Автор: NHA
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There are no translations available.

Brain networks

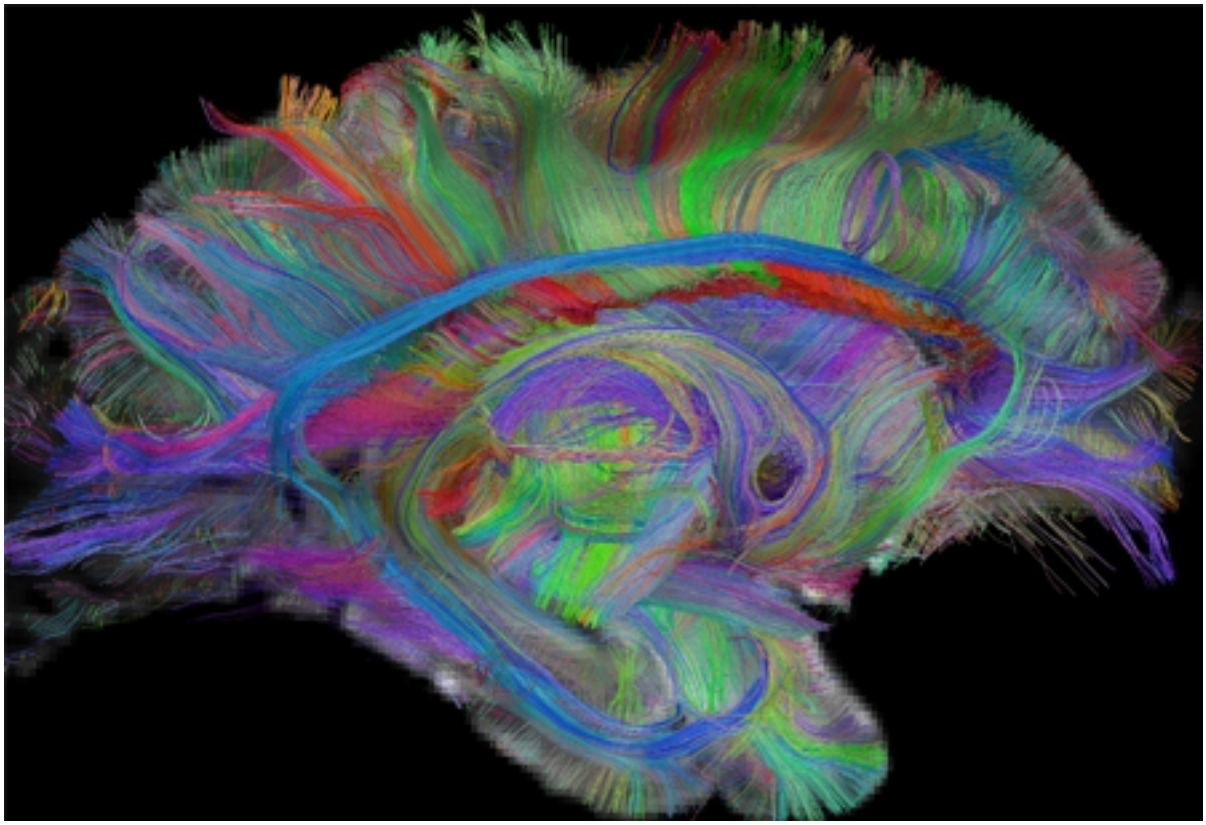
also see: Anatomy, physiology & brain networks, in this section

Aim of this article: answering some questions raised in forums and clarifying what networks do and how they develop.

Readers: Tell us if it works! Also, please tell us anything that you feel would explain stuff better, bearing in mind that we'd like it to be less wordy but clearer. After reading it, consider whether you now have a clear idea of what networks do what? If not, what's missing? What doesn't need to be in here? Feedback in the forums please!

Networks –clarifying what they do and how they develop

Who are you?

