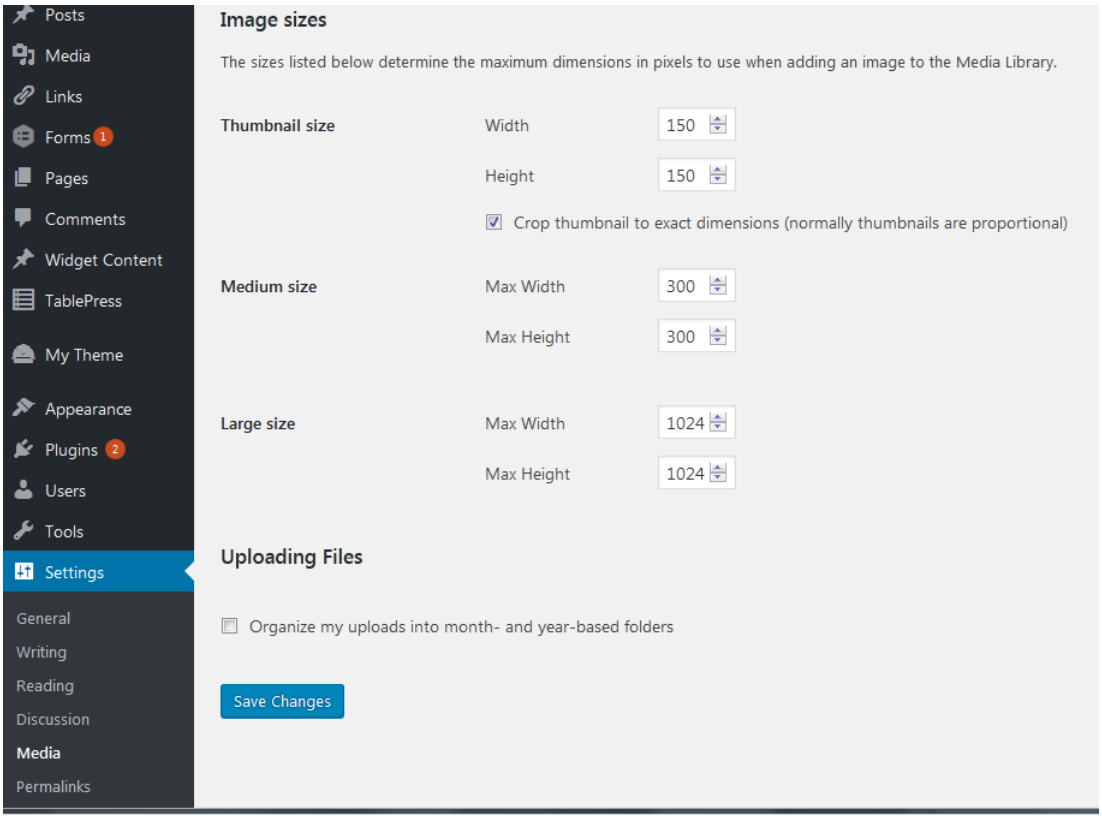
Images

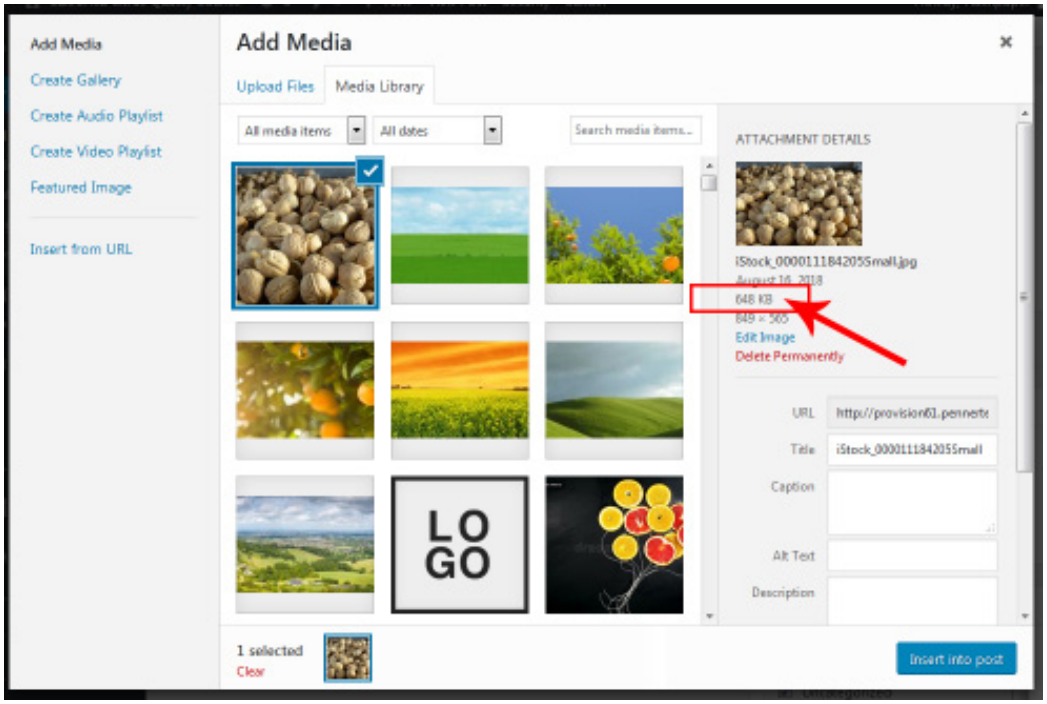
When you add an image to your website, an entry for that image appears in **Media**. However, WordPress makes several copies of the image according to the settings found in **Settings...Media**. It will store the original image you uploaded, and make optimized copies of the image according to these settings. This results in your original image being stored up on your server, as well as the additional optimized copies; or four images total by default. In **Media**, however, you will only see one image serving as the entry placeholder. This leaves the impression that the only image being stored is the one you uploaded, which is not the case for reasons just explained. You cannot directly manage the additional optimized copies from the Media