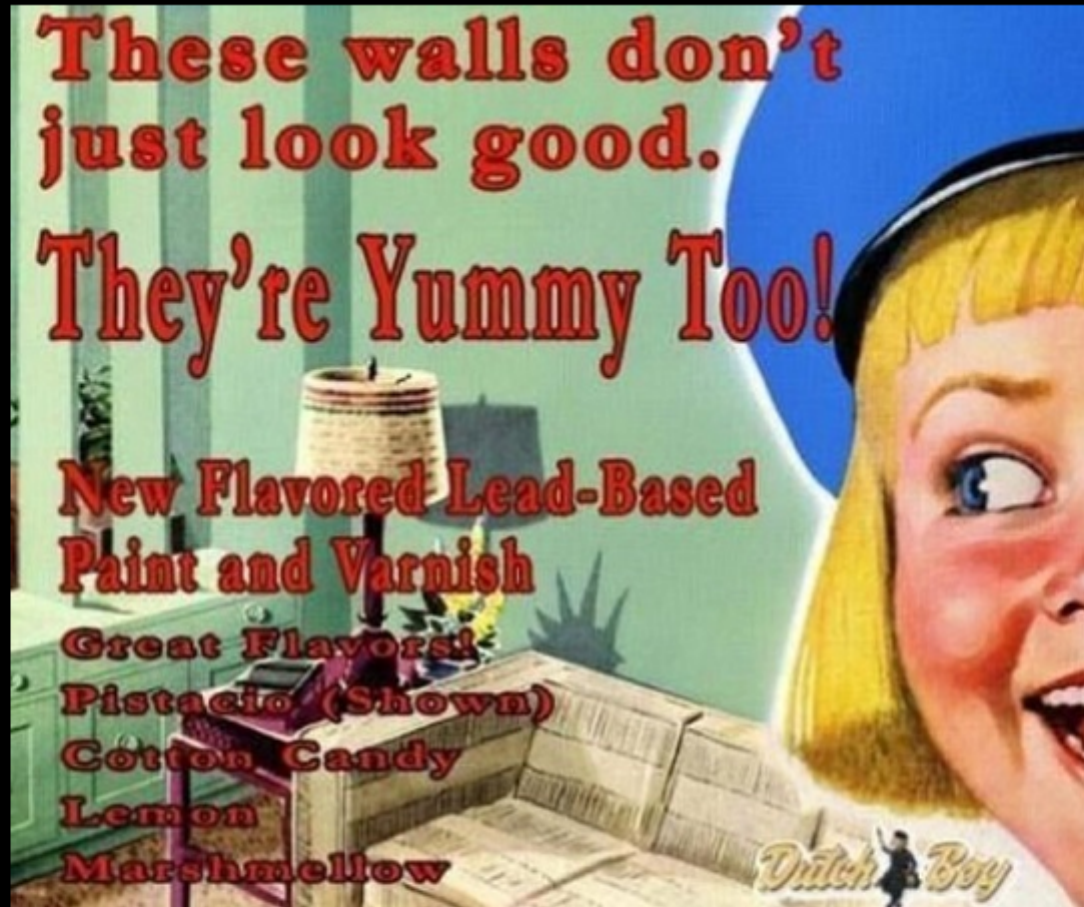
The older the neighborhood the higher the risk

Take-away Message: **Be Aware of Lead**

In older neighborhoods, somewhere, Lead-Based Paint (LBP) is being disturbed. Often renovations happen before real estate sales. Spending time as a Real Estate Professional in older neighborhoods has a risk of lead exposure. The older the neighborhood, the higher the risk.

If there are young children in your life, avoid carrying home the risk of lead exposure, Use disposable shoe covers. On your way home stop by the office to wash up & change clothes.

Thank you for your attention !



Questions or Comments

(or you just want to vent about the revised 1018 Disclosure Form)

Laurie Fay (206) 468-6226
Call or text