

Safety Message for January 2026

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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?

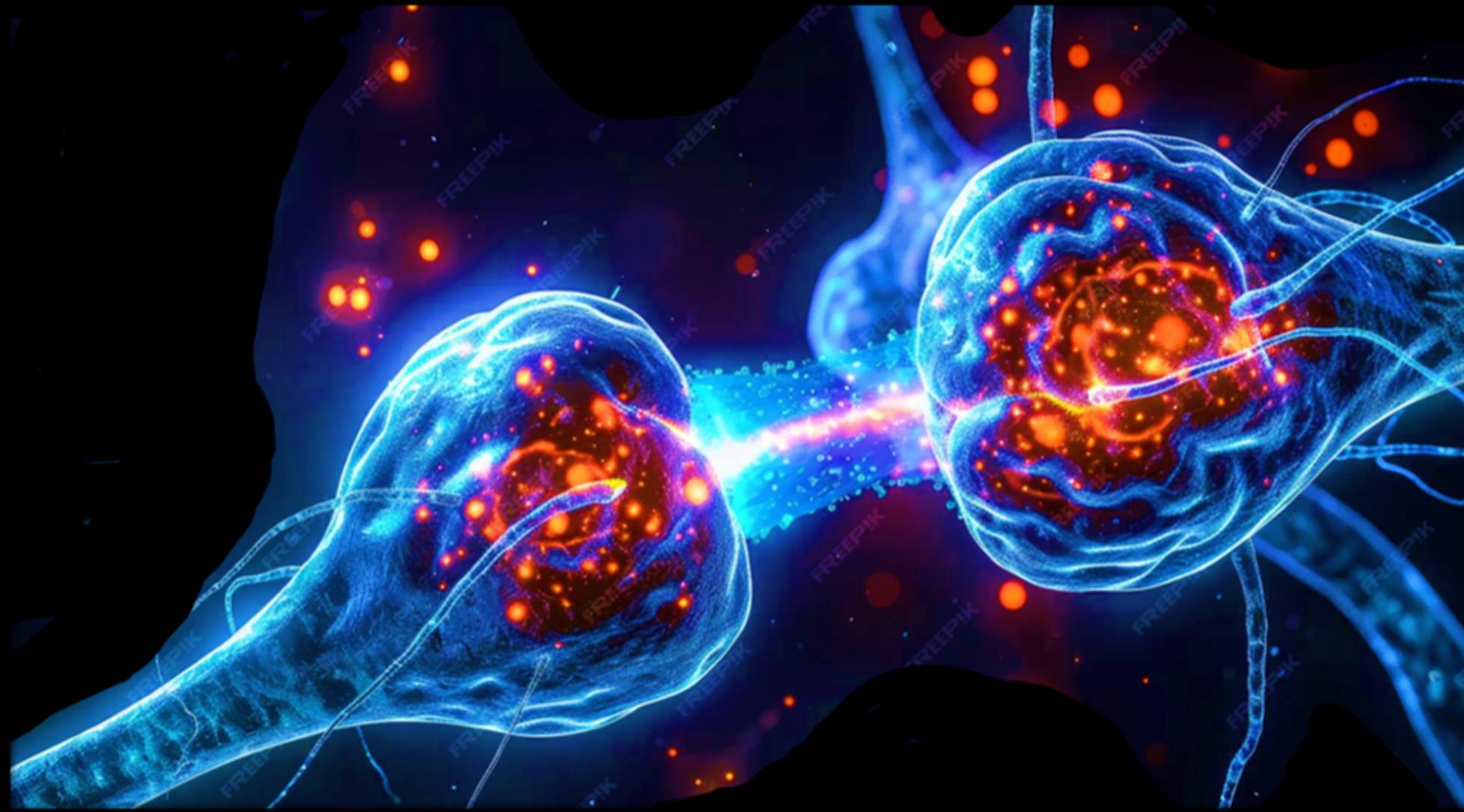
The Blood Brain Barrier (BBB)

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

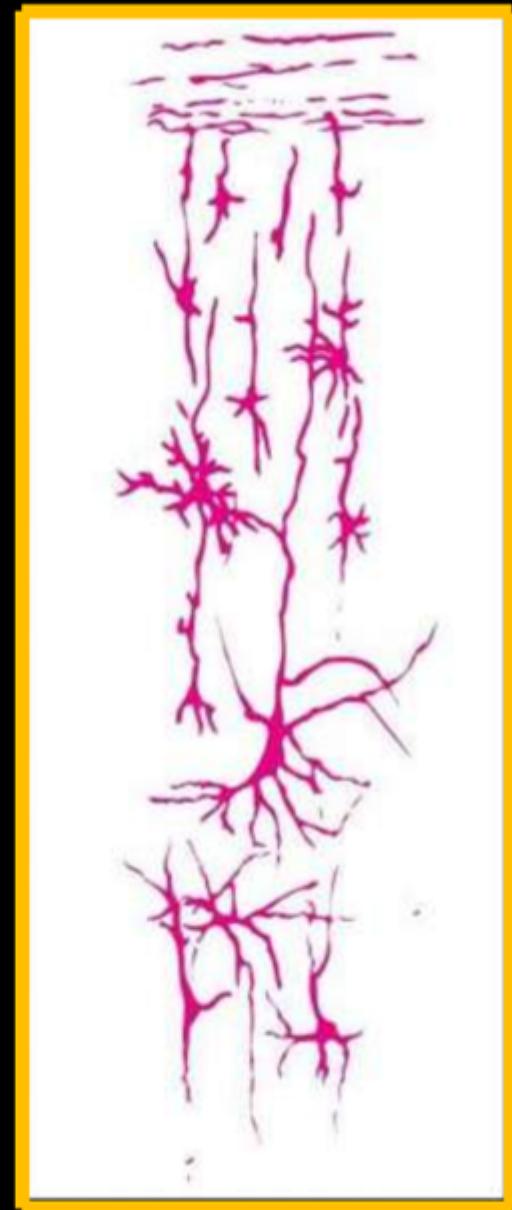
**Jerry Royster
Director Pacific NW HUD Healthy Homes**

Brain Neural Development

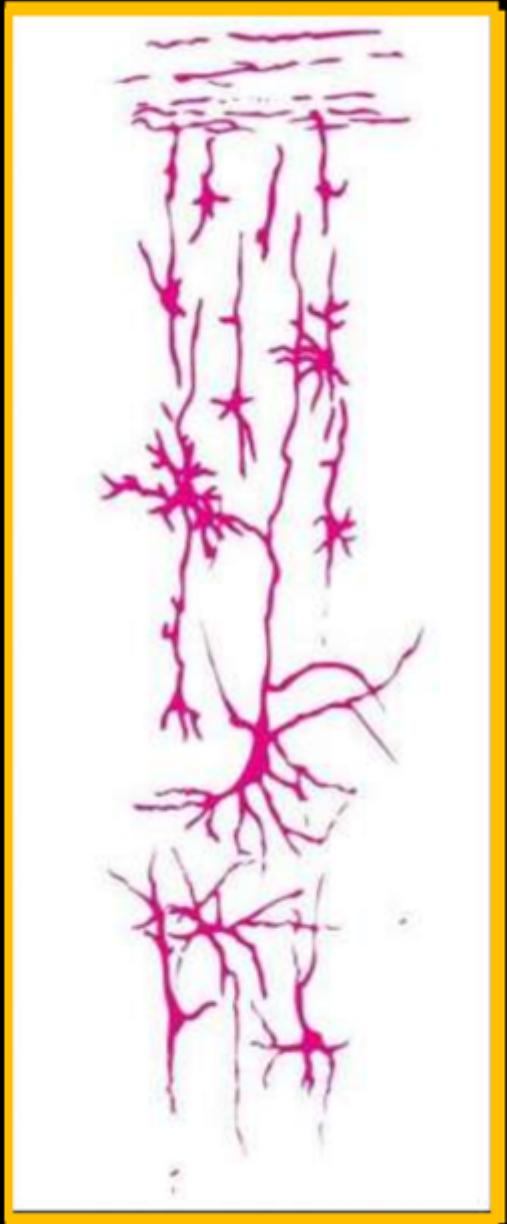
- At birth – brain is $\frac{1}{4}$ size of adult
- Brain grows by forming synaptic connections
- 0 to 5 years rapid development
over 1 million new neural connections per second.