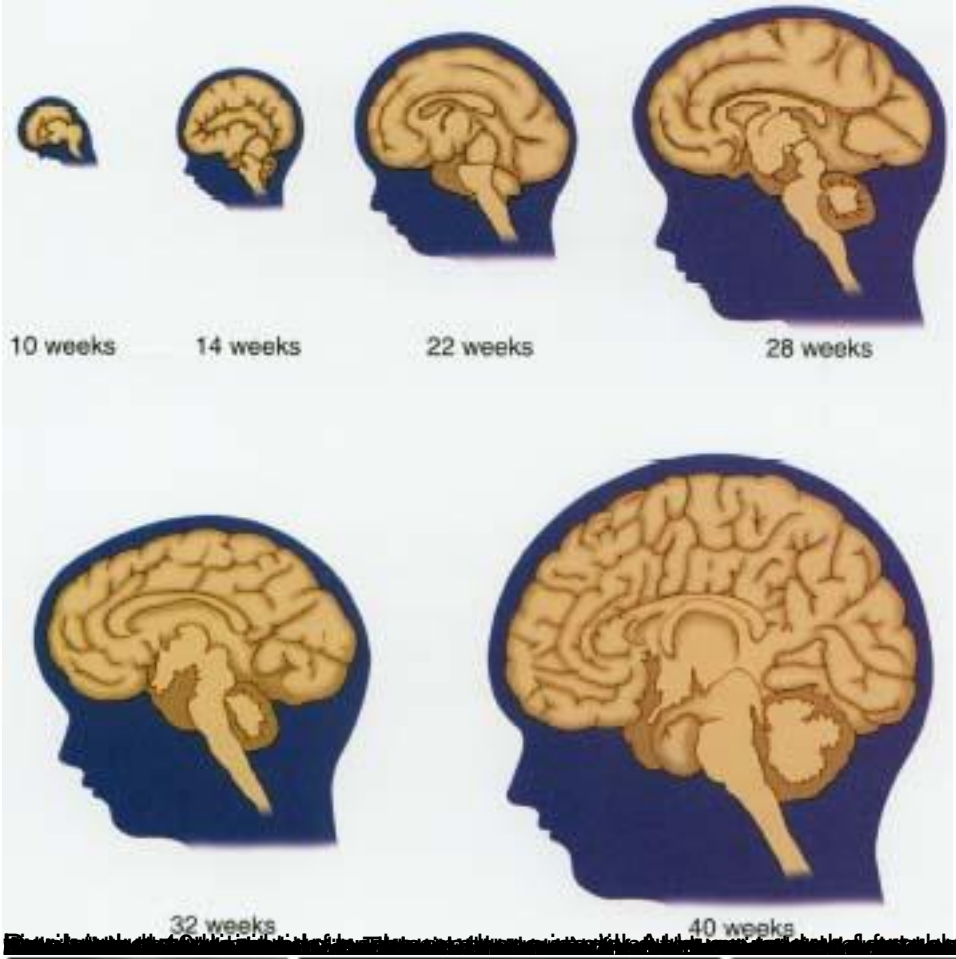


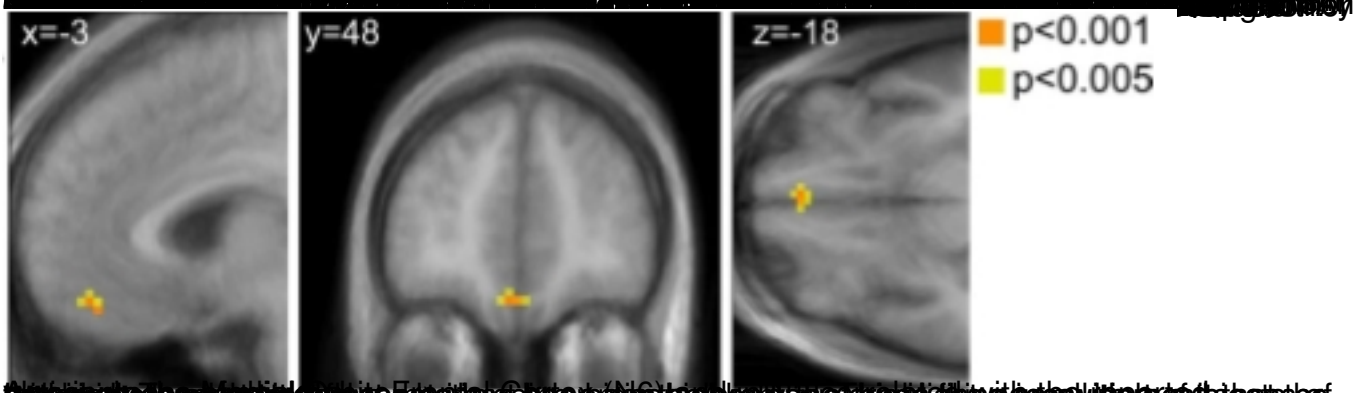
‘***Game Space’ of network connections or ‘wiring’ across one half of the brain*** *. What we are seeing here is a map of axons; connections between networks; not the neuron cell bodies themselves. The clear line of blue from front to back about two thirds up is the thin part of N6, just above the Corpus Callosum marked in red (we can’t see most of it because it runs laterally from left to right). We can’t see much of each lateral hemisphere either, but we can at least*

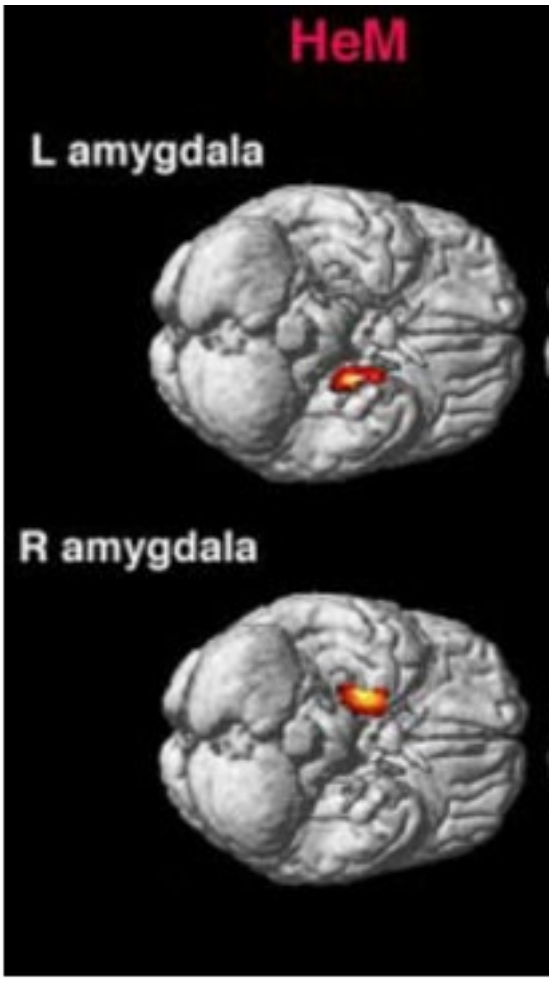
appreciate how ‘networks’ are not tidy little modules geographically separated and neatly wired together; in fact they more closely resemble a dangerous server room.

The example above may not be a fully developed brain, despite the fact it is an adult one. The concept of ‘development’ as linear does not accord well with any species having a life cycle –a fully developed body, for example, is not at all the same as one that has completed its cycle! By developed we mean ‘reached the peak potential of its maturity’ and for the brain and body this means it needs to have done things and learned things as well as grown things. Brain development with optimal input still takes about 25 years. If things are not optimal, development at any stage may slow or stop.

The speediest part of growth should occur in the womb, at about the following pace:


10 weeks
14 weeks
22 weeks
28 weeks
32 weeks
40 weeks


x=-3
y=48
z=-18
p<0.001
p<0.005



And if you just can’t decide…….

Both amygdalae –keeping your options open.

When a situation holds both benefits and dangers, we stay alert but open minded.

