Arteries of the Head and Neck

The common carotid arteries supply blood to the head and neck. Each common carotid artery runs up one side of the neck (at the branch is a swollen area containing a pressoreceptor regulating BP), each branches into an: External carotid artery (supplies blood to the face and scalp) and and internal carotid artery (blood to the brain)

The external carotid arteries branch into:

- superior thyroid artery supplies blood to the thyroid gland and larynx
- lingual artery supplies blood to the tongue
- facial artery supplies blood to the face
- occipital artery supplies blood to the posterior scalp

Then splits into maxillary artery (blood supply to deep facial structures) and superficial temporal artery (blood supply to the skin of the scalp and face above zygomatic arch).
Arteries of the Head and Neck

1. Superficial temporal artery
2. Ophthalmic artery
3. Maxillary artery
4. Facial artery
5. Lingual artery
6. Superior thyroid artery
7. Larynx
8. Thyroid gland
9. Common carotid artery
10. Clavicle
11. Brachiocephalic trunk
12. Aortic arch
13. Occipital artery
14. Internal carotid artery
15. External carotid artery
16. Vertebral artery
17. Subclavian artery

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The Circle of Willis

The internal carotid artery helps create the Circle of Willis – an anastomoses of brain circulation between the internal carotid and vertebral arteries. The internal carotid arteries supply blood to 80% of the cerebral hemispheres. They enter the skull through the carotid canals and branch into:

> ophthalmic arteries which supply blood to the eye sockets, anterior scalp and nasal cavity
> anterior cerebral arteries which supply blood to the medial cerebral hemispheres
> middle cerebral arteries which supply blood to the lateral temporal lobes and parietal lobes.

From the other end of the circle, the vertebral arteries supply blood to the posterior head and neck. They travel up the neck through the transverse processes of the cervical vertebrae and enter the skull through the foramen magnum to join into the:

> basilar artery which supplies blood to the brain stem.
> It then splits into two posterior cerebral arteries supplying blood to occipital lobes and temporal lobes.
> Two posterior communication arteries connect the posterior cerebral arteries to the middle cerebral arteries forming the Circle of Willis.