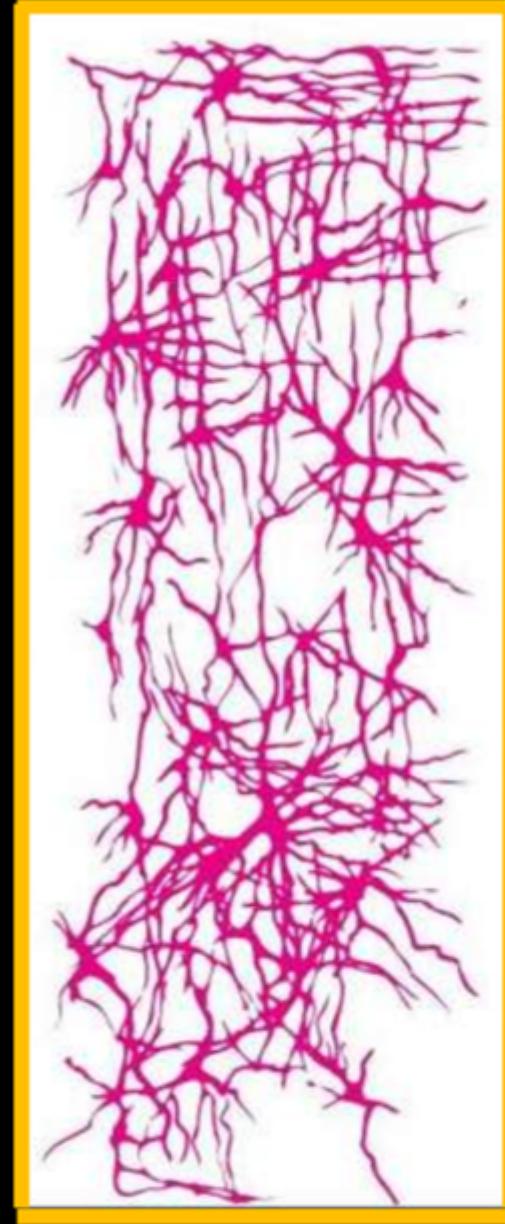
Synaptic Connection



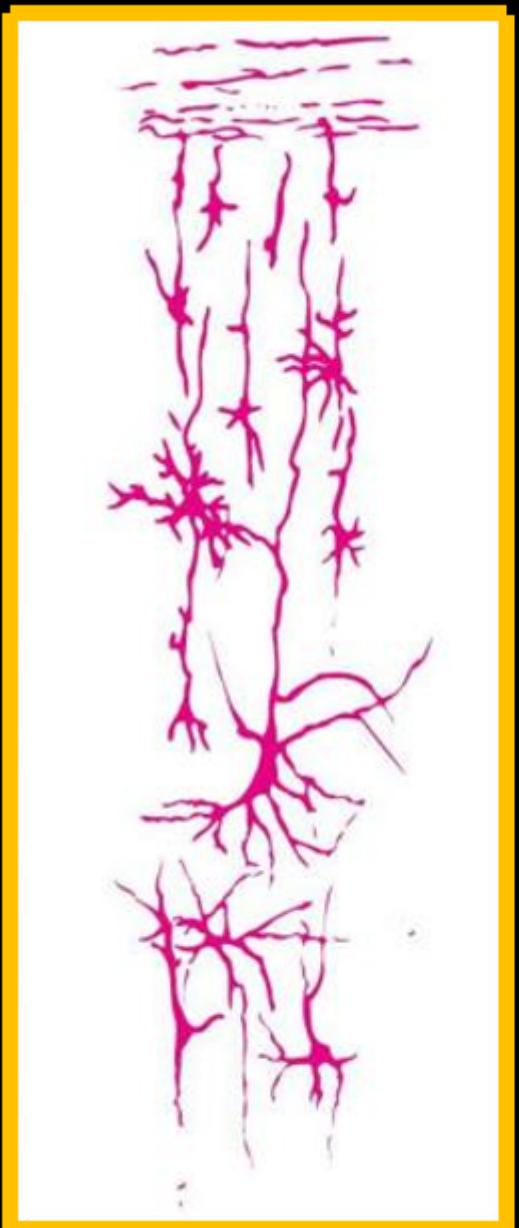
At Birth



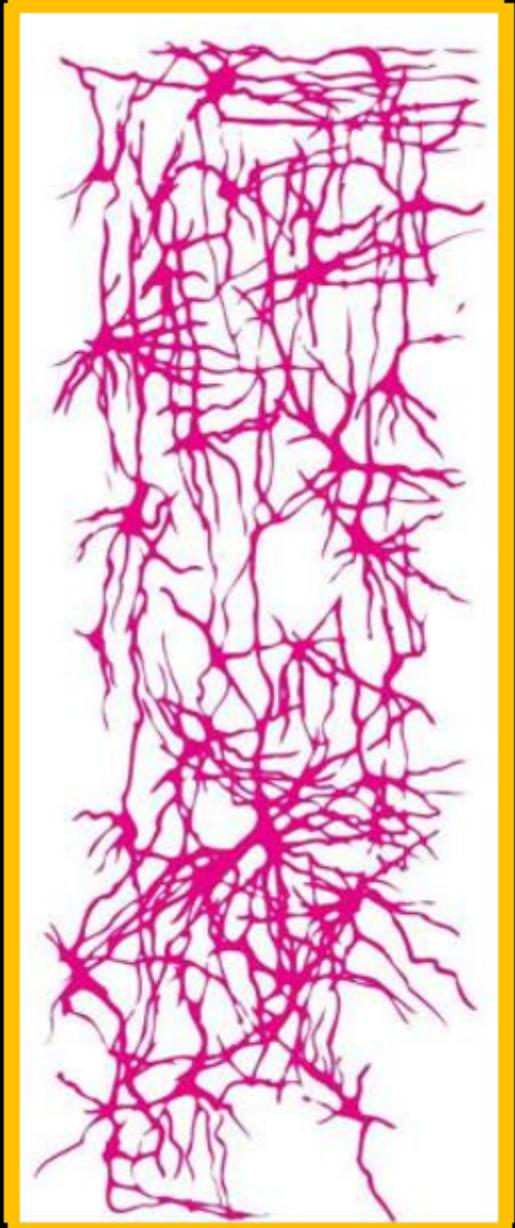
At Birth



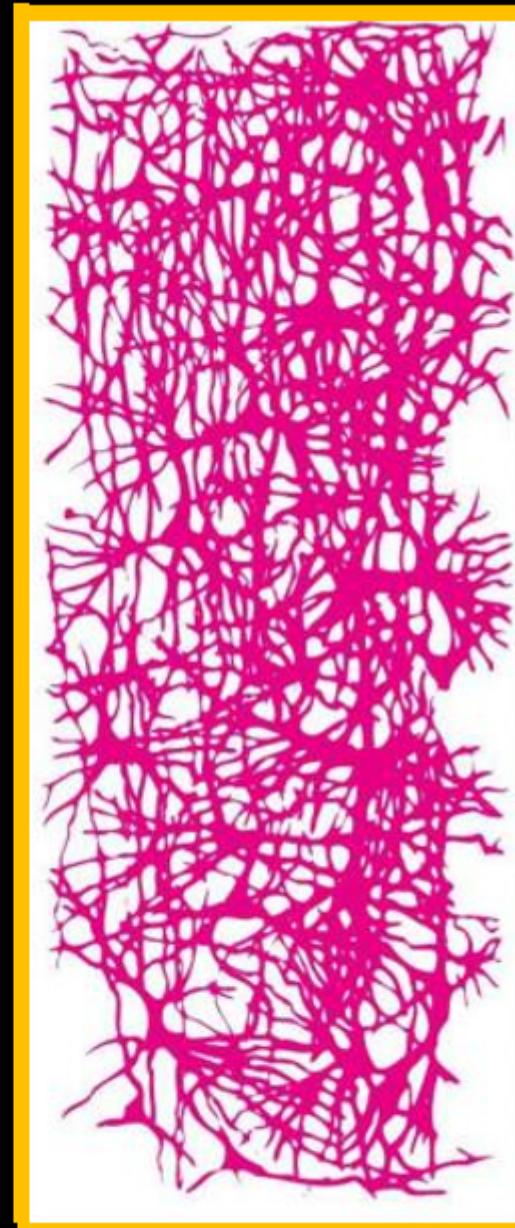
At 3 Months



At Birth



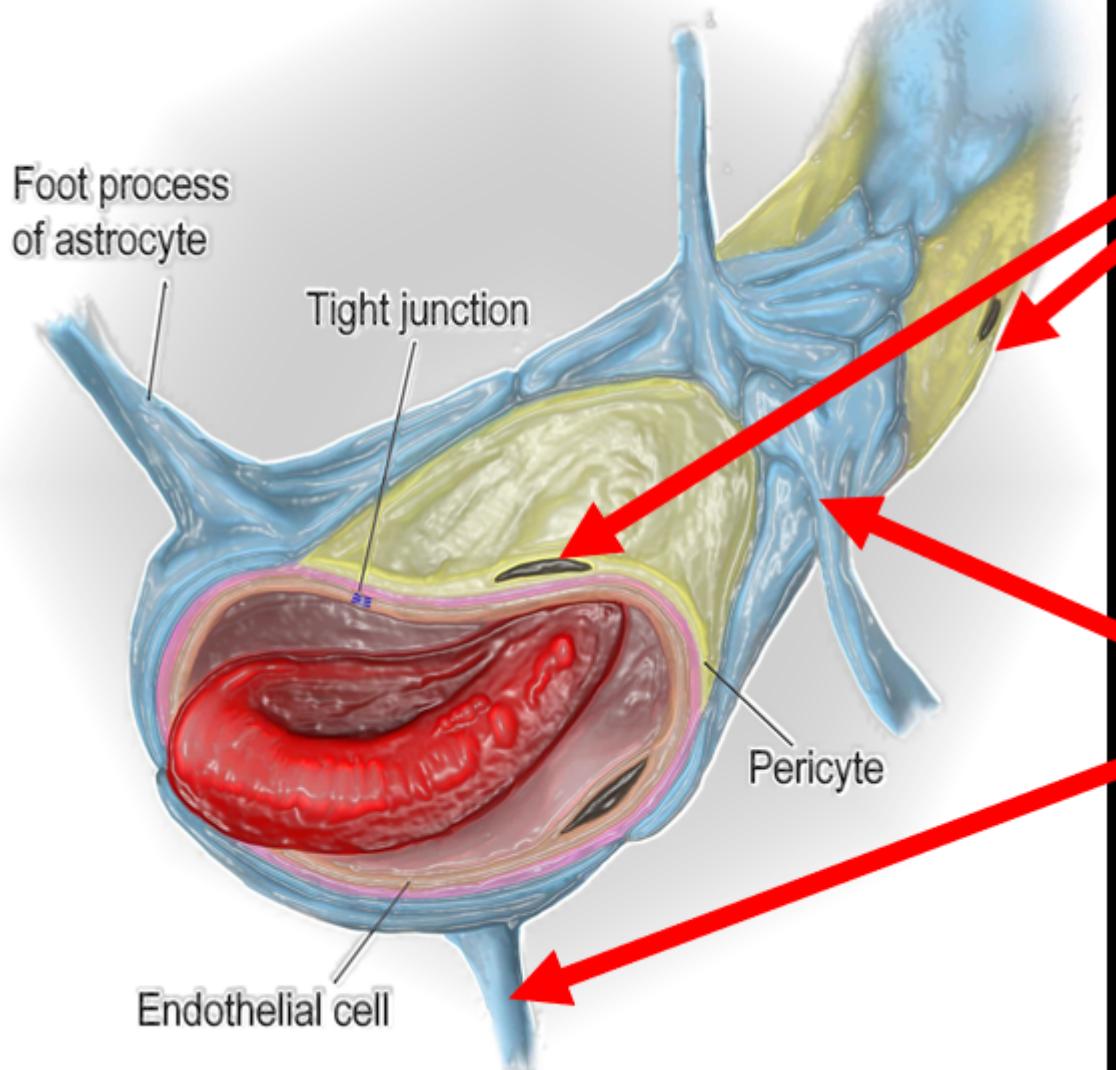
At 3 Months



At 15 Months

**Blood Brain Barrier
Development starts at
birth**

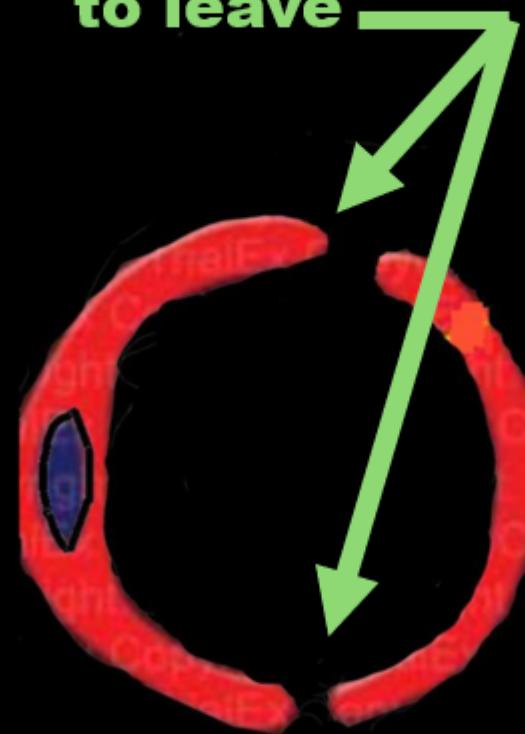
Blood brain Barrier (BBB)