We may from there move into conditional or unconditional trust:

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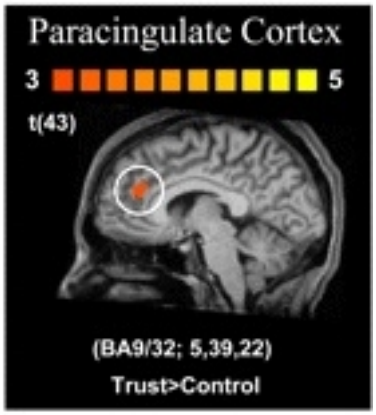
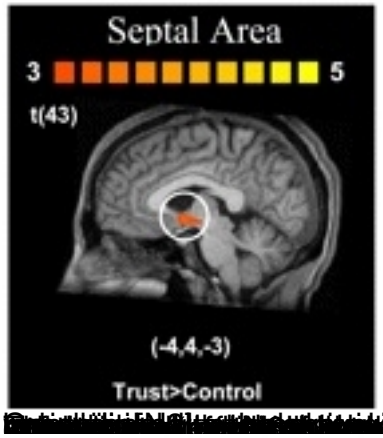
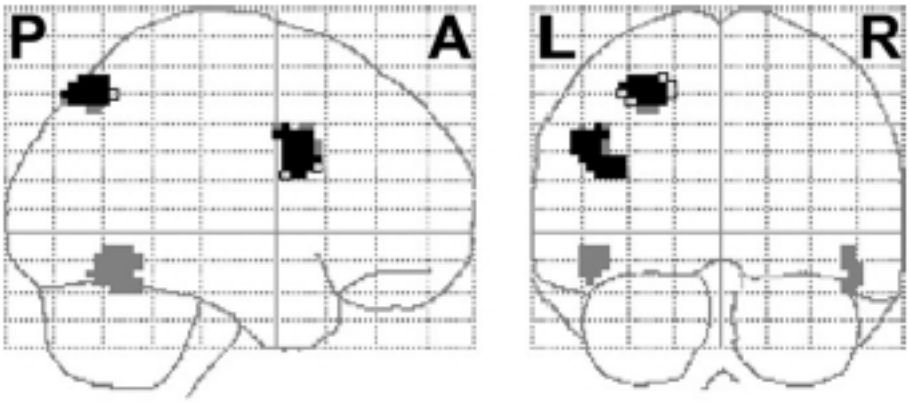
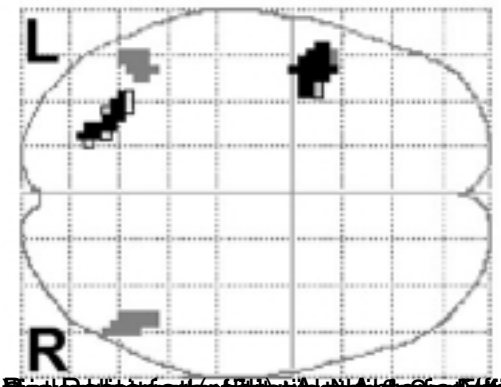
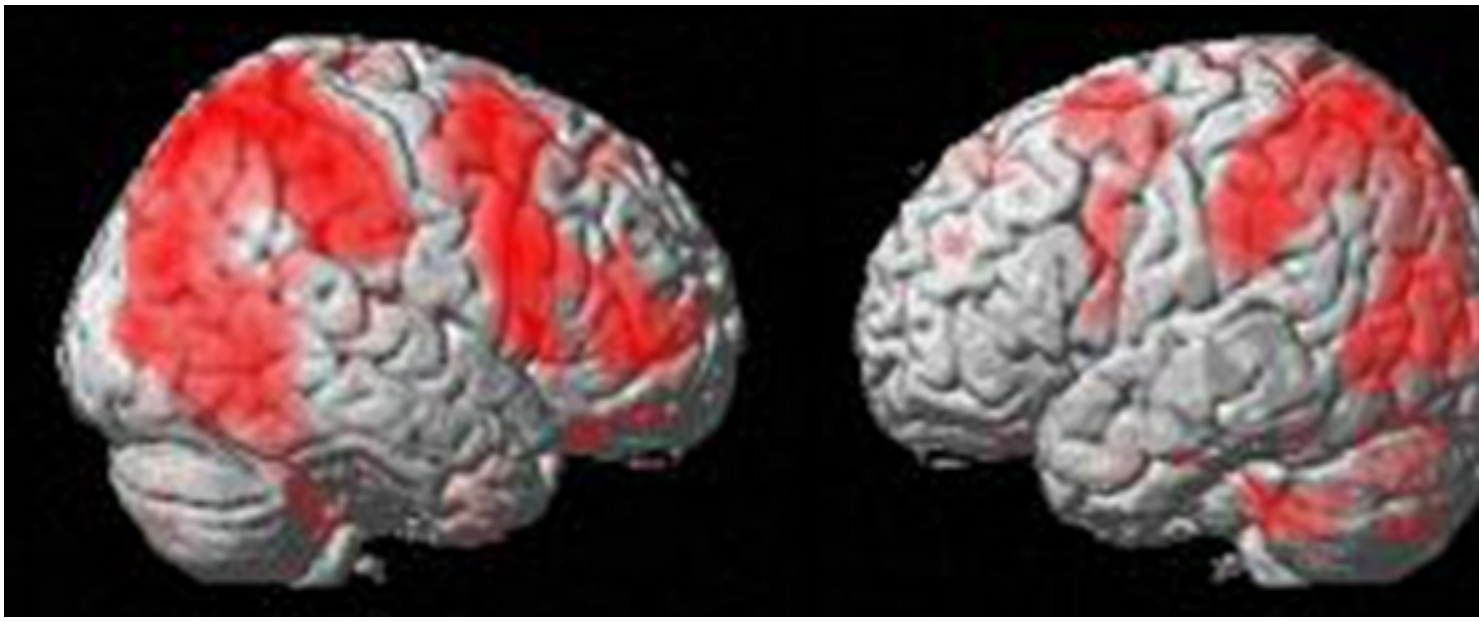










