

# The Blush

*By Josephine Ann A. Aparte*

**W**e've all experienced it at one time or another. Your crush passes by, says hi to you, and you turn a bright red. You fail to answer a question your math teacher asks you, and your face heats up.

The flushed, heated face (and, in some people, also the ears, neck, and chest) is a sign of blushing. Although teenagers seem to be blush more than adults or very young children, the fact is, almost everyone has experienced blushing at some point in their life.

Blushing is caused by a larger-than-normal flow of blood to blood vessels under the skin called capillaries (say: cap-ill-er-ees). Capillaries are so tiny that blood cells need to line up single file just to be able to pass through them.


But, you might be wondering, what causes the blood flow to increase in the first place? The answer is “strong emotions.” Think of any strong emotion you might feel—embarrassment, confusion, nervousness,



*Getting mad makes one blush.*

shame, excitement, anger—all of these, and a few others besides, can bring on a bout of blushing.

Blushing is an involuntary reaction controlled by our autonomic nervous system. This system is the network of nerves in our body that produces automatic reactions. It controls the muscles of the heart, the digestive system, lungs, intestines, eyes, and blood vessels, among other things. Think of what a disaster it would be if we had to control the beat of our heart in the same way that we have to control the movement of our limbs. Nature made it easy for us by taking that huge responsibility out of our hands and making some muscles in our body work without any help from us.

Higher up, the autonomic nervous system is controlled by nerve centers in the spinal cord and the brain. What this means is that while the thinking centers of the brain are also involved in all autonomic responses, you can't tell yourself to stop blushing any more than you can will your heart to stop beating. All of these actions happen involuntarily. 

### Did You Know That...?

Sometimes, blushing is caused by factors other than strong emotions. These other causes include heat; high fever; exercise; hot, spicy food; or medical conditions like acne rosacea. The latter is a skin condition that happens when the blood vessels on the skin of the cheek and nose are permanently widened. This causes the skin to appear red all the time.

### Sources

*Blushing.* <<[www.nhsdirect.nhs.uk/articles/article.aspx?articleId=55&PrintPage=1](http://www.nhsdirect.nhs.uk/articles/article.aspx?articleId=55&PrintPage=1)>>

*Blushing.* Microsoft® Encarta® 2007 [DVD]. Redmond, WA: Microsoft Corporation, 2006.

# Word Find

The following words were mentioned in the article you just read. Find those words in the jumble of letters below. Some words read forward, backwards, up, down, or diagonally.

W J M X W S D B Q N Y  
 P Y T K M Z Q H N U F  
 C I M O N O T U A T H  
 S E I R A L L I P A C  
 U L M L L J S H V Q D  
 O S B O I P O X A V Y  
 V K L R T H R K K M Z  
 R E U T K I N I A R B  
 E B S N B L O O D P S  
 N W H O B Z D N H G R  
 M C B C B E G V S D E

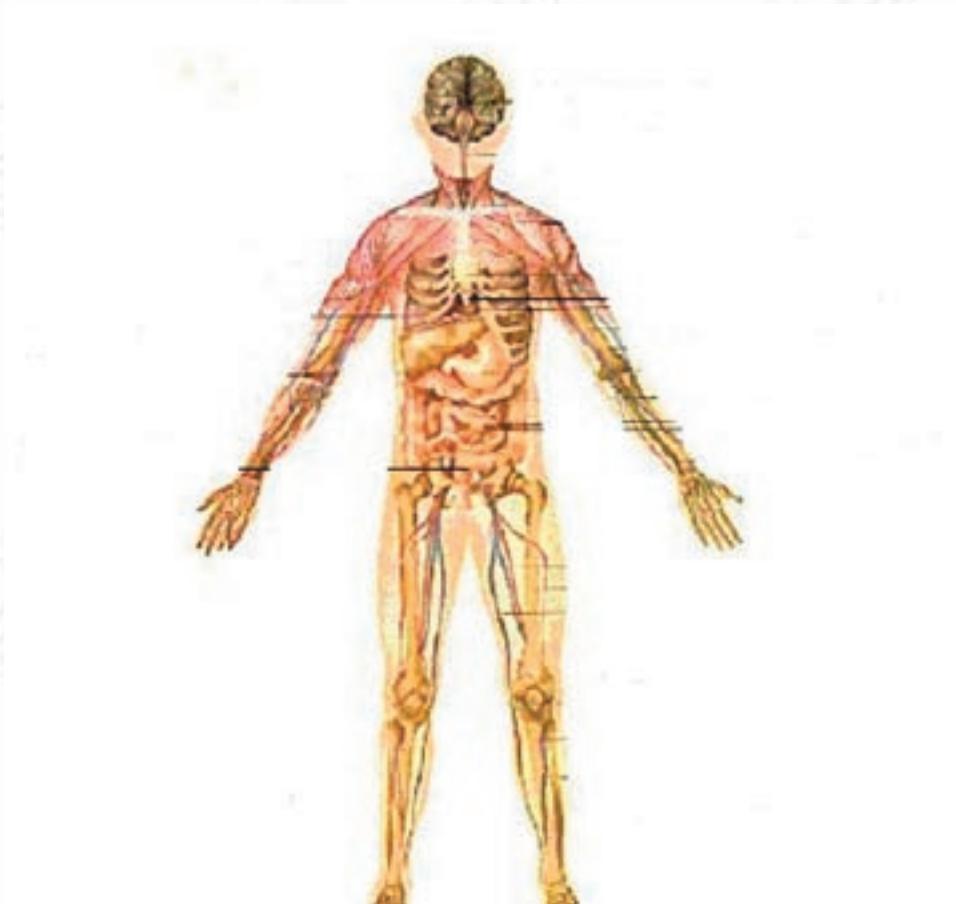
autonomic  
 blood  
 blush  
 brain

capillaries  
 control  
 emotions  
 nervous

# Autonomic Nervous System

The autonomic nervous system (ANS) controls many organs and muscles in our body, such as the muscles of the heart, in the skin, around blood vessels, in the eyes, and the stomach, intestines, and bladder. It also controls some glands.

In the illustration below, try to identify as many parts of the body as you can that is controlled in some way by the ANS. Draw a line pointing to the organ or its rough location and write down the organ or body part's name beside the line.



*Answers to Word Find*

W	J	M	X	W	S	D	B	Q	N	Y
P	Y	T	K	M	Z	Q	H	N	U	F
C	I	M	O	N	O	T	U	A	T	H
S	E	I	R	A	L	L	I	P	A	C
U	L	M	L	L	J	S	H	V	Q	D
O	S	B	O	I	P	O	X	A	V	Y
V	K	L	R	T	H	R	K	K	M	Z
R	E	U	T	K	I	N	I	A	R	B
E	B	S	N	B	L	O	O	D	P	S
N	W	H	O	B	Z	D	N	H	G	R
M	C	B	C	B	E	G	V	S	D	E

*Answers to ANS*