Pores allowing waste & toxins out of Capillary

Blood Brain Barrier forming to block pores

**Pores allow waste & toxins
to leave**

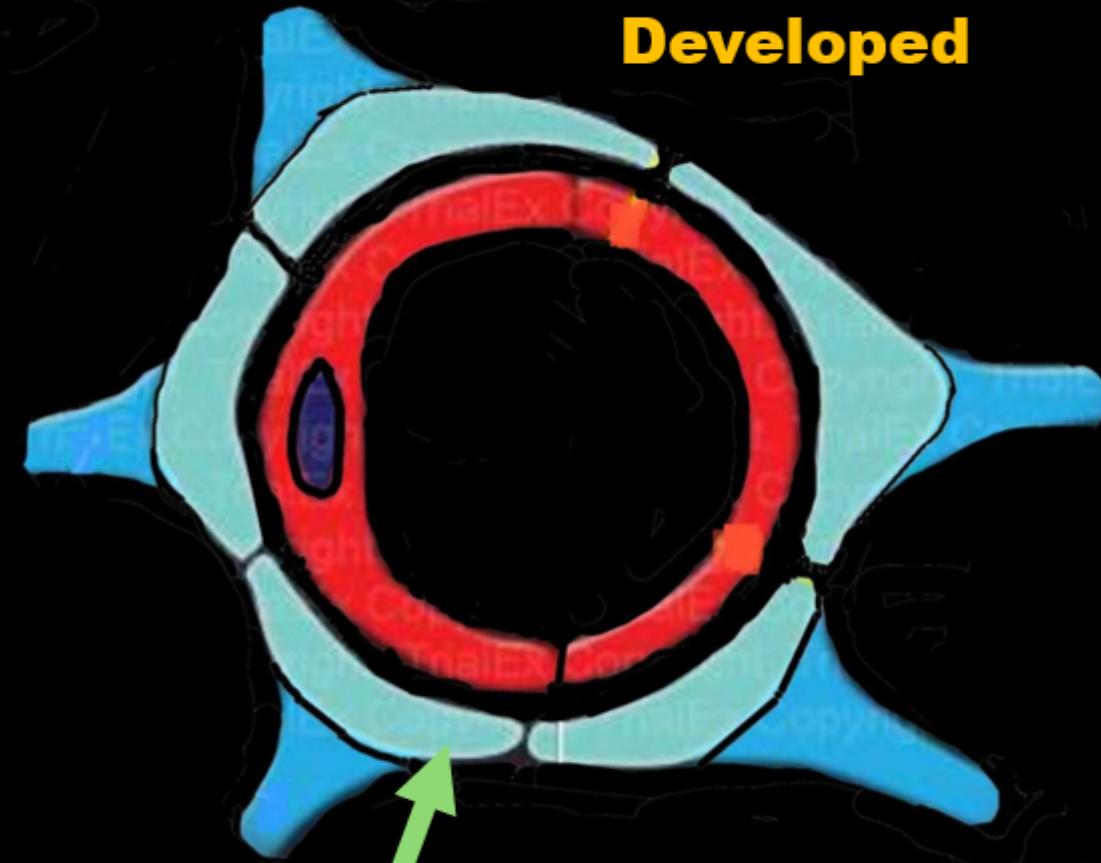


Newborn Brain Capillary

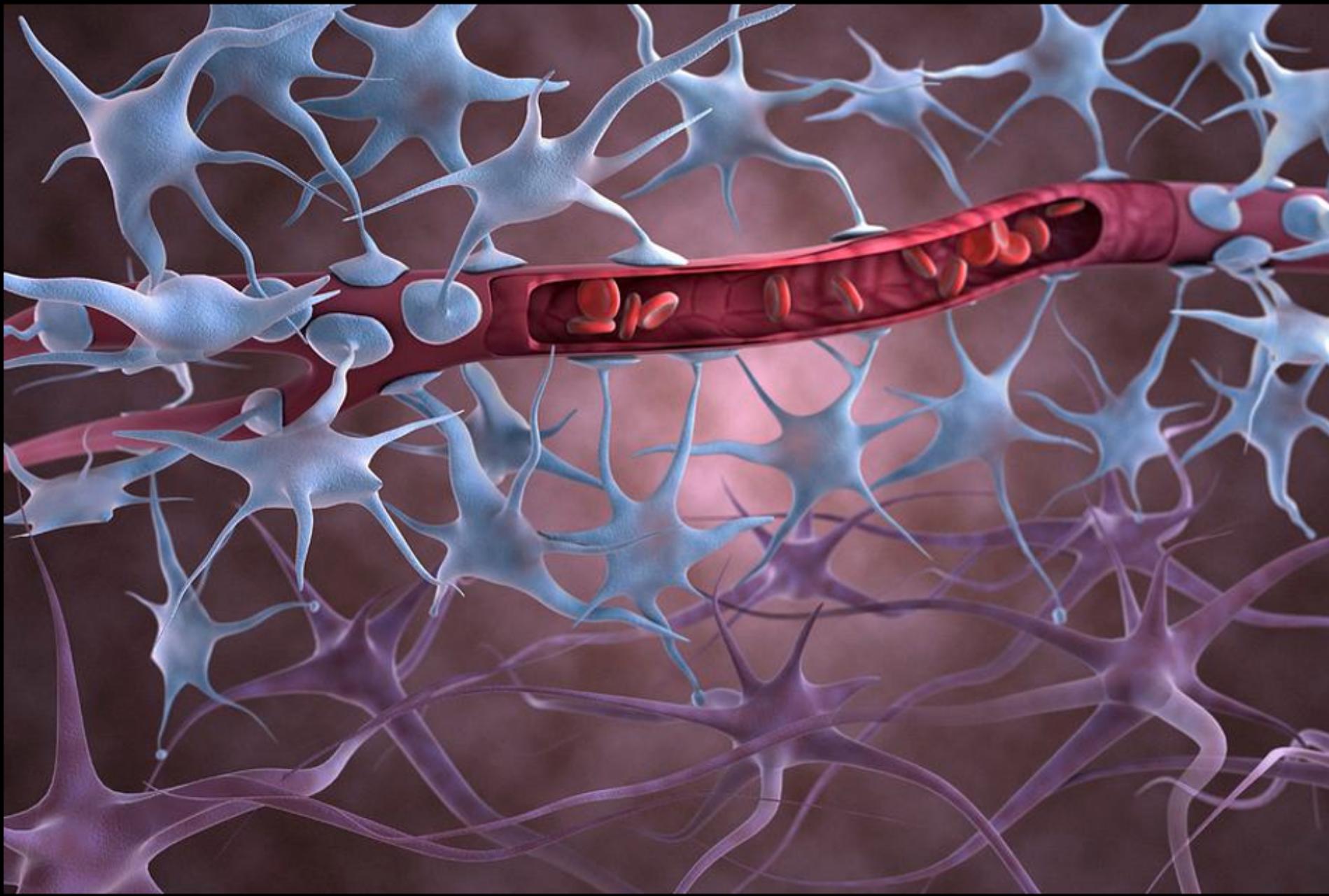
**No Blood Brain Barrier
Development**

Around Age 6 Brain Capillary

**Blood Brain Barrier Fully
Developed**



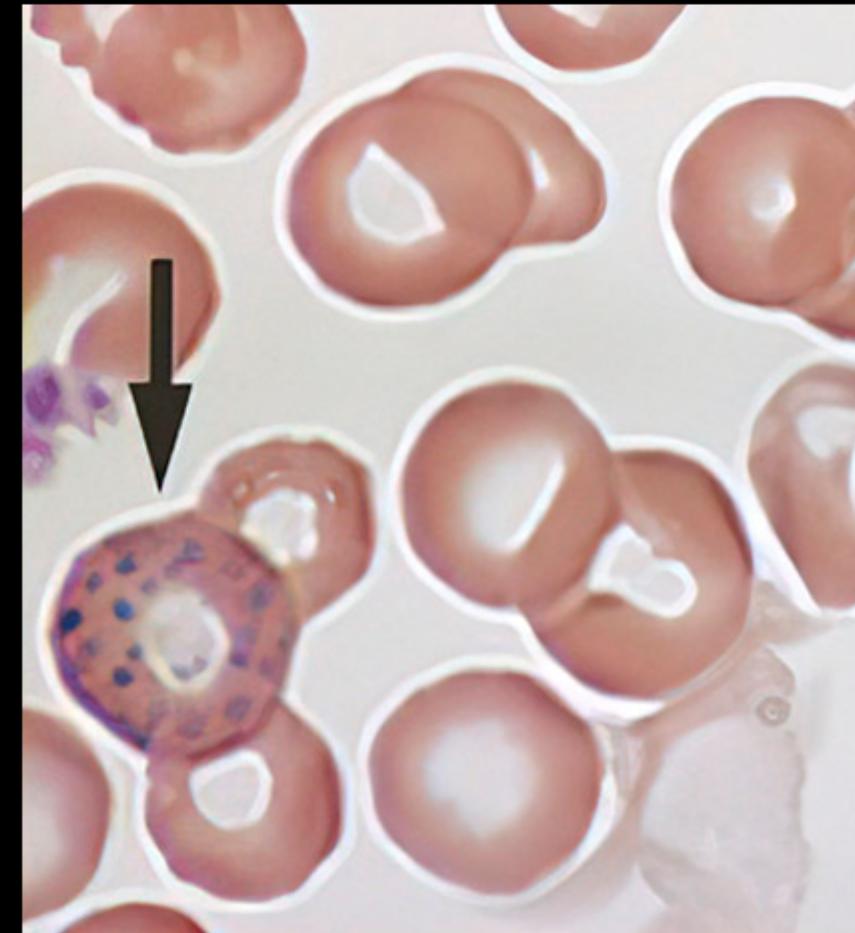
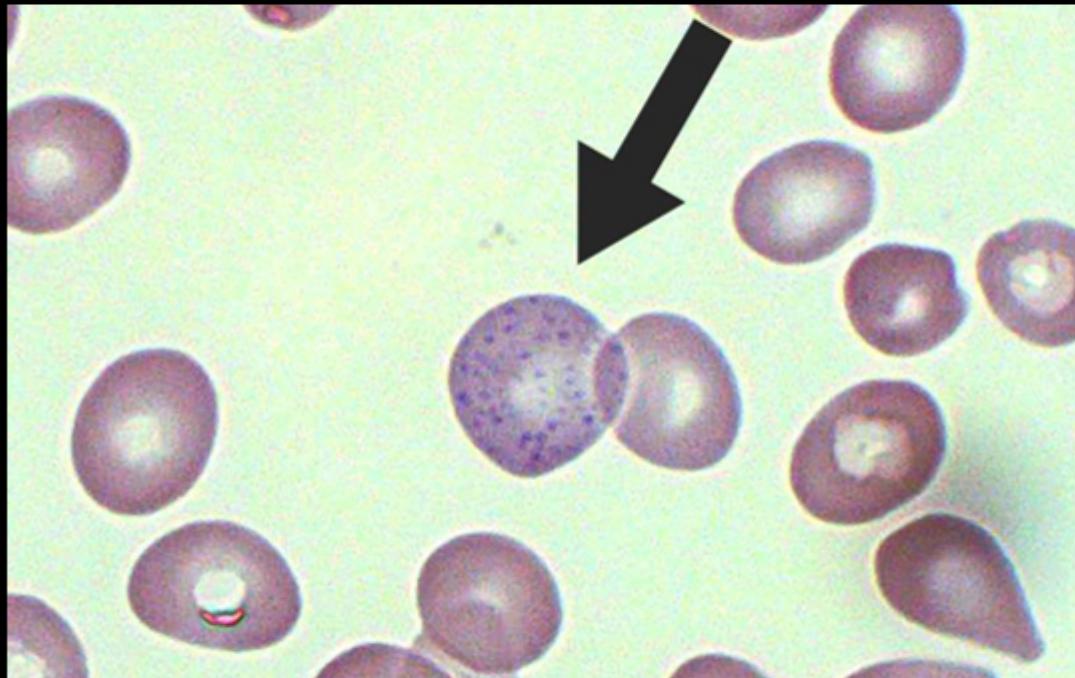
**Blood Brain Barrier
prevents leakage of wastes
& toxins**



