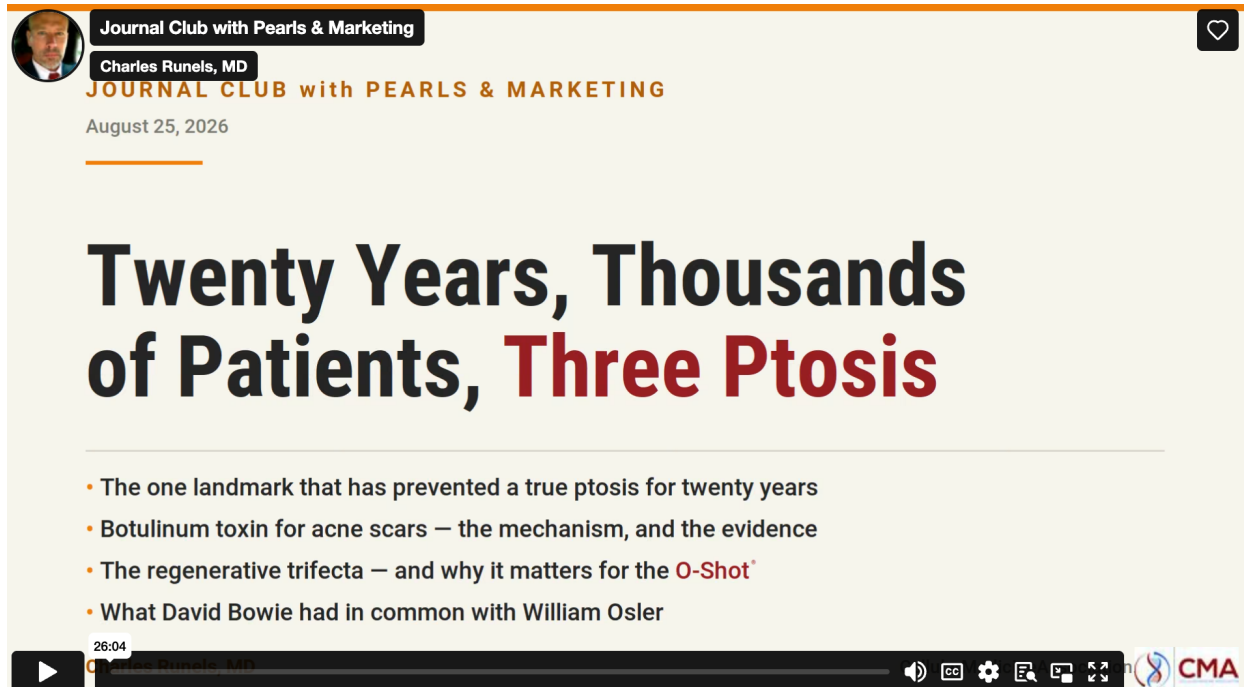


JCPM2026.08.26

The following is an edited transcript of the *Journal Club with Pearls & Marketing* (JCPM) on August 25, 2026, with Charles Runels, MD.

>> [The video of this live journal club can be seen here](#) <<



Journal Club with Pearls & Marketing

Charles Runels, MD

JOURNAL CLUB with PEARLS & MARKETING

August 25, 2026

Twenty Years, Thousands of Patients, **Three Ptosis**

- The one landmark that has prevented a true ptosis for twenty years
- Botulinum toxin for acne scars — the mechanism, and the evidence
- The regenerative trifecta — and why it matters for the **O-Shot**[®]
- What David Bowie had in common with William Osler

26:04

Charles Runels, MD

Volume, Mute, Full Screen, and other controls

CMA

Topics Covered

- Today: Botulinum Toxin, Drooping Eyelids, and David Bowie
- The First Paper: The Many Effects of Botulinum Toxin Nobody Talks About
- Acne Scarring: Considered Experimental, but Safe Enough to Try
- The Mechanism: Substance P, Nitric Oxide, Sebum, and Fibroblasts
- What It Is Like to Want to Hide Your Face
- How to Use This News With Your Patients
- The Second Paper: How to Keep From Drooping the Eyelids
- Two Different Kinds of Drooping
- Their Rules — and Why I Palpate Instead of Marking
- Rule One: Stay High on the Frontalis
- Rule Seven: The One That Keeps You From Causing a True Ptosis
- Inside the Botulinum Toxin Course
- Finding the Bony Landmark With Your Finger

