

Note:

This article demonstrates Healing Brush and related Photoshop tools in action with the help of examples. See these pages if you're looking for basic information on using these tools:

- Retouch and repair photos
- Video: Fix flaws and repair photos

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Applies to: Photoshop

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Diffusion slider control

The Healing Brush, Spot Healing Brush, and Patch tool in Photoshop have a Diffusion slider which controls how quickly the pasted region adapts to the surrounding image.



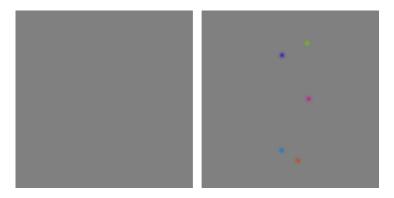
As a general guideline, low slider values are good for images with grain or fine details whereas high values are good for smooth images.

Examples: Photoshop healing in action

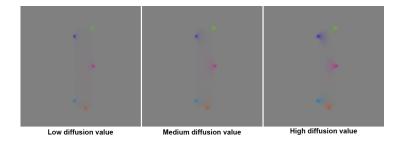
Let's go through some of the examples to illustrate how to use the Photoshop healing feature.

Example 1

In the below example, a rectangular region from the left image has been pasted into the right image



The following three images demonstrate the effect of increasing Diffusion slider.



Example 2

Next, we will remove the two bulbous objects from an image.



Image with two bulbous objects on top left corner



Top left corner healed in PS CC 2014 using Patch

Example 3

The new healing algorithm is better in diffusing the color and spreading them over an area. However, you need to be very clear about the area being sampled or filled. For soft selection, Photoshop thresholds the soft selection at 128 to display an 8-bit mask. As a result, the screen feedback in patch tool can misrepresent what user is actually sampling or trying to heal. This can manifest itself in bright or dark color contamination at the boundary of the filled area, which will be spread over the filled area. The new algorithm is enhanced to deal with very soft brushes. To limit the contamination, you may want to try different diffusion slider values and be careful with the sampling region. The patch tool can be prone to this sort of error as illustrated in the next example.



Underneath left eye healed in PS CC 2015.1 using Patch tool (Diffusion 6)

Photographer: Takeshi Fujishima

Model: Asaka Kubo

The next six examples will compare the effect of various slider values on the healing result. The focus will be on the content with noise, high texture, and details.

Example 4

Original image courtsey of Giuseppe Circhetta

Example 5



Original image



Healed in PS CC 2014 and older

View full image

View full image



Healed in PS CC 2015.1

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Original image courtsey of Giuseppe Circhetta

Example 6



Original image



Healed in PS CC 2014 and older

View full image



Healed in PS CC 2015.1 (Diffusion 2)



Healed in PS CC 2015.1 (Diffusion 3)

View full image

View full image



Healed in PS CC 2015.1 (Diffusion 4)



Healed in PS CC 2015.1 (Diffusion 5)

View full image

View full image

Original image courtsey of Josh Withers

Example 7



Original image



Healed in PS CC 2014 and older.

View full image

View full image



Healed in PS CC 2015.1 (Diffusion 2)



Healed in PS CC 2015.1 (Diffusion 3)

View full image

View full image



Healed in PS CC 2015.1 (Diffusion 4)



Healed in PS CC 2015.1 (Diffusion 5)

View full image

View full image



Healed in PS CC 2015.1 (Diffusion 6)

Original image courtsey of Steve Brown

Example 8



Original image



Healed in PS CC 2014 and older

View full image



Healed in PS CC 2015.1 (Diffusion 3)

Original image courtsey of Marko Saari

Example 9



Original image



Healed in PS CC 2014 and older

View full image

Original image courtsey of Bram Declercq

skin-original-hr.png skin-healed-2014_hr.png skin-healed-diffusion-2_hr.png skin-healed-diffusion-3_hr.png skin-healed-diffusion-4_hr.png skin-healed-diffusion-5_hr.png skin-healed-diffusion-6_hr.png

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