Library. They are stored in a folder on your server you cannot access unless you connect to your website using FTP. As your website ages, and more images are uploaded, the amount of server disk space it requires increases.



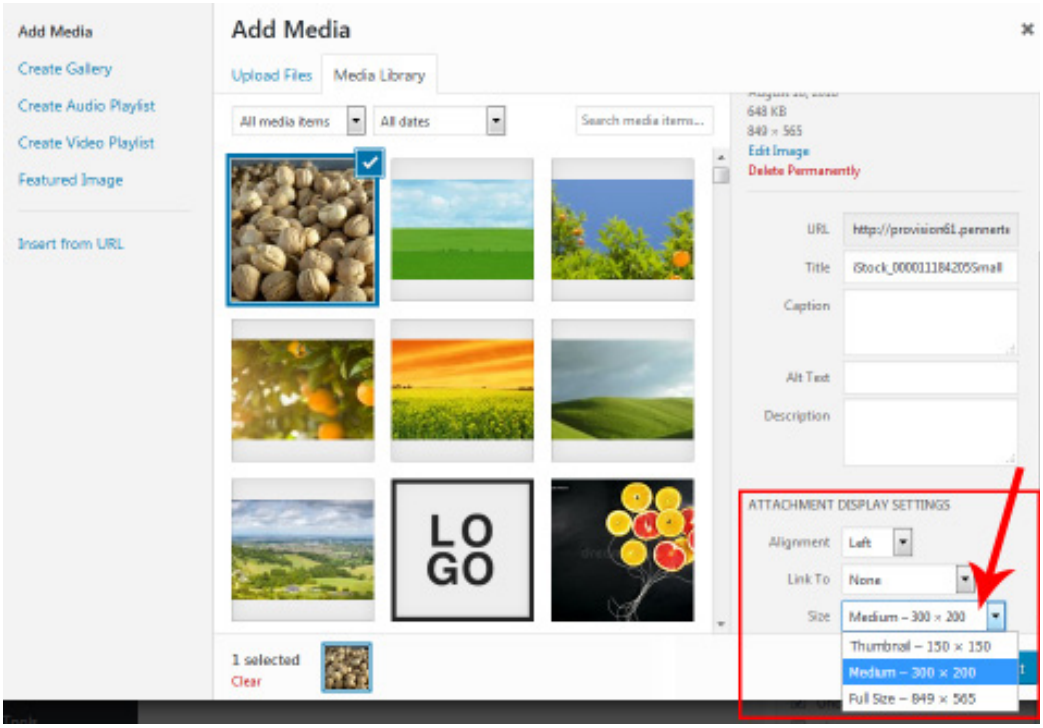
Optimizing images prior to upload in WordPress requires skills with a graphics package such as GIMP (free), Adobe PhotoShop, or a service paid to optimized images. Though your web host may be generous with disk space allocation, images not optimized prior to upload bring with them the possibility of dramatically increased page load times, which can be especially brutal for mobile visitors. In the tutorials that follow, the decision of whether to take the time to optimize images prior to upload is up to you. Tutorial hints will indicate when this should be considered.