- Twenty Years, Thousands of Patients, Three Ptois
- My Practical Rule: Do Not Treat the Frontalis on the First Visit
- Why You Have to Say Two to Four Weeks
- The Third Paper: Three Modalities for Soft Tissue Injury
- Why the Muscle-Injury Research Applies to Women
- Why We Love Sport: Running and Fighting
- The Urinary Sphincter Is Three Layers of Muscle
- What the Paper Says: Rest, Nonsteroidals, and Cortisone Only Manage Symptoms
- The Macrophage as Traffic Signal
- The Regenerative Trifecta — and the Metabolic Factors That Sabotage Healing
- Know the Laws of Your State Before You Use Exosomes
- Three Books: A Way of Life, by William Osler
- Osler's Simple Rules — Including Four to Five Hours of Reading a Day
- David Bowie: The Self-Taught Man Who Traveled With Fifteen Hundred Books
- Bowie's Bookshelf — Buy It for the Introduction
- My Challenge: Your Own Hundred Life-Changing Books
- How All of That Relates to Your Marketing
- The Book Dr. Pfeiffer Gave Me When I Got Out of Medical School
- Forty-Year-Old Women Control Medicine — and the Old Ethics of Advertising
- Read Like Bowie, Write One Email a Week, and You Will Not Lack for Patients
- Savage Factors, the Cryo Machine, and the Marketing That Did Not Work
- Hormesis: The Stress That Makes the Organism Stronger
- The Podcast With Jeff Piccirillo, MD
- Closing: Share Those Papers With Your Patients



Charles Runels, MD

Author, researcher, and inventor of the Vampire Facelift®, Orchid Shot® (O-Shot®), Priapus Shot® (P-Shot®), Priapus Toxin®, Vampire Breast Lift®, and Vampire Wing Lift®, & Clitoxin® procedures.

Transcript

Botulinum Toxin, Drooping Eyelids, and David Bowie

Some interesting articles today about botulinum toxin and how to prevent drooping of the eyelids. And I reread a book today about David Bowie's favorite one hundred books, and

I'd like to relate that to a lecture that William Osler gave to the graduating class at Yale in 1914, he gave that lecture. And interestingly, I think they complement each other. So we'll get to that. But before we talk about David Bowie and what he had in common with William Osler, let's talk about this research.

And we'll start with this one.

The First Paper: The Many Effects of Botulinum Toxin Nobody Talks About

And this one's open source, so you have it in your handout section, and this is one I would definitely recommend sharing with your people. They talk about the multiple effects of botulinum toxin that many people don't think about: anti-inflammatory, vascular, and fibroblast-modulation effects.¹

So it's been used to help prevent scarring.² The vascular regulation is exactly why it can help with erectile dysfunction in men³, and the anti-inflammatory effect is something not often talked about.

I'll tell you the bad news right now: when these authors reviewed the research, they thought it was not convincing, but the science is strong, and this paper summarizes it.

Acne Scarring: Considered Experimental, but Safe Enough to Try

So if you're treating acne scarring, there's no major downside. And if you have done your microneedling and you combine it with PRP or the Vampire Facial^{®4}, and you want to get some extra bang for the

¹ Liao et al., "Exploring the Therapeutic Potential of Botulinum Toxin in Treating Post-Acne Sequelae."

² Zhibo and Miaobo, "Botulinum Toxin Type A Affects Cell Cycle Distribution of Fibroblasts Derived from Hypertrophic Scar"; Kasyanju Carrero et al., "Botulinum Toxin Type A for the Treatment and Prevention of Hypertrophic Scars and Keloids"; Wang et al., "Current Research of Botulinum Toxin Type A in Prevention and Treatment on Pathological Scars"; Disphanurat et al., "Efficacy of Botulinum Toxin A for Scar Prevention After Breast Augmentation."