A baby eats Lead-Based paint

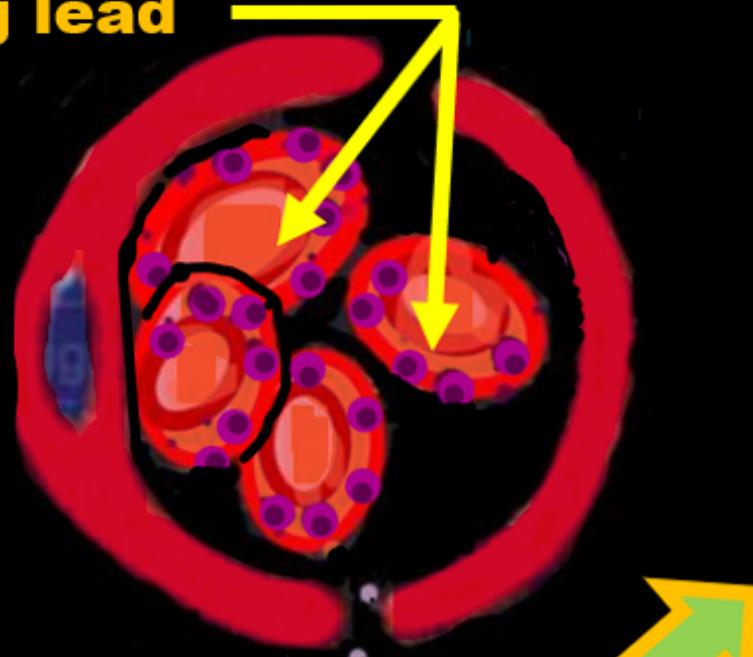


The lead is transported to the brain by red blood cells

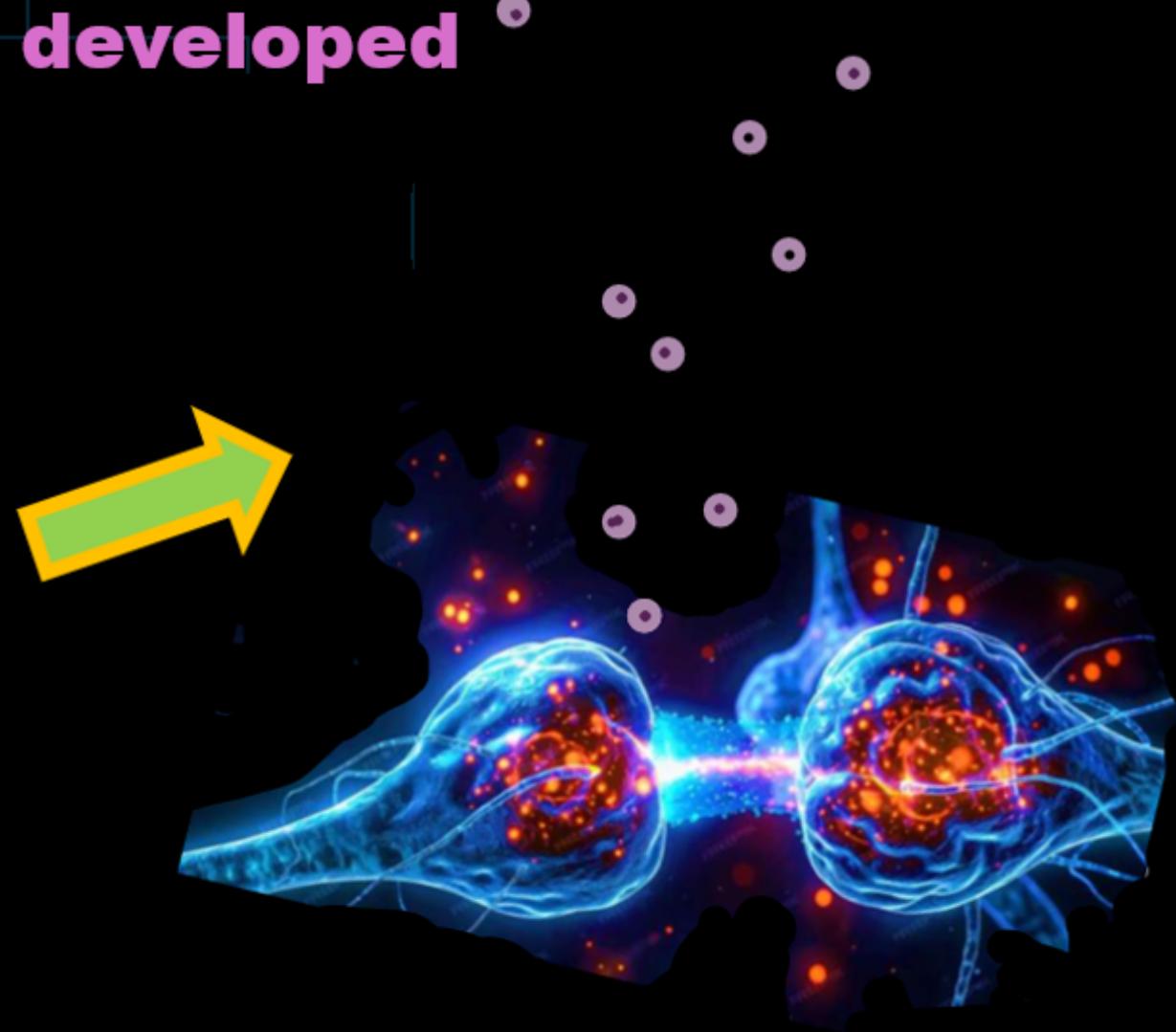


Newborn Brain Capillary no BBB developed

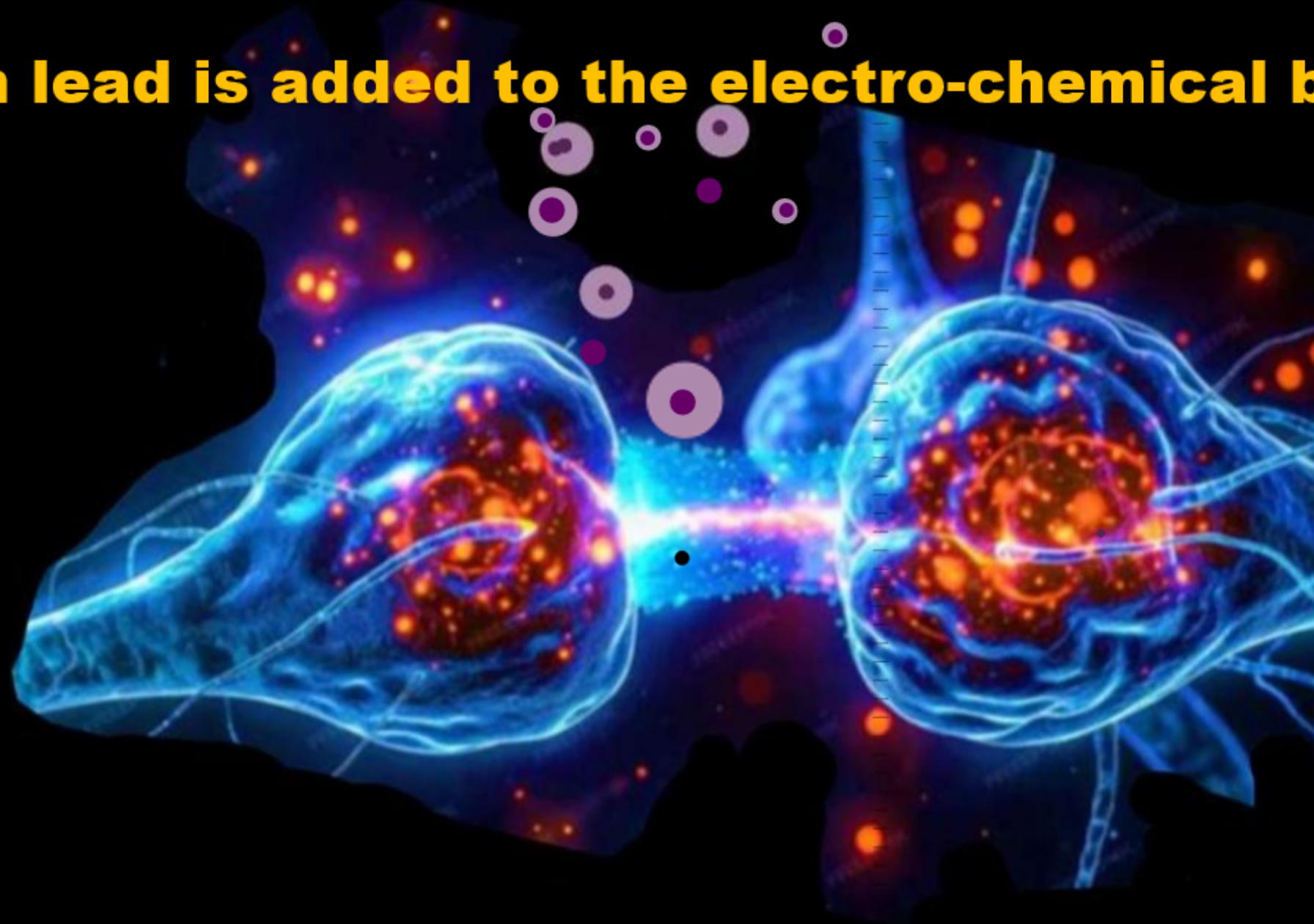
