

NEUROSCIENCE FOR KIDS NEWSLETTER

Volume 12, Issue 11 (November, 2008)

Welcome to the Neuroscience for Kids Newsletter.

Here is what you will find in this issue:

1. What's New at Neuroscience for Kids
 2. Neuroscience for Kids Site of the Month
 3. Potato Neuroscience
 4. Neuroscience for Kids Drawing Contest
 5. UW Brain Awareness Week Open House
 6. Museum Exhibits
 7. Media Alert
 8. Treasure Trove of Brain Trivia
 9. Support Neuroscience for Kids
 10. How to Stop Your Subscription
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1. WHAT'S NEW AT NEUROSCIENCE FOR KIDS

Neuroscience for Kids had several new additions in October including:

- A. October Neuroscience for Kids Newsletter was archived
<http://faculty.washington.edu/chudler/news1210.html>
- B. Sloths Not So Lazy
<http://faculty.washington.edu/chudler/sloth.html>
- C. Flying Can Give You A Headache
<http://faculty.washington.edu/chudler/flying.html>
- D. Brain Cancer Takes a Swing at Golfer Ballesteros
<http://faculty.washington.edu/chudler/seve.html>

In October, 9 new figures were added and 92 pages were modified.



2. NEUROSCIENCE FOR KIDS "SITE OF THE MONTH"

The Neuroscience for Kids "Site of the Month" for November is "Teaming Up to Protect Young Athletes" at:

<http://www.cdc.gov/Features/Concussion/>

The Centers for Disease Control and Prevention, Seattle Seahawks football team and the Brain Injury Association of Washington have teamed up to launch a campaign to help protect young athletes from getting concussions.

The team's web site has videos and podcasts to explain concussions and describes ways to protect athletes and prevent long-term brain problems. Tool kits (posters, videos, wallet cards, fact sheets) for high school coaches, youth sports coaches and doctors can

be downloaded from the site. You can also send electronic postcards to remind people about the symptoms of concussions and make others aware of the "Teaming Up" web site.



3. POTATO NEUROSCIENCE

This past year I grew potatoes in my small home garden. I had never grown potatoes before and thought my family would enjoy some fresh produce. So what, you may ask, do potatoes have to do with neuroscience? It turns out that potatoes contain a neurotoxin called solanine. Don't worry -- potatoes are safe to eat. The amount of neurotoxin in potatoes is usually very small and the chance of poisoning is low. Most potatoes that you buy in the store contain little solanine. Solanine is concentrated in the skin and "eyes" of the potato, so peeling a potato removes much of the neurotoxin. Also, the amount of solanine increases when potatoes are exposed to light and when they turn green. So, potatoes should always be stored in a dark place.

A few outbreaks of potato poisoning have been reported, but people rarely die. Typical symptoms of solanine poisoning include headache and stomach problems; severe poisoning can cause convulsions, breathing problems and coma. Solanine works by blocking the enzyme that breaks down the neurotransmitter acetylcholine. Therefore, solanine causes an increase in the amount of acetylcholine in the body.

I look forward to next spring when I will plant several varieties of potatoes including Yukon Golds, Red Potatoes, and maybe even some Purple Potatoes. And I'll peel the potatoes before I eat them.

Reference:

Lee, M.R., The solanaceae: foods and poisons, J.R. Coll. Physician Edinb., 36:162-169, 2006.



4. NEUROSCIENCE FOR KIDS DRAWING CONTEST - NOW OPEN

Get out your pencils, pens and markers! The NEUROSCIENCE FOR KIDS DRAWING CONTEST is now open to students in kindergarten through high school. Use your imagination to draw a picture about the brain and you might win a prize. The complete set of rules and the official entry form for the contest are available at:

<http://faculty.washington.edu/chudler/contest89.html>

Here is a brief set of the drawing contest rules:

A. Drawings must be done by hand using pencils, pens, markers, and/or crayons and submitted on an official entry form (or copy of the form).

B. Entries will be divided into four categories based on age. Drawings in each group should be about the following topics:

Kindergarten to Grade 2: "My brain helps me _____."

Grade 3 to Grade 5: "Brain Fitness: I keep my brain healthy by _____."

Grade 6 to Grade 8: "My brain is like a _____ because _____."

Grade 9 to Grade 12: "Brain research is important because _____."

C. To enter the drawing contest, mail your completed entry form to the address listed on the entry form.

D. Entries must be received by February 1, 2009, and will not be returned. Winners will be announced no later than March 1, 2009.

E. Drawings will be judged by the staff of Neuroscience for Kids or by other individuals designated by Dr. Eric H. Chudler. Drawings will be judged on the basis of originality, scientific accuracy and overall design.

F. There will be several winners in each age group. Winners will be awarded a neuroscience book or other prize related to the brain.

Contact Dr. Chudler with any questions about the contest: chudler@u.washington.edu

Good luck to everyone!



5. UW BRAIN AWARENESS WEEK OPEN HOUSE

Do you want to attend the 2009 Brain Awareness Week Open House at the University of Washington in Seattle on Wednesday, March 11, 2009? Applications are now being accepted. Please complete and return the application form (in PDF format or WORD format):

<http://faculty.washington.edu/chudler/pdf/2009teachinv.pdf>
or
<http://faculty.washington.edu/chudler/pdf/2009teachinv.doc>

To read about last year's BAW Open House at the University of Washington, please see:

<http://faculty.washington.edu/chudler/baw08oh.html>

If you cannot download the application form for the Open House, contact me by e-mail (chudler@u.washington.edu).