³ Giuliano et al., "Effectiveness and Safety of Intracavernosal IncobotulinumtoxinA (Xeomin[®]) 100 U as an Add-on Therapy to Standard Pharmacological Treatment for Difficult-to-Treat Erectile Dysfunction"; Shehri et al., "Evaluation of the Efficacy of Low-Dose Botulinum Toxin Injection Into the Masseter Muscle for the Treatment of Nocturnal Bruxism"; El-Shaer et al., "Intra-Cavernous Injection of BOTOX[®] (50 and 100 Units) for Treatment of Vasculogenic Erectile Dysfunction."

⁴ Nobari et al., "A Systematic Review of the Comparison between Needling (RF-Needling, Meso-Needling, and Micro-Needling) and Ablative Fractional Lasers (CO2, Erbium YAG) in the Treatment of Atrophic and Hypertrophic Scars"; Alghazawy and Almodalal, "Evaluation of Flexibility and Thickness of Cleft Lip Scars After Treatment with Microneedling Technique"; Ebrahimi et al., "Platelet-Rich Plasma in the Treatment of Scars, to Suggest or Not to Suggest?"; Cui et al., *The Anti-photoaging Effects of Pre- and Post-treatment of Platelet-rich Plasma on UVB-damaged HaCaT Keratinocytes*.

buck and try something else, this is considered experimental, but it's safe enough that you might get some great results.

The Mechanism: Substance P, Nitric Oxide, Sebum, and Fibroblasts

You could try it, and there would be no downside to it. And this picture summarizes the mechanism of action. It helps with redness, atrophic scars, and enlarged pores. The mechanism is that it's really multiple targets. It *calms the neurogenic inflammation by blocking substance P and CGRP*.

=> [Apply for Online Training for Multiple PRP Procedures](#) <=

It modulates blood vessels via nitric oxide and reduces sebum production through non-neuronal cholinergic pathways on sebocytes. It rebalances fibroblast activity with TGF-beta 1. So all that's in that picture. Because it's open source, you can also [share pictures](#).

You just have to give the source. And whether people come for this or not, they will love you for inspiring them with the possibility. And the people who really suffer with acne scars, as they say at the beginning of this article, it's very common, and it really does significantly affect a person's quality of life.

What It Is Like to Want to Hide Your Face

Somehow, I was spared from the scarring, but having spent a couple of years of my life with really severe cystic acne, where I remember as a teenager looking in the mirror and tears coming down my face because I couldn't figure out the shape of my nose, because there was so much swelling and distortion from the pustular acne—I understand the pain.

And obviously, it didn't make me want to go to school every day, but I had to go. So I know what it's like to want to hide your face, and that's how it can feel when people have acne scars, especially teenagers.

Remember...

It is not your patient's responsibility to know what you can do. It is our responsibility to teach them.

How to Use This News with Your Patients

So you can shoot this out. It gives you a ... news gives you a jumping-off point, and I've put it in your handout section. You could literally click and drag it, put a link to it, or throw it in a Google Doc and share the link in an email or a social media post, and use the news. This is news because it just came out.

Could use this news to tell people there are options for treating acne scars and that you know how to do them. And then, as a first step, it would be, of course, the [Vampire Facial®](#). I promised you thirty minutes or less, so let's do the next one. This was a nice review article. I also put this one in your handout section.

The Second Paper: How to Keep from Drooping the Eyelids

It's open source. But I think I'm going to show you their very detailed, in my opinion, maybe more complicated than it needs to be, discussion of how to keep from drooping the eyelids.⁵ I've been injecting since 2006, so that's 20 years. As far as I know, I've done this a total, grand total of three times in 20 years, causing ptosis.

Two Different Kinds of Drooping

Now, when people talk about drooping from Botox or whatever toxin you're using, oftentimes it's not the ptosis that happened; it was over-treating the frontalis, and both mistakes drop brows. But with the overtreatment of the frontalis, they look like a Neanderthal. They cover both of those causes of drooping and give you these tips.