Image dimensions are always in pixels, not inches or other units of measurement.

When you add an image to content, WordPress displays the original image's file size. This is also the Full Size image file size.



Scrolling down the screen, you are provided with options like those shown below. The different sizing options are coming from the previously mentioned **Settings...Media** area. It will only display options for image sizes that are the same as or smaller than your original image size. In this case, the image is smaller than 1024 wide or 1024 high, so that option is not available.



If we placed the image as shown in the example on the previous page, and chose Full Size, it is the same thing as asking WordPress to place the original, non-optimized image on the page, with it's full file weight of 648kb (kilobytes). Ideally, your images would weigh less than 200kb, or even 75kb. If you do this several times on a page, the load time required for that page increases significantly. Mobile visitors will experience even more dramatic wait times for your page to load.

Re-sizing an image using the re-size handles WordPress provides in the Visual Editor does not do anything to reduce the image's file size. You could shrink a Full Size image that dominates a page down to the size of a postage stamp, and it would still contain the same amount of information about the image. Instead of a 648kb image that takes up most of the page, you are left with a 648kb image that takes up much less space. Page load speeds will still suffer. The page must still lift 648kb of image weight.

Two Methods For Handling Image File Weight

There are two methods available for dealing with heavy images. You can avoid selecting the Full Size option when placing the image, choosing instead to use one of the optimized image sizes (they are also weight-optimized with an algorithm WordPress uses when generating the different image sizes) which are provided based on the custom design of your website, or you can optimized the image prior to upload while still retaining the desired dimensions of the image that you would then select using the Full Size option. Both approaches are covered in detailed in the sections that follow.

Processing the image prior to upload is a bit more work, no doubt about it, but it is not difficult once you understand how to do it. In this user guide, GIMP is used to do that kind of work. Professional web content managers with other office duties do it all the time. However, with the media settings defined for your site it is unlikely to be necessary unless you are starting out with a really heavy image, such as those coming directly from a camera.

What does "really heavy" mean? Well, if you are starting out with an image with a file weight greater than 800kb, it is recommended that you optimize the image prior to uploading, even if the image will be placed using one of the optimized options in the Size drop-down. This will keep your disk space consumption manageable over the long run, and reduce the time it takes to backup your website. It will also prevent you from accidentally placing heavy image files on a page should you choose the Full Size option without noting the file weight.

Consistent Image Sizes Are A Beautiful Thing

Perhaps the best reason to select image sizes other than Full Size is the visual consistency provided by these options. Full size images will have the original dimensions of the image you uploaded. Unless you are cropping and sizing those images yourself prior to upload, it is likely images of many sizes will end up littering your layouts.