This person is watching a video and answering simple questions about it such as 'is the guy holding the object with all five fingers?' The pic on the left is the right hemisphere and vice versa. You'll notice the motor cortex is joining in even though the guy's not moving, just because of paying attention to the movements. All networks except N5 seem to be involved in some way, with a lot of activity over N3's association area.

We know what some of the networks' tasks will be because we know what sort of processing goes on in each network. Here's a reminder below:

Here is a table showing what each network processes and pays attention to, together with some of their associations.

Network

Processing

Associations [the sort of things the process recognizes]

1

sensorimotor experience and memory, attention, short-range senses taste & texture,

relations/associations of Matter; physical substance; mass, individual material objects,

2

Spatial experience and memory, orientation, motion against background, kinesthesia,

Spatial relations & associations; volume, size, air, wind, atmosphere and gases, area,

3

[able to mix input from N1 & 2] density,gradient, smell, weight, number, degree, quant

Relationships and associations of Density; liquids and concentrates, ratios, chemical

4

Procedures & procedural memory, analog / qualitative sequences of events, regulatio

relationships/associations of a Temporal nature; seasons, orbits, oscillation, synchrony,

5

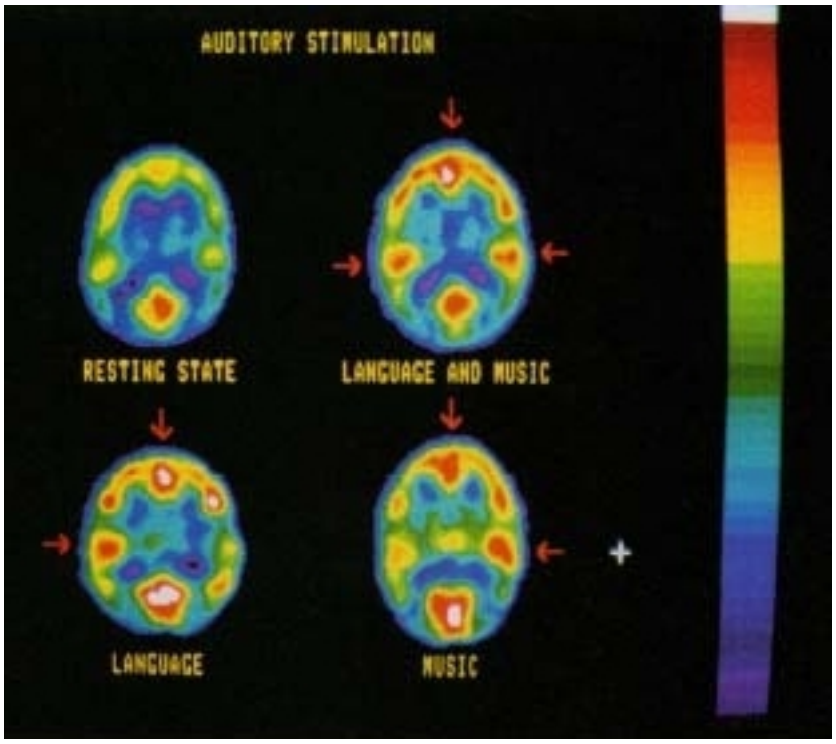
Declarative facts & memory, digital / quantitative data, intellect, calculation, assessme

Energy relations/associations; explosion, the sun, strength, individual autonomy, cata

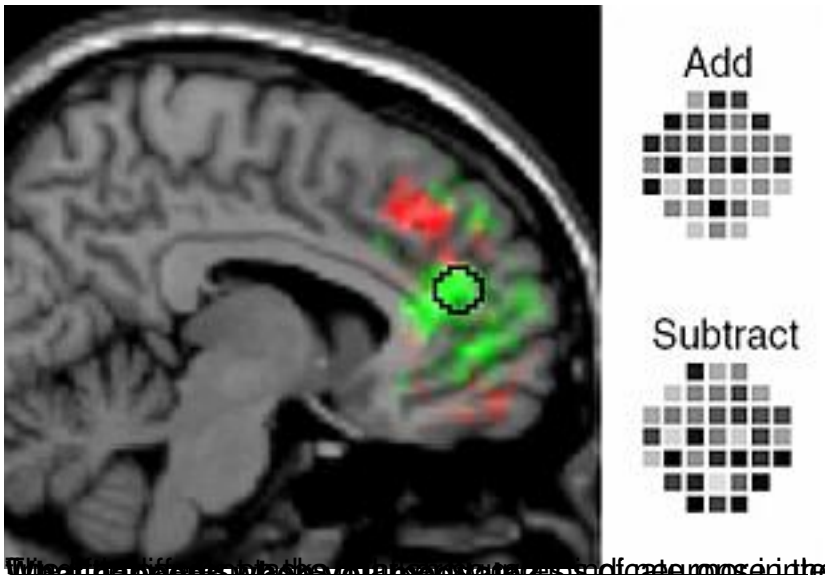
6

brightness, intensity, quality, essence, Animal behaviors of executive functions, syner