I'm going to show you my simplified version.

But I like that they have put pretty much every way you can droop the lids or the brows in one picture. I'll comment on their rules, then show you my little online course, which my beautiful wife was kind enough to model. I'll show you that course, in my simplified version, in a moment.

Their Rules — and Why I Palpate Instead of Marking

But just a few comments. They talk about being above the orbital.

So, of course, you're going to take a “before” picture and mark the bony landmarks. Some people actually do mark things, but I just palpate.

[This next section makes much more sense if you [see the video](#)]

First, you have to see the face move. I look for the indentation on each side where the corrugator is pulling on the skin.

So you'll **see corrugating from the corrugators**. You'll see corrugating of the skin here, and it'll be smooth lateral to where it inserts into the skin. So you know the corrugator is medial to that indentation.

And I just take my thumb and very lightly place it, palm side up. Aim towards the frontalis or the forehead.

And that gives me a feel for where everything is. You can almost see through the skin when you do that. I'll show you the picture of where I do it in a moment.

⁵ Diab et al., *Methodology for Preventing Botulinum Toxin-A Eyelid Ptosis: Risk Index Derivation, Safety Rules, and Evidence-Graded Management Algorithm*.

Their rule number two is that you don't go below that orbital rim. And of course, if your thumb is there on the rim, you're not going to stick the needle below your thumb, so that forces you to do it the right way.

Rule One: Stay High on the Frontalis

Rule one is that you're going to stay high on the frontalis with a low... Especially laterally, if you start getting... People will sometimes complain that they'll see little horizontal ridges here after they've had Botox in the frontalis, and they'll want you to put Botox here to keep flattening them out [see video].

Rule Seven: The One That Keeps You from Causing a True Ptosis

But when you do, that's oftentimes the only thing holding the brow up. This one, where I put... I won't go over through all the rules.

You can read them, but the main ones I'm telling you about.

Where you put this one injection for rule seven, to me, is the most important rule of them all. That's the one that keeps you from causing a true ptosis.

And so I'll show you that one in [my little course here](#). Give me just a second. And I'll come back to this paper

Inside the Botulinum Toxin Course

Okay, you're looking inside the Botox course, and if you have our all-access pass, this is free. You have it. And it's 40 videos. The transcription is a 400-page book, plus some, and the first part is just how to use events to grow your practice. The next part is about how to keep from hurting people, and then here are the injection points.

So when you look for the brow lift, here we go.

Finding the Bony Landmark With Your Finger

Right here, that's what I want to show you. If you take your finger and you feel-- You just put your finger on their temple, temporalis. It'll be soft. Then you take your finger, and you move it anteriorly until you feel this ridge right here. I think it's the frontal process of the zygomatic bone. It'll feel like the "corner of their head" because this is the front, that's the side, and you can feel that ridge between the two.

So the lateral process of the zygoma.

And then once I find that, you see, I'm taking my two fingers and grabbing the brow, and my finger is going to be that forefinger, second finger will be in contact with that frontal process of the zygoma. So it will be touching the edge of the bone with the fingertip touching the soft tissue of the frontalis.⁶

Twenty Years, Thousands of Patients, Three Ptosis

And when that finger is in that place, if you just grab the eyebrow and put your needle between your fingers into the eyebrow, that has allowed me to do twenty years of botulinum toxin, thousands of people with only three ptosis in the whole time. Now, as far as dropping the brow, I'll give you something a little more practical than their rule.