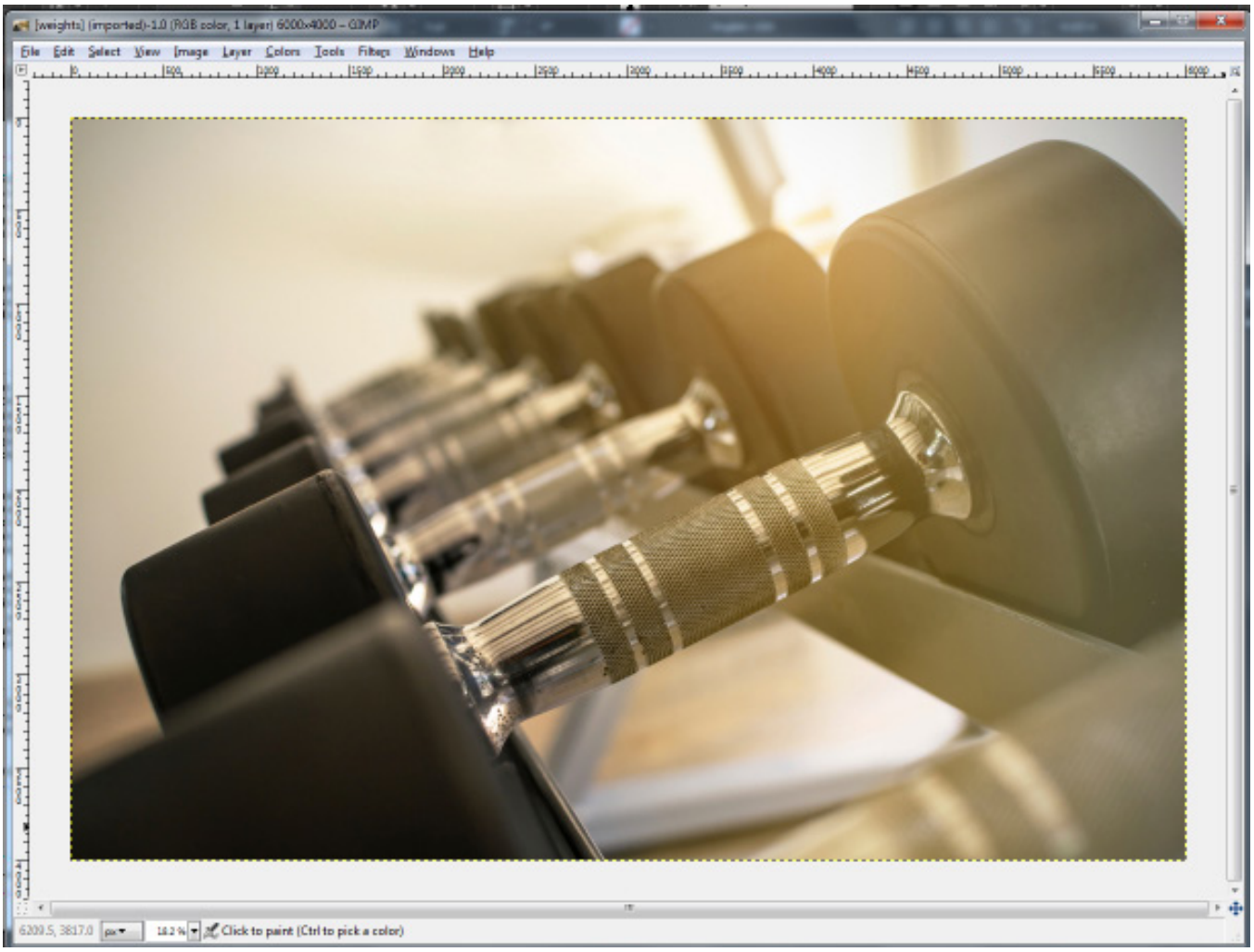
Still, there may be valid reasons to use Full Size images when placing them, it's just up to you.