Red Blood Cells carrying lead

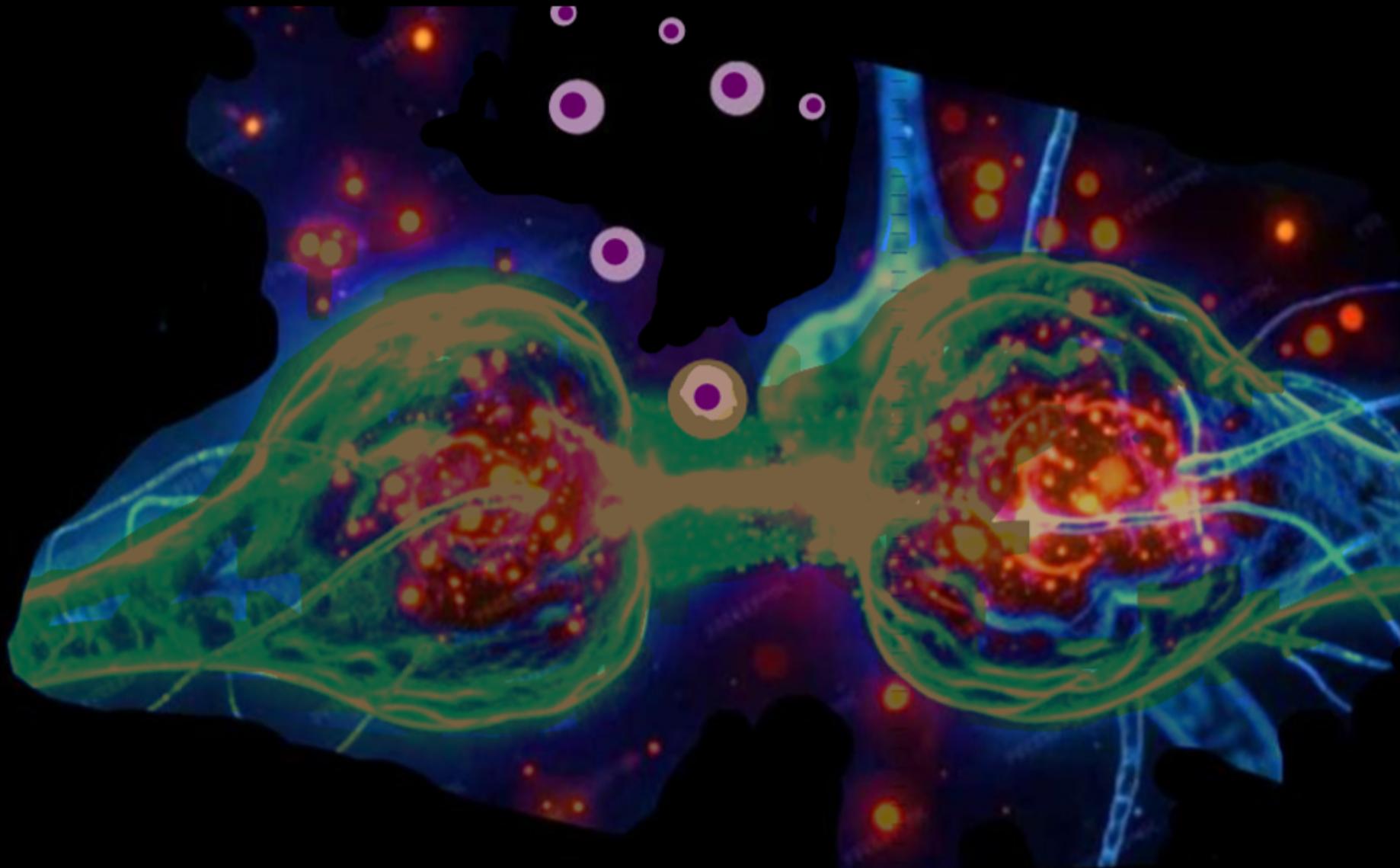


Lead leaves the brain capillary through uncovered pores

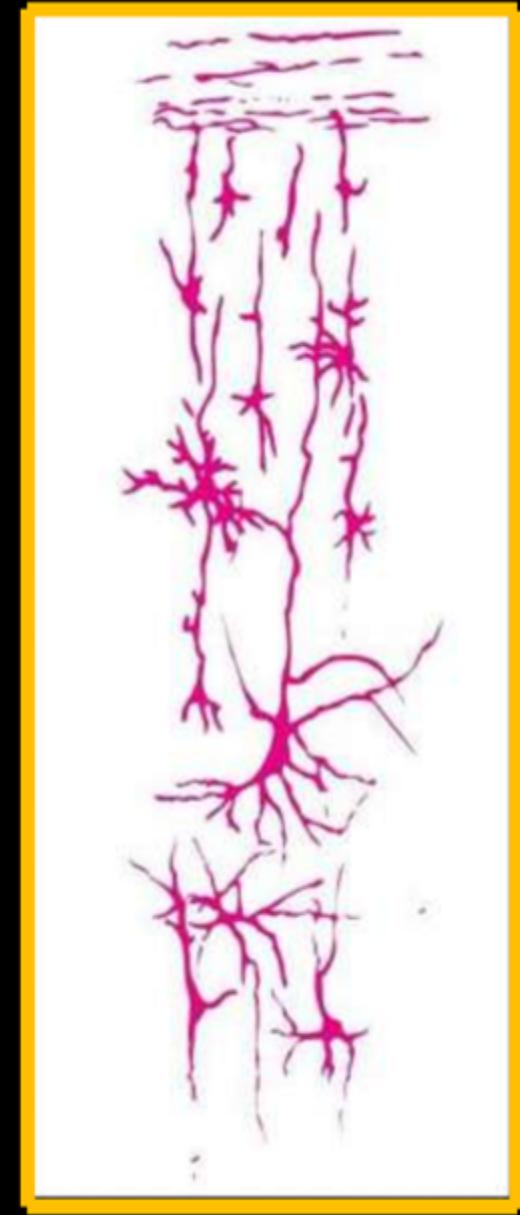


When lead is added to the electro-chemical bond...



