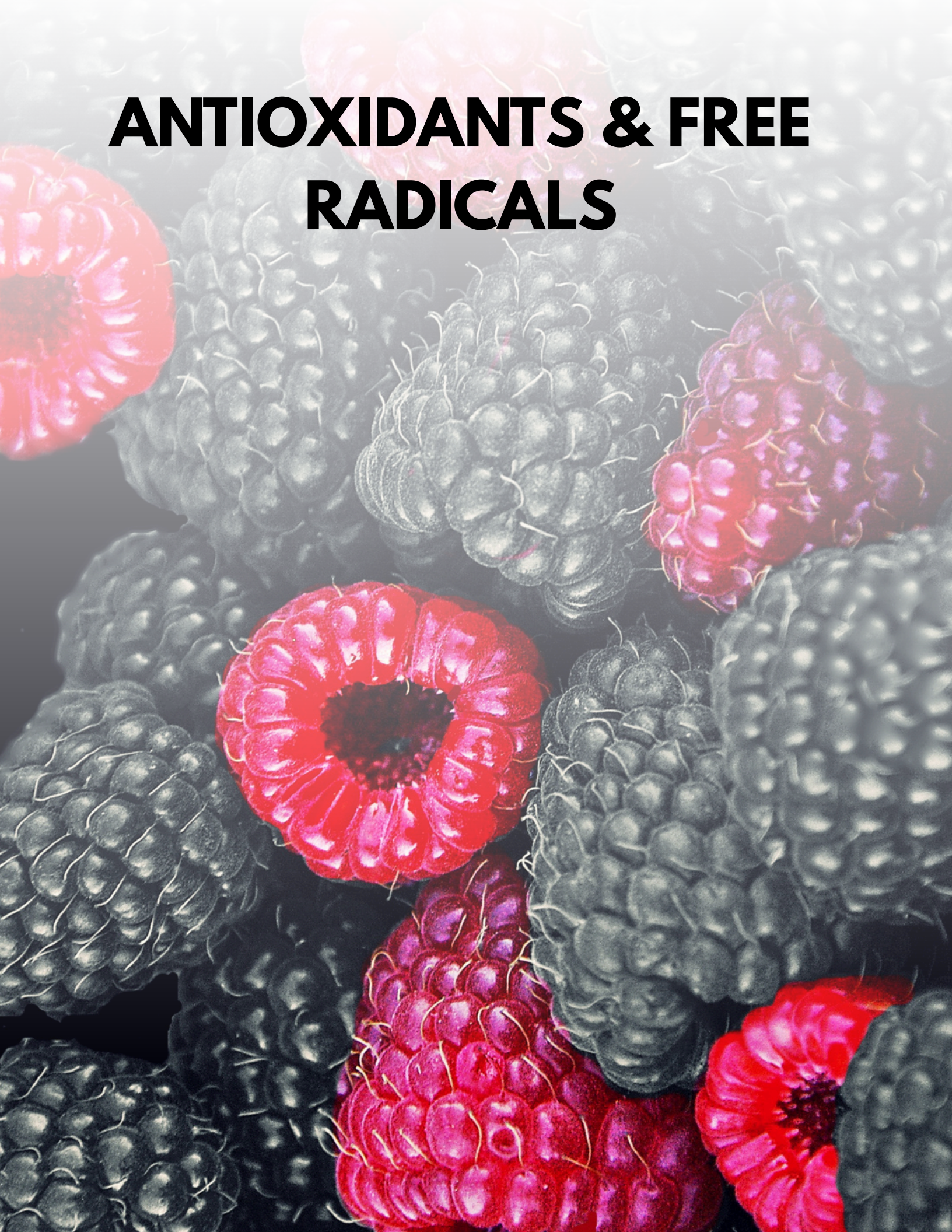


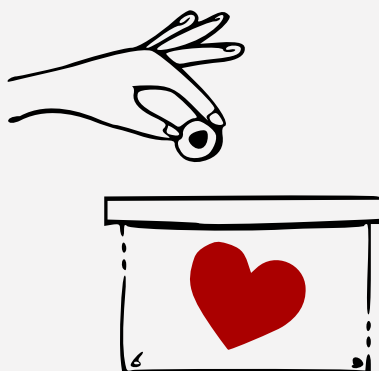
ANTIOXIDANTS & FREE RADICALS



Antioxidants are the body's defense system against free radical damage and oxidative stress. Their main role is to help neutralize unstable molecules before they can continue damaging healthy cells and tissues. To understand why antioxidants are so important, it helps to first understand what makes free radicals harmful in the first place.

Free radicals are unstable molecules missing an electron. Because they are unstable, they try to stabilize themselves by stealing an electron from another molecule nearby. In the skin, this can include collagen, elastin, cell membranes, lipids, or even DNA. When that electron is stolen, the previously healthy molecule becomes damaged and unstable itself, creating a chain reaction of oxidative stress throughout the tissue.

Antioxidants help interrupt this process. They are unique because they are able to donate an electron to a free radical without becoming unstable or destructive themselves. This allows the free radical to stabilize without needing to damage another healthy molecule. In other words, antioxidants help “stop the chain reaction” before it spreads further through the skin.