Using GIMP to Optimize Images Prior To Upload

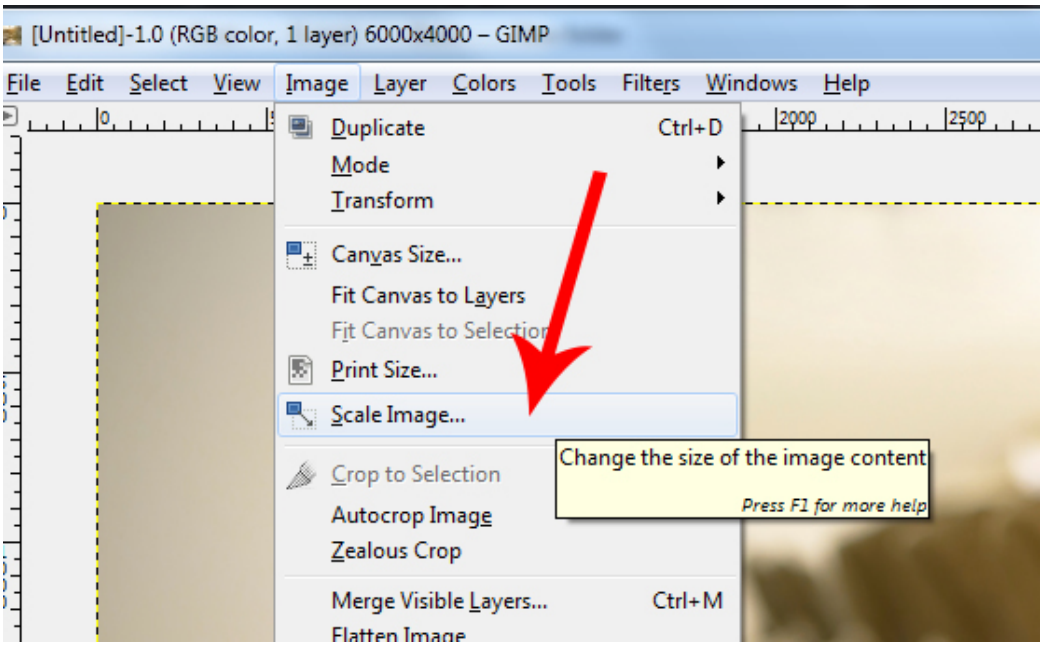
GIMP is free software you can download and install from https://www.gimp.org/downloads/. Once you've installed the version appropriate for your operating system, you're ready to begin.

1. In GIMP select **File...Open**. If GIMP warns you that the file has an embedded color profile, you can usually just click convert. Color profiles are often applicable to print destinations, not web, so this should be fine in most cases. You won't see a difference on screen.

2. The image will appear with a dotted line around it. In this example, my file size is 9mb and the image dimensions are 6000x4000. This is definitely an image requiring optimization prior to uploading!