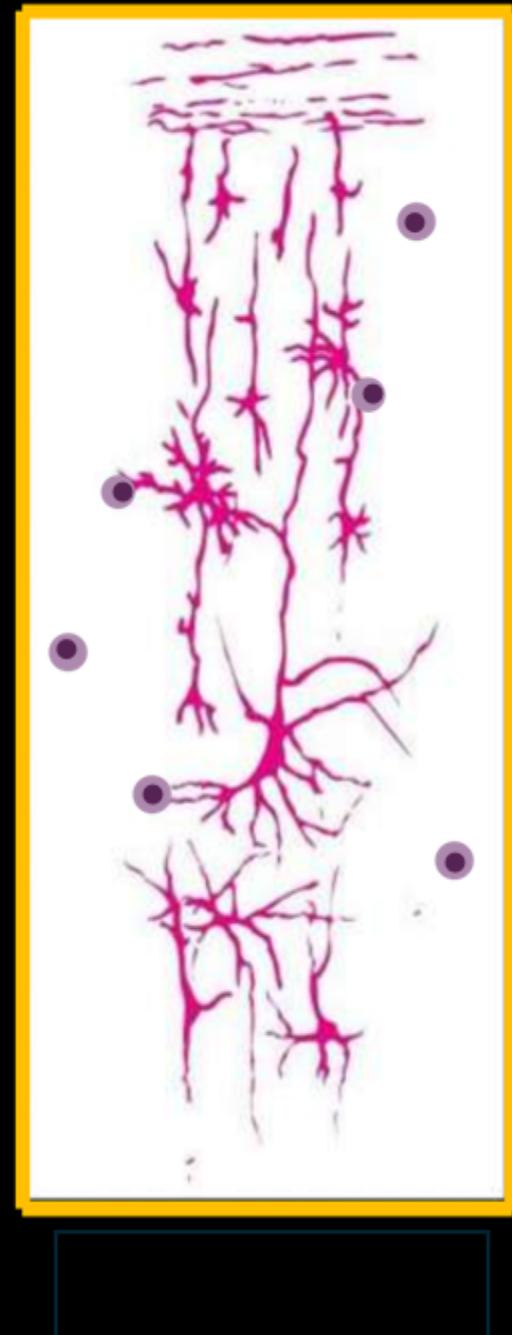


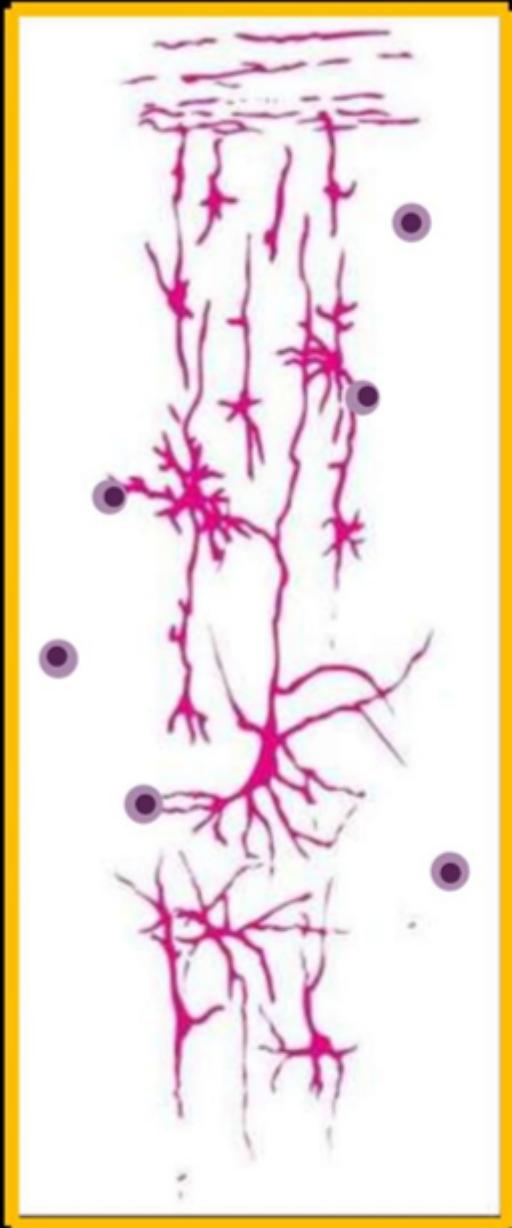
It kills the synaptic connection



At Birth

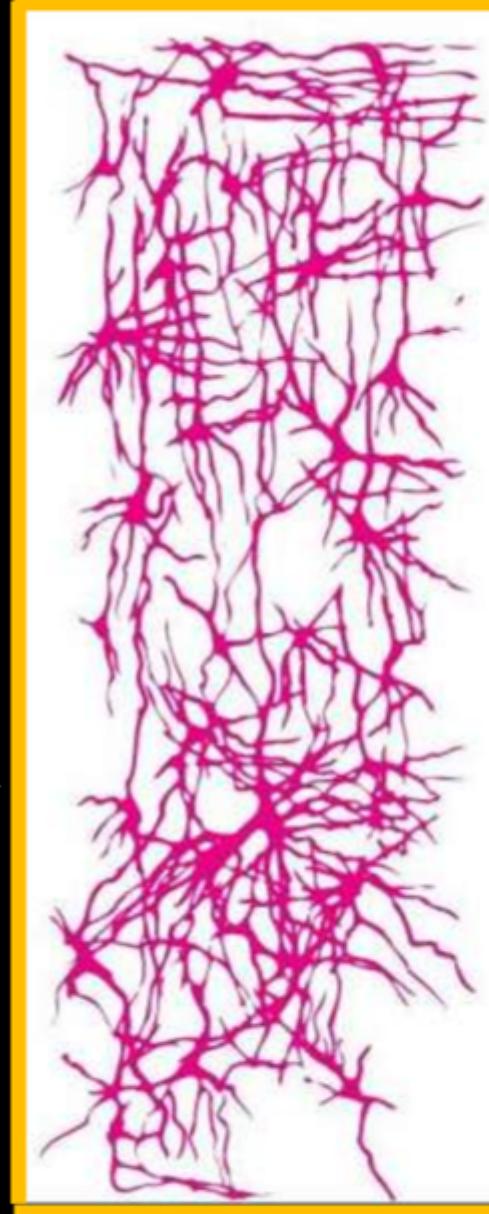
When lead is added to a newborn brain



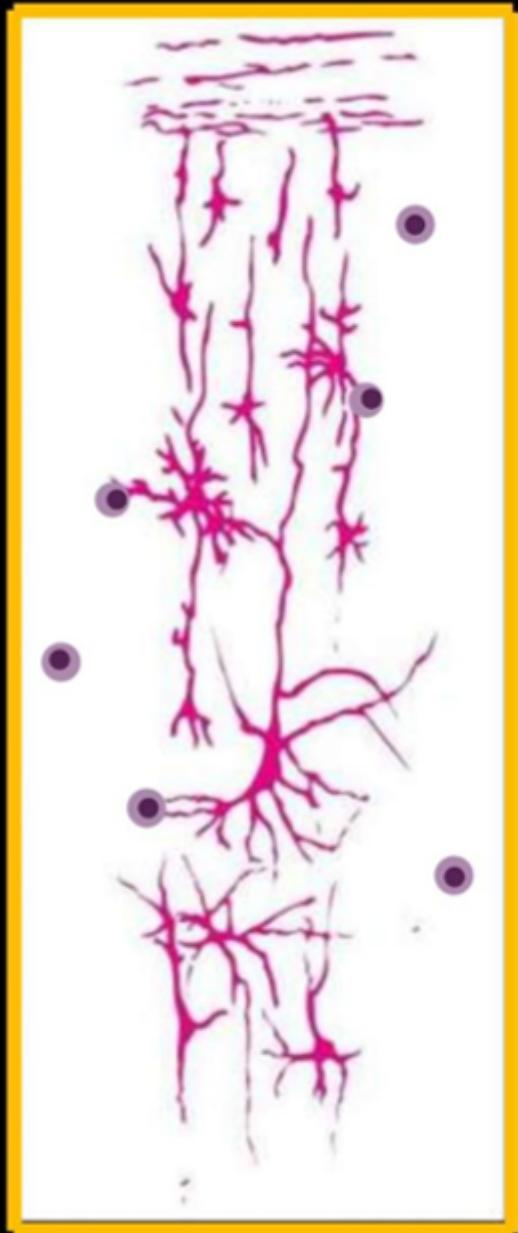


At Birth

**Instead of
this
development
at 3 months**

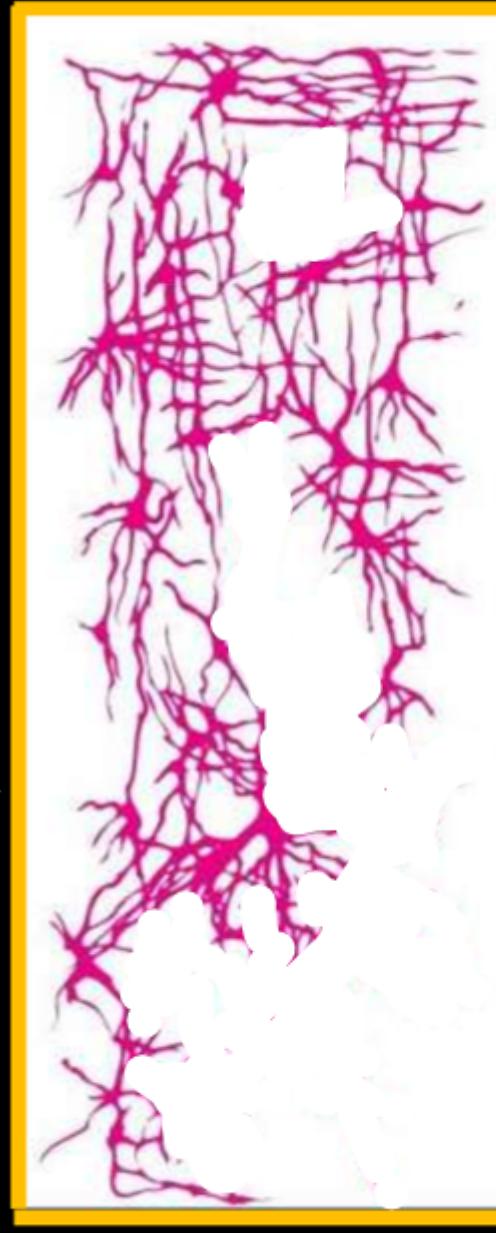


At 3 Months



At Birth

This is the 3 months development



At 3 Months