The body naturally produces some antioxidants on its own, but we also rely heavily on antioxidants from skincare, diet, and lifestyle to keep up with environmental stress. This is especially important because modern skin is constantly exposed to oxidative stress.

Topical Antioxidants

When you really start looking at topical antioxidants, the most important thing is understanding that different antioxidants do different jobs. Some are primarily focused on neutralizing free radicals, some help reduce inflammation, some support collagen production, and others are more focused on barrier repair and healing. The reason brands like GlyMed+, Face Reality, and Hydrinity feel so different clinically is because they prioritize different antioxidant systems and skin goals.

With GlyMed+, a lot of their antioxidant philosophy revolves around combining antioxidants with barrier repair and anti-inflammatory ingredients. One of the more unique antioxidants they use is fulvic acid, which is found in their fulvic-based products. Fulvic acid is interesting because it functions as both an antioxidant and a transport-support ingredient. It helps neutralize oxidative stress while also supporting hydration and reducing inflammation. GlyMed pairs this with ingredients like aloe, panthenol, allantoin, phospholipids, sodium hyaluronate, and botanical extracts to create a more “repair-focused” antioxidant environment.

They also incorporate more traditional antioxidants like:

- vitamin E (tocopherol)
- vitamin C derivatives such as magnesium ascorbyl phosphate
- grape seed oil
- superoxide dismutase (SOD)

Superoxide dismutase is especially interesting because it’s an enzyme antioxidant naturally found in the body that helps neutralize one of the most aggressive free radicals: superoxide radicals. GlyMed tends to formulate antioxidants in a way that feels very “skin correction + healing” oriented rather than aggressively active. Many of their formulas also include calming ingredients because oxidative stress and inflammation are so interconnected.

Face Reality’s antioxidant approach is very different. Because the brand is so acne-focused, they prioritize antioxidants that help reduce inflammation and oxidative stress without overwhelming or irritating acne-prone skin. Their formulas are generally simpler, lighter, and more barrier-conscious.

One of the standout ingredients in their antioxidant systems is spin trap technology, specifically Phenyl t-Butylnitron (PBN). This is a very interesting antioxidant because instead of simply neutralizing free radicals after damage begins, it’s designed to “trap” free radicals before they continue spreading oxidative chain reactions. That’s a much more targeted oxidative stress approach than traditional antioxidants like vitamin C alone.

They also use:

- resveratrol ferment extract
- copper amino acid complexes
- peptides like Palmitoyl Tripeptide-38
- glycerin-based hydration systems

Resveratrol is a polyphenol antioxidant known for helping reduce inflammation and oxidative stress, while copper peptides support wound healing and collagen signaling. Face Reality’s formulas are less about aggressive brightening and more about maintaining skin resilience during acne treatment. That’s important because inflamed acne itself creates oxidative stress in the skin, so their antioxidants are really designed to support healing while minimizing irritation.

Hydrinity takes a much more regenerative and healing-centered approach. Their antioxidant systems are heavily tied to hydration and tissue recovery rather than “anti-aging correction” in the traditional sense.

A major focus in Hydrinity is:

- hyaluronic acid technology
- peptides
- anti-inflammatory antioxidants
- barrier repair support

What makes their philosophy different is that they view oxidative stress through the lens of wound healing and skin recovery. Instead of using highly aggressive antioxidant systems, they pair antioxidants with intense hydration support because dehydrated or compromised skin is much more vulnerable to oxidative damage and inflammation.

Their formulations focus heavily on:

- reducing inflammation
- accelerating recovery
- supporting fibroblast function
- improving healing environments after procedures

Peptides are especially important in this category because they function more like signaling molecules than traditional antioxidants. Certain peptides help communicate with skin cells and fibroblasts to support repair processes, collagen synthesis, and healthier extracellular matrix function.

One of the biggest misconceptions in skincare is that antioxidants are only about “anti-aging.” In reality, antioxidants are deeply tied to:

- inflammation regulation
- barrier integrity
- wound healing
- collagen preservation
- acne healing
- pigment control
- and overall skin function

Dietary Antioxidants

Antioxidants also play an important role internally through diet. Foods rich in antioxidants help support the body's ability to manage oxidative stress from within. Some examples include:

- berries
- leafy greens
- colorful vegetables
- green tea
- nuts and seeds
- healthy fats rich in omega-3s

Conclusion

It's important to understand that antioxidants are not about eliminating free radicals completely. Free radicals are actually a normal part of life and even play roles in processes like immune function and cell signaling. The goal is balance. Problems occur when free radical production becomes excessive and overwhelms the body's ability to neutralize and repair the damage.

This is also why antioxidants are most effective when combined with other protective habits. For example, antioxidants help support the skin, but they do not replace sunscreen. UV exposure can generate such a large amount of oxidative stress that antioxidant protection alone is not enough to fully prevent damage. Instead, antioxidants and SPF work best together. SPF helps reduce free radical formation, while antioxidants help neutralize the free radicals that still occur, because no sunscreen is 100% effective and even the best sunscreen comes with user error.

Overall, antioxidants act as protective stabilizers within the skin and body. By helping neutralize free radicals before they can continue damaging healthy tissue, they play a major role in maintaining collagen, reducing inflammation, supporting repair processes, and slowing visible signs of aging over time.