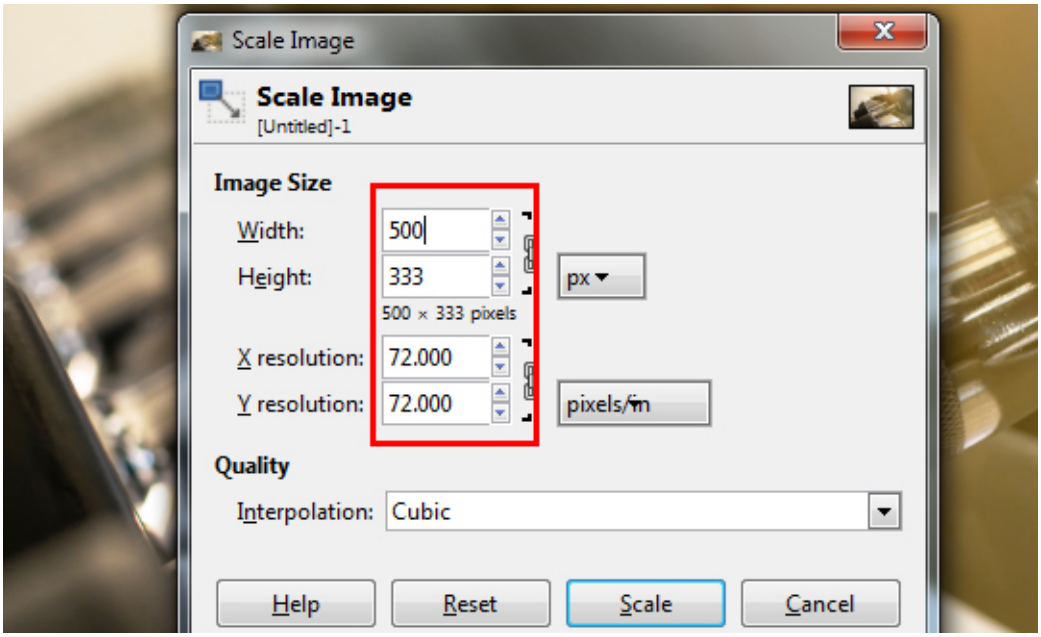


3. Select **Image...Scale Image...**

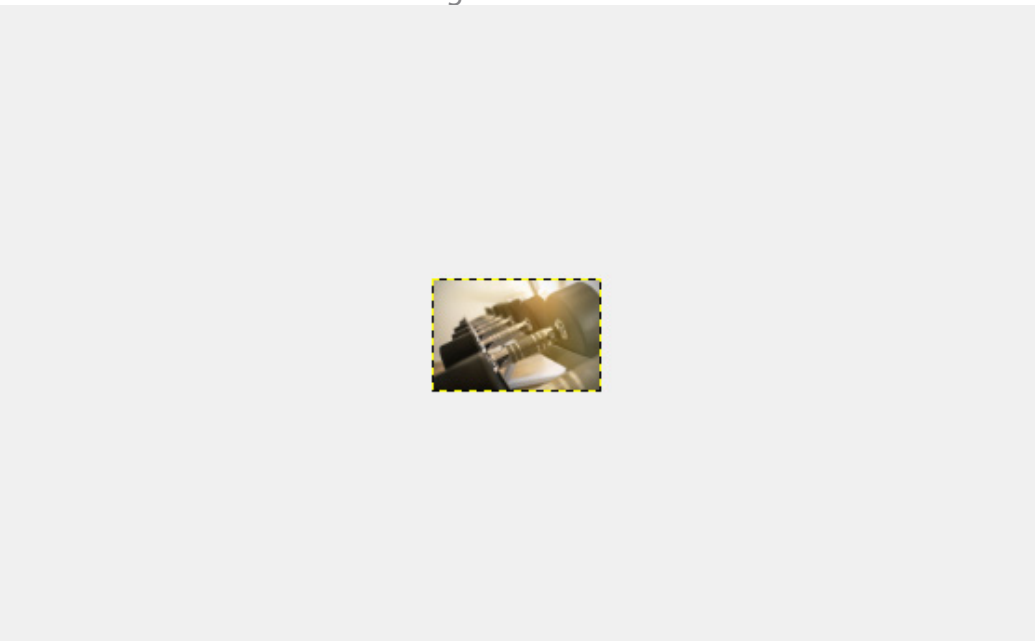


4. In the resulting dialogue box, change the **Width** field as needed and click in the height field. By default, GIMP will modify the height so that it is proportional. If this is not desired, click on the chain icon next to the **Height** field and enter your own value.

5. Change the **X-Resolution** field to 72 (this is ideal for web, not print), then click in the **Y-Resolution** field. By default, GIMP will modify **Y-Resolution** automatically.