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

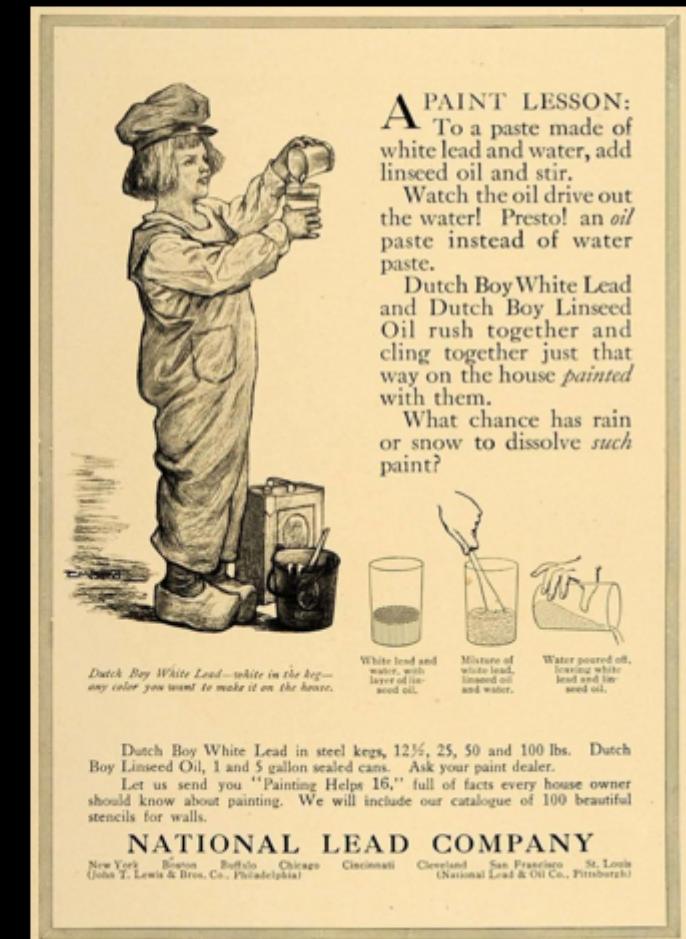
**How much Lead does it take to
cause damage ?**

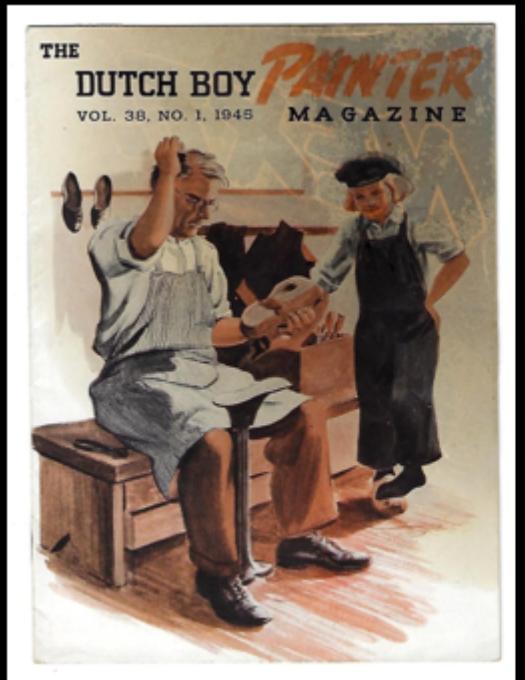
**The CDC's current
blood lead reference value (BLRV)
is 3.5 micrograms per deciliter ($\mu\text{g/dL}$)**

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

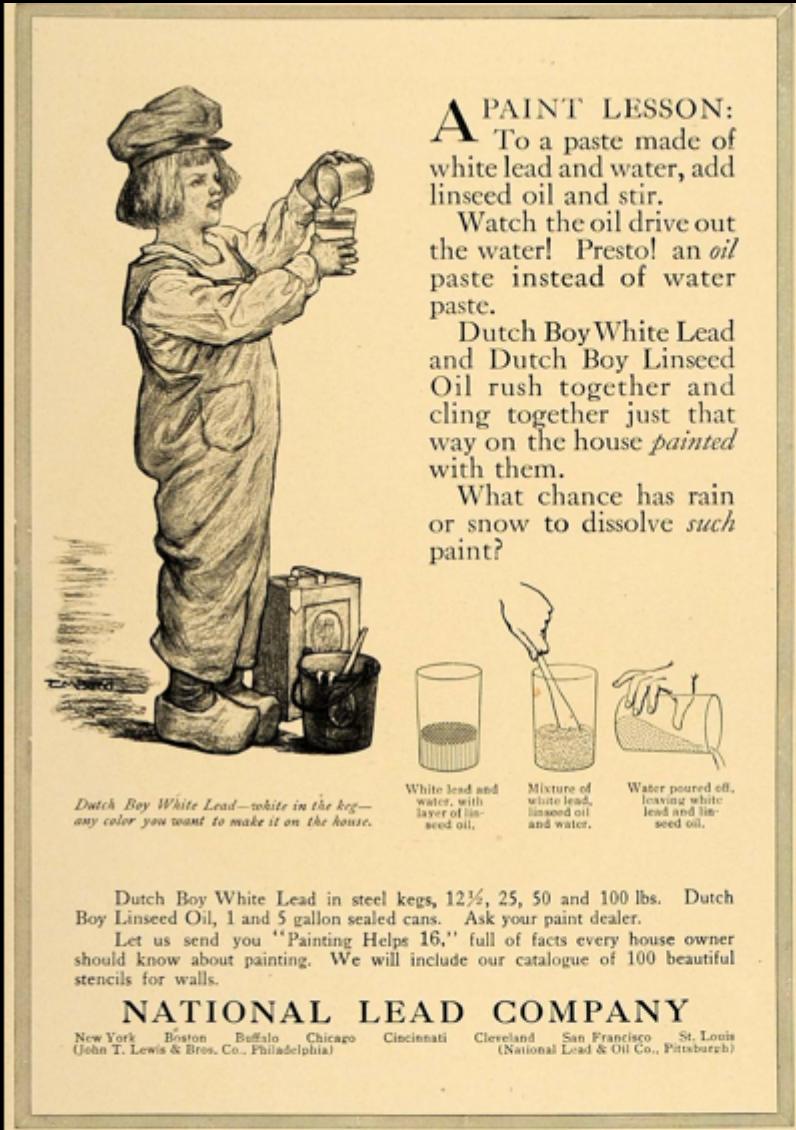
How much lead
is on that wall?

How much lead was put in the paint?





