**Anti-Aging Science and Terminology:**
[Avibon](http://www.avibon.com/Avibon-Retin-A-Tretinoin-30g-w-Free-Shipping-231055.htm) [Vitamin A (Retinyl Palmitate)](http://www.avibon.com/), Retinol, Retinoic Acid, and Tretinoin

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There is much confusion and ambiguity in the anti-aging marketplace regarding the entire category of products commonly deemed ‘retinoids’. Typically with youth-promising products debates are centered around the efficacy (effectiveness) of manufacturers’ claims; however in this case several studies back-up the science of retinoid-reduced wrinkles. One such study was conducted by the University of Michigan in which they created their own form of topical **Vitamin A cream** and administered it to test subjects for 6 months, producing undeniable proof using before and after photos of subjects’ treated arms and untreated ‘control’ arms. The study also purported that not only did retinol reduce wrinkles from sun-damaged skin, it also proved effective for reducing wrinkles related to aging. ([Read official study release.](http://www.med.umich.edu/opm/newspage/2007/retinol.htm)) **Retinyl palmitate** is approved by the FDA as a food additive, as an over-the-counter (OTC) drug, and a prescription drug ([Source](http://www.cosmeticscop.com/cosmetic-ingredient-dictionary/definition/1253/retinyl-palmitate.aspx)).

But what is **retinol**, since it is commonly referred to in the same breath as vitamin A, or retinyl palmitate, or even **tretinoin**? Retinyl palmitate such as Avibon, or vitamin A palmitate, is the ester of retinol (vitamin A) and palmitic acid. Esters are chemical compounds derived by reacting an oxoacid with a hydroxyl compound such as an alcohol or phenol. Esters are usually derived from an inorganic acid or organic acid. Palmitate is the major component of palm oil. The word "palmitate" is from the French "palmitique", the pith of the palm tree ([Source](http://en.wikipedia.org/wiki/Retinyl_palmitate)).

An alternate spelling, retinol palmitate, which violates the -yl organic chemical naming convention for esters, is also frequently seen. However, retinol and retinol palmitate or retinyl palmtiate are not the same things. More specifically, they are more easily understood as both originating from the same vitamin A, but one is farther along in the process of being converted to retinoic acid which actively changes skin. After its absorption into the skin, retinyl palmitate is converted to retinol, and ultimately to retinoic acid, also known as tretinoin ([Source](http://www.smartskincare.com/smartchoices/myths/myth_retinol_retina.html)).

Scientists have converted retinyl palmitate into retinoic acid in labs to create some of the harsher products on the market with side-effects such as redness, flakiness, or burning. Retinoic acid or tretinoin products can cost several hundred dollars and require prescriptions, and are not available in all countries, thus individuals with sensitive skin or those seeking a more natural and less harsh product prefer vitamin A palmitate such as [Avibon](http://www.avibon.com/) and let their bodies convert it naturally in just a few minutes. If persistent, the side effects of tretinoin may lead to skin damage and accelerated aging, i.e. the result opposite to the goal of the treatment ([Source](http://www.smartskincare.com/smartchoices/myths/myth_retinol_retina.html)).

Vitamin A as an additive to sunblock has been under review by the FDA for years, and one University of Michigan scientist involved in the earlier mentioned study stated, “In the past, it was everyone believed that retinoids would treat only photoaging, or damage from exposure to sun. This is the first systematic, double-blind study showing that it improves any kind of aging – photoaging as well as natural aging.”

Interestingly, a popularly-cited study years ago claimed that vitamin A increased risks of skin cancer due to the sun. When one digs further, it appears the findings are highly controversial contradicting a larger body of research, with the original study allegedly tainted due to not using stabilizers in the laboratory tests as the commercial sunblock products would use; as well as potential conflicts of interest with proceeds paid to the original group contesting vitamin A in sublock products.

“The group’s allegations are in direct conflict with established scientific safety assessments of sunscreen products and their ingredients and the assessments of regulatory authorities in the U.S., European Union, Canada, and several other countries. Ignoring the established scientific and regulatory safety assessment process for sunscreen products and ingredients, EWG invents its own sunscreen product rating system not based on credible scientific methodology. In fact, EWG’s methodology for calculating SPF values has been proven to be inaccurate and unreliable by sunscreen experts, both in the U.S. and abroad.”

“Compounding this lack of scientific objectivity is the fact that sunscreen products ranked highly by EWG are promoted for sale on the group’s Web site via their partnership with Amazon.com, generating revenue for EWG and demonstrating a clear and inappropriate commercial interest. ([Source](http://personalcaretruth.com/2011/06/statement-by-farah-ahmed-chair-personal-care-products-council-sunscreen-task-force-response-to-the-2011-ewg-sunscreen-report/)). The original, allegedly tainted study report can be read [here](http://www.fda.gov.tw/files/publish_periodical/10-4-8.PDF).

Presently, it appears at least when using retinyl palmitate in the form of vitamin A pomade, such as Avibon cream, the general consensus is it is not the same as when vitamin A is applied to sunblock products containing stabilizers, and so regardless of further examinations concerning sunblock, Avibon and other retinol users are advised to avoid direct sun exposure after application. This seems logical based on the pomade, ointment type of nature of the product, akin to avoiding direct sun if one had rubbed Vaseline® on one’s skin.

[Dosage and indications related to Avibon](http://ingredients.avibon.com/ingredients/buy-avibon-cream-vitamin-a.html) and similar products mention usage up to a two-week period and then a ‘rest’ period to avoid too much vitamin A absorption by the body which can result in negative side-effects. Also, pregnant or nursing mothers are not advised to use vitamin A palmitate due to the lack of research regarding its uptake in breast milk or within the womb.

The body of evidence regarding Avibon or other vitamin A ointments and their effectiveness on wrinkles is uncontested, and media coverage of Avibon has risen in recent years in publications such as Vogue®, Elle®, Style®, and Goop—a popular site of actress Gwyneth Paltrow. Direct quotes include:

"I know an older movie star who uses this every night and she has the most amazing skin!" Gwyneth Paltrow. "...a must-purchase while in Paris...for keeping wrinkles at bay," Style.com. And, "Pumped full of skin-clearing and wrinkle-blitzing Vitamin A," as seen on VOGUE.com (Australia).

Avibon retinyl palmitate can be purchased online in the topical pure vitamin A pomade form at <http://www.avibon.com>. Official before and after photos from the University of Michigan study are available via the Avibon.com website.