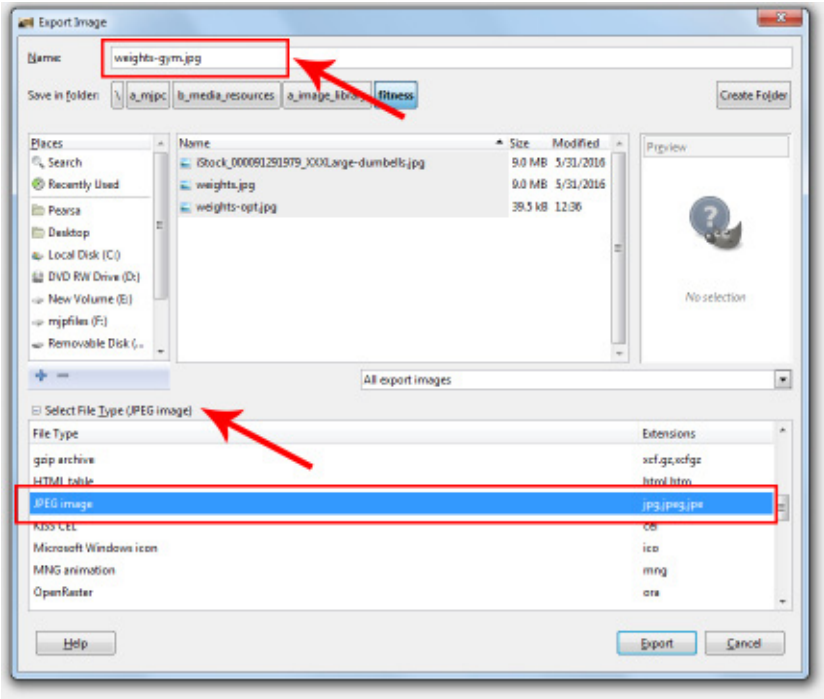
6. The image is now scaled, but we have to export our work as a different file so that we can use that file on our website. Don't worry that the image appears really small at this point. That is just based of the zoom level we were working in.



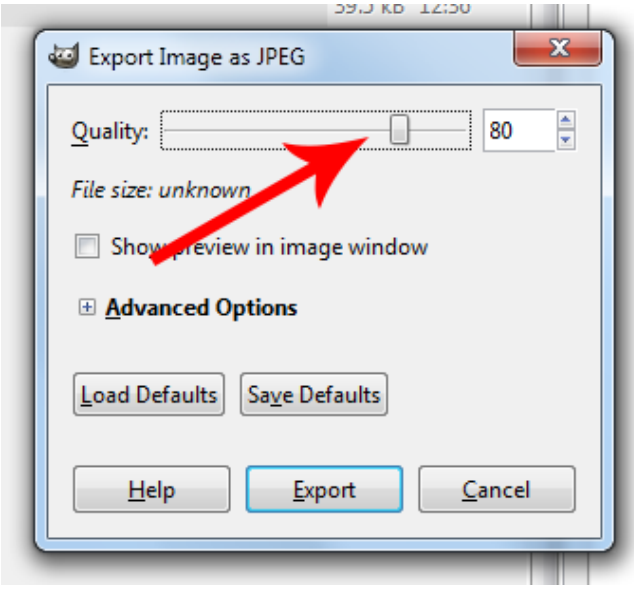
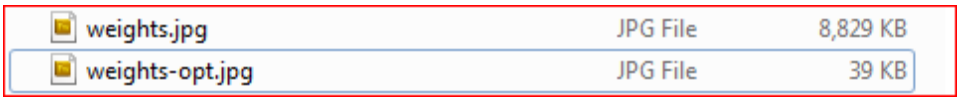
7. Now select **File...Export As...**

8. In the resulting dialogue box, change the file name to match your SEO requirements or other preferences.

9. Open the "Select File Type" option and scroll until you see JPEG, then select it. JPEG provides the best compression for photos without too much quality loss when we specify compression on the next screen. You can experiment with other file formats.



10. Click on **Export**
11. In the resulting dialogue box, set "Quality" to 80 or less.
12. Click on Export (yes, again).



To check the file size and image quality results, switch to the folder where you exported your work. Here we see that the exported file is only 39kb. That's thousands of kilobytes less than the original image. Upon opening this image in GIMP to view it (make sure to zoom-in to 100% when performing this assessment), there should be no overt quality loss unless you set the quality slider to less than 65%.