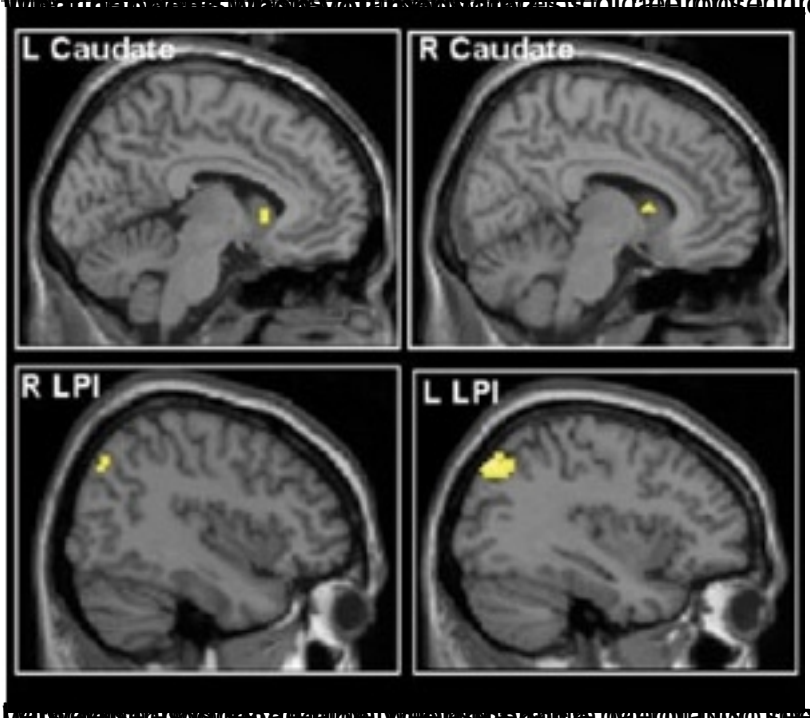
Power relations/associations; lightning, light, clarity, truth, upward and outwards, com



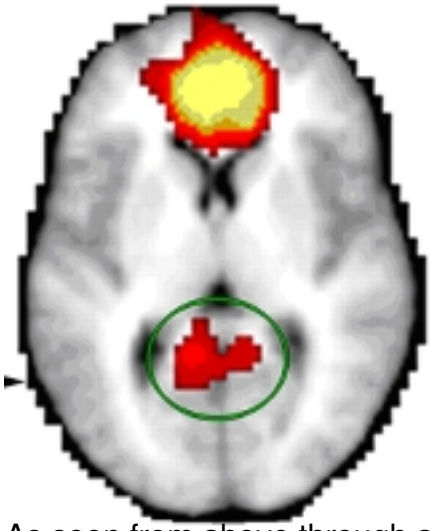
Many tasks use multiple networks, and the same network can perform many tasks as you can see in the activities above in which people are listening to spoken language or music; but sometimes they are quite specific. Below is a scan of N5 doing arithmetic:



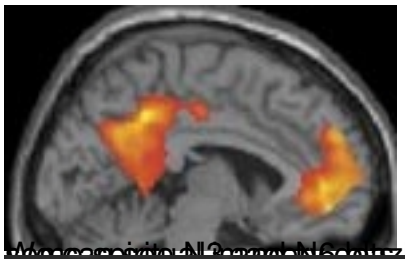
[illegible] the same area and their strength of



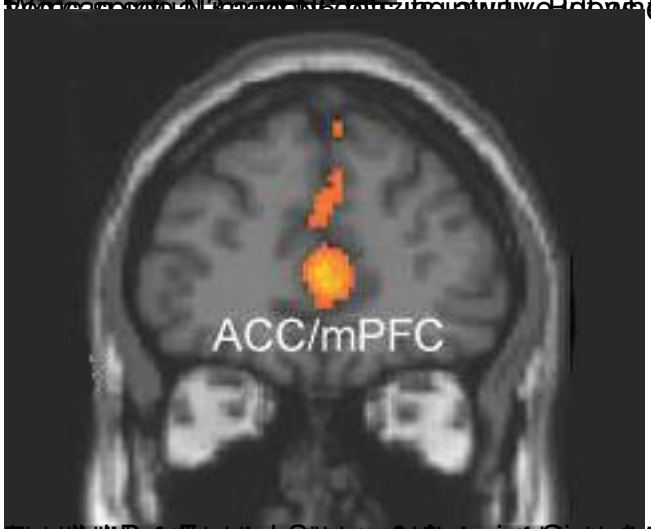
[illegible]



As seen from above through a slice from the middle of the brain. From the side it looks like this:



[illegible] you view this from the front, you can see where



[illegible]

And sometimes the whole of the N3 /N6 connection gets involved:

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ntally; the front of the head is to the left.

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