Dutch Boy Paints
organized the
painters



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



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

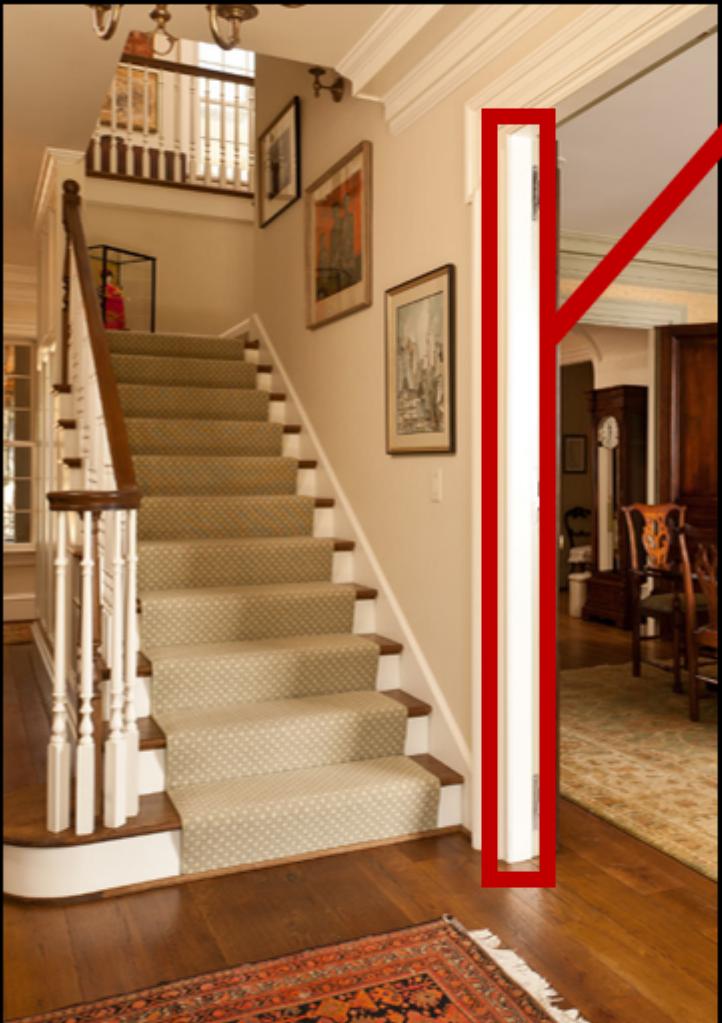
1 ug = 1/1,000,000 of a gram

1 mg = 1/1,000 of a gram

1 ft² = 929.03 cm²

ARGH!!!!

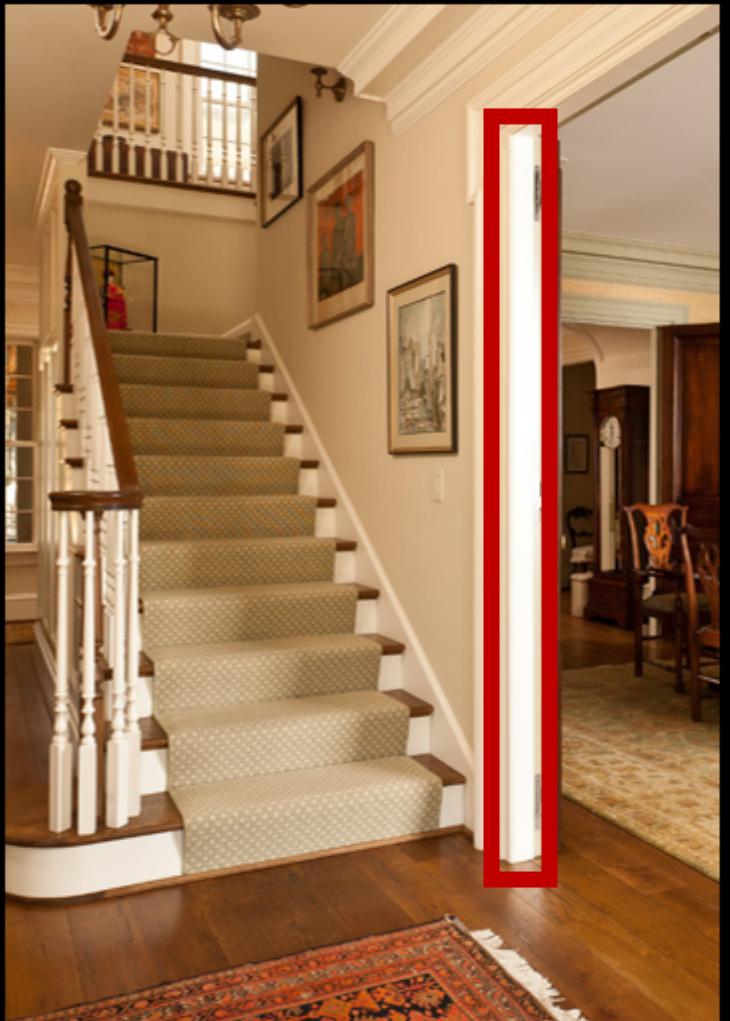
Let's look at it from a Human Health perspective



Project: Sand & repaint piece of trim
Size: 0.5' x 8' = 4 ft²
Test Results: 2 mg / cm² of lead

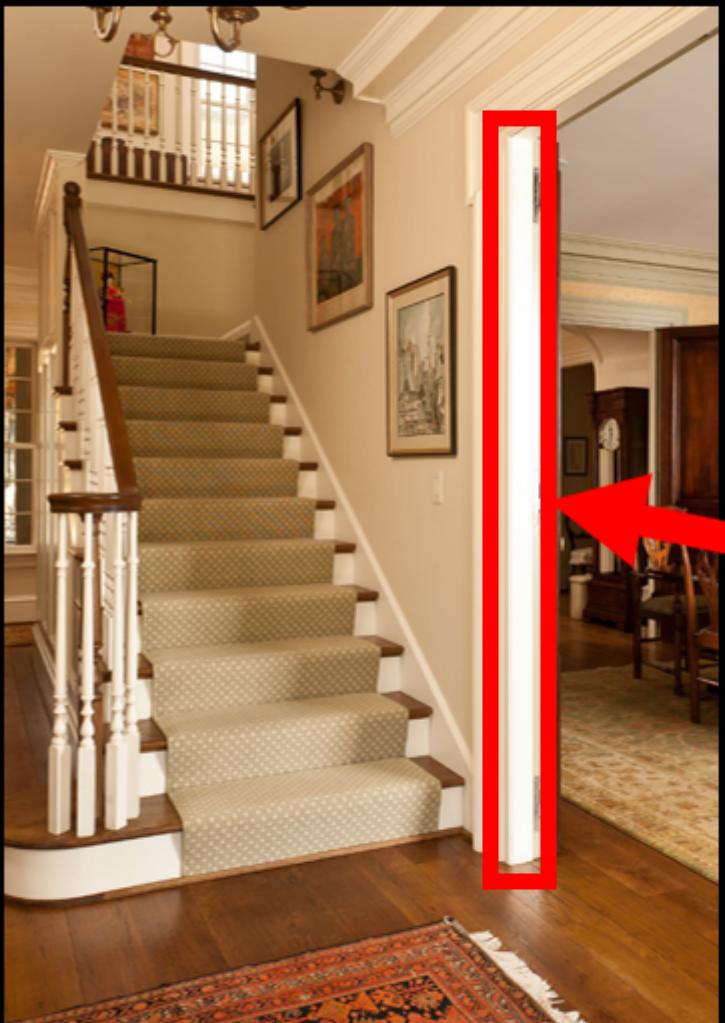
This is a small unregulated project, no containment required

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



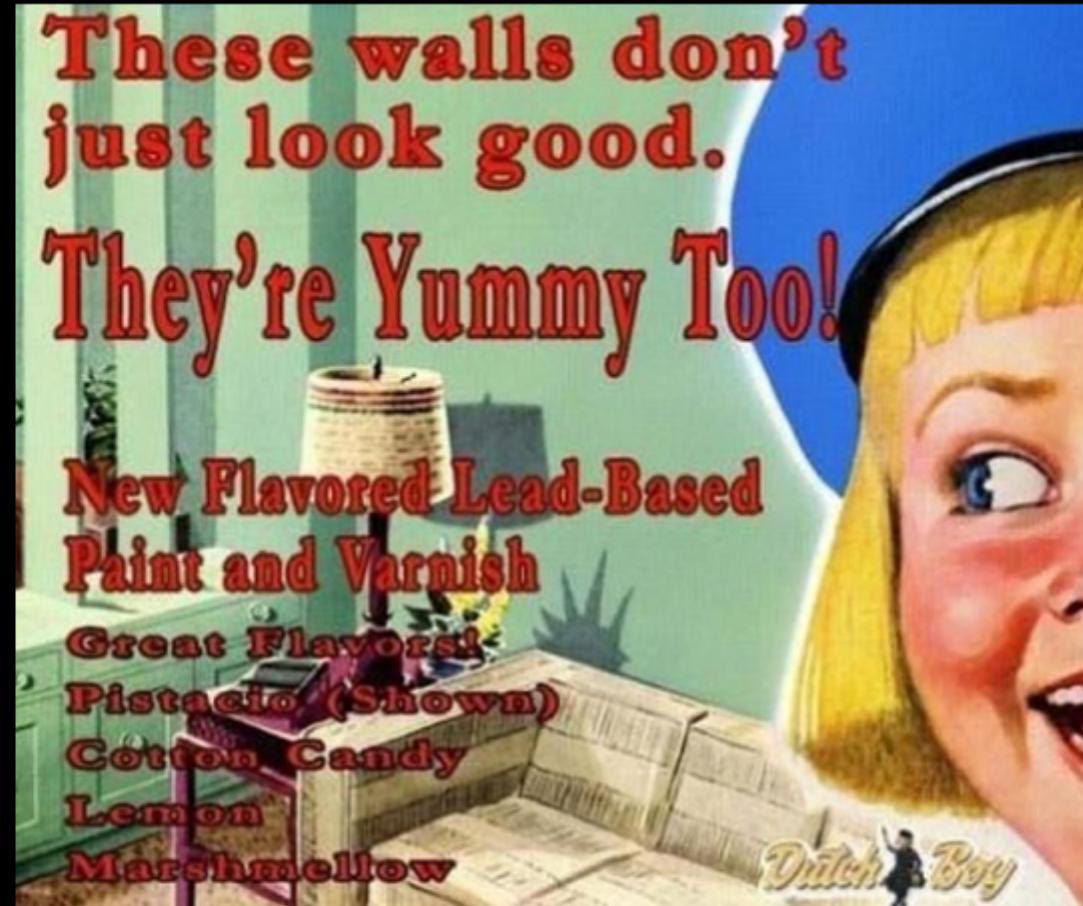
The older the neighborhood the higher the risk

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**