6. MUSEUM EXHIBITS

A. Join me at Life Sciences Research Weekend at the Pacific Science Center (Seattle, WA), November 7-9, 2008. I'll be on the demonstration stage on Friday, November 7 (11 am and 1 pm) with an interactive presentation, "Journey into the Brain." Come meet other scientists as they host hands-on science activities. For more information about the event, see:

<http://www.pacsci.org/lifesciences/>
and
<http://www.nwabr.org/education/lisrw.html>

B. "Dialog in the Dark" is an exhibit where people who are blind lead small groups of guests through completely darken spaces to experience their surroundings without eyesight. Visit the exhibit in Brazil (Campinas), France (Strasbourg), Germany (Frankfurt and Hamburg), Israel (Holon), Italy (Milan), Japan (Tokyo) and the USA (Atlanta and Kansas City). Tickets are a bit expensive, but the exhibit is unique. The "Dialog in the Dark" web site has more information about the exhibit:

<http://www.dialogue-in-the-dark.com/>

C. The permanent home for "Vision," a hands-on exhibit developed by the National Eye Institute is on permanent display at the Discovery State in Hagerstown, Maryland. "Vision" demonstrates how the eye focuses light, how we perceive motion and color, and how the brain processes visual information into a meaningful picture. See:

<http://www.discoverystation.org/>

D. "Mixed Signals" an exhibit about how we process visual information reopened in September at the Museum of Nature & Science in Dallas (TX). You can also watch the "Wired to Win" IMAX movie at the museum. For more information about these activities, see:

http://www.natureandscience.org/exhibits/mixed_signals.asp
and
<http://www.natureandscience.org/imax/default.asp>

E. The "Brain Education Museum" opened in September, 2008, in Taiwan (Sinpi township). The museum was built by the Pingtung County government and the Calo Psychiatric Center to help people understand the structure and function of the brain. The exhibit include displays, models and interactive activities.



7. MEDIA ALERT

A. The November 2008 issue of Scientific American MIND is on newsstands now. Included in this issue are "The Science of Gossip: Why We Can't Stop Ourselves," "Your iBrain: How Technology Changes the Way We Think," "Tempering Toddler Tantrums Now May Prevent Aggression Later," "Five Ways Brain Scans Mislead Us," and "Putting Thoughts into Action: Implants Tap the Thinking Brain."

B. The cover story Scientific American (November, 2008) is "Plugging into the Brain." The article discusses advances in merging machines with brains.

C. The cover story of the October 4, 2008, issue of New Scientist is titled "Outer Limits of the Brain."

D. "Spare a Cerebellum" by Adam Duerson (Sports Illustrated, October 6, 2008) describes how 12 professional athletes, including some National Football League players, have agreed to donate their brains for research. Researchers associated with The Sports Legacy Institute and Boston University will study these brains to learn more about concussions and brain injury.

E. The European Commission Scientific Committee on Emerging and Newly Identified Health Risks released a report titled "Potential health risks of exposure to noise from personal music players and mobile phones including a music playing function" describing the risks associated with listening to loud music. The report is available at:

http://ec.europa.eu/health/ph_risk/committees/04_scenihr/docs/scenihr_o_018.pdf



8. THE TREASURE TROVE OF BRAIN TRIVIA

A. Turkeys sleep about 11 hours each day. (Source: Ayala-Guerrero, F., Mexicano, G. and Ramos, J.I., Sleep characteristics in the turkey Meleagris gallopavo, Physiology & Behavior, 78:435-440, 2003.)

B. Polo players (even those who are left-handed) are required to hold the mallet in their RIGHT hands. (Source: Federation of International Polo; <http://www.fippolo.com/polo-basics/the-international-rules-for-polo.html>)

C. Two scientists who won the Nobel Prize in Physiology or Medicine were both born on the same day of the year. Neuroscientist Eric R. Kandel, who won the Nobel Prize in 2000, was born on November

7, 1929 and Konrad Lorenz, who won the Nobel Prize in 1973 was born on November 7, 1903.

D. The word psychology comes from the Greek words psyche ("mind") and logos ("study").

E. Rabies, a disease caused by a virus that attacks the nervous system, causes 30,000 to 70,000 deaths worldwide each year. In the United States, 25,000 to 40,000 people are treated each year for exposure to rabid or potentially rabid animals at a cost of at least \$1000 per patient. (Source: Hankins, D.G. and Rosekrans, J.A., Overview, prevention, and treatment of rabies, Mayo Clin Proc., 79:671-676, 2004.)



9. SUPPORT NEUROSCIENCE FOR KIDS

To insure that Neuroscience for Kids stays available, we need your help. All contributions to Neuroscience for Kids are tax deductible (subject to IRS regulations). If you would like to donate to Neuroscience for Kids, please visit:

<http://faculty.washington.edu/chudler/help.html>



10. HOW TO STOP RECEIVING THIS NEWSLETTER

To remove yourself from this mailing list and stop your subscription to the Neuroscience for Kids Newsletter, send e-mail to Dr. Eric H. Chudler at:

chudler@u.washington.edu

Your comments and suggestions about this newsletter and the "Neuroscience for Kids" web site are always welcome. If there are any special topics that you would like to see on the web site, just let me know.

Eric

Eric H. Chudler, Ph.D.

(e-mail: chudler@u.washington.edu)

(URL: <http://faculty.washington.edu/chudler/neurok.html>)