My Practical Rule: Do Not Treat the Frontalis on the First Visit

⁶ The anatomy here can be a little confusing to me. Here's how ChatGPT explained it to me:

The most revealing instruction is moving your finger **horizontally just above the brow**, or moving **forward from the temporalis until you encounter an edge**. That describes the ridge where the forehead turns into the temple. Anatomically, **the temporal line rises from the zygomatic process of the frontal bone and continues upward and backward, dividing into superior and inferior temporal lines**. [Anatomical reference](#)

Here is how I interpret the landmarks in your demonstration:

What you are indicating	Most likely anatomical structure
The upright edge marked by the blue line, above the lateral brow	Temporal line of the frontal bone , often called the temporal crest or ridge
The lower end of that ridge, at the upper outer corner of the orbit	Zygomatic process of the frontal bone
Continuing farther down the lateral orbital rim, across the frontozygomatic suture	Frontal process of the zygomatic bone
The last two structures meet to form that portion of the lateral orbital rim. Anatomical reference	

Therefore, I would replace “lateral process of the zygoma” in both captions. For the blue line, a suitable label is:

“Temporal ridge of the frontal bone—the ‘corner of the head.’”

For your spoken explanation, you could describe it as **“the palpable temporal ridge just above the lateral brow, where it meets the zygomatic process of the frontal bone.”** You can keep “corner of the head” as your memorable teaching phrase.

And the practical rule is just **don't treat the frontalis on the first visit.**

Just don't do it.

Do the brow lift, then tell them to come back in two weeks to do the frontalis so they can see how high you can raise the brow. Then you tell them, you warn them that it could cause a drooping of both brows.

Ptosis would be the lid. You warn them that it could cause drooping of both brows in anyone, just by treating the frontalis at all, in some people.

And then you go very high on the forehead with a low dose. Then, if they droop, they forgive you and just tell you they do not want to treat the frontalis on the next visit. They won't have the ptosis, and they'll just tell you they don't want it next time.

Why You Have to Say Two to Four Weeks

If they still have lift and want more smoothness, you can add more to the frontalis on the next visit. But you let them see that you can lift the brow first, and then you tailor-make how you do the frontalis when they come in between two to four weeks. **You have to say between two to four weeks, or they'll come in at eight weeks.**

By that time, it's time to Botox their whole face. You have to be specific, two weeks, because that's when it's in full effect, before four weeks, so that they come in before it starts to wear off. The package insert says that botulinum toxin starts to wear off at eight weeks, and it's only after repeated visits that it reliably lasts three to four months.

=>Next Hands-On Workshops with Live Models<=

Okay, so that's my tip. You have much more in-depth ideas in this paper from the recent article⁷ you can read to understand more about how things might go wrong, but that's my simplified version, and it has been effective for me for twenty years.

The Third Paper: Three Modalities for Soft Tissue Injury

All right, this one I keep, I keep seeing these beautiful review articles. You know, this was another one that came out recently. They published it just a few days ago, on August 16th. And it's talking about using three different modalities to address soft tissue injury and return to sport.

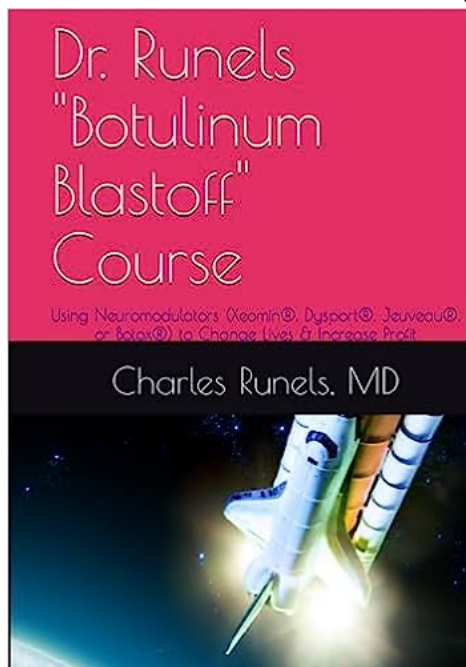
Why the Muscle-Injury Research Applies to Women

⁷ Diab et al., *Methodology for Preventing Botulinum Toxin-A Eyelid Ptosis: Risk Index Derivation, Safety Rules, and Evidence-Graded Management Algorithm.*

And as you know, there are quite a number of people in our group who are sports medicine specialists, family practitioners, or general internists treating muscle injuries. But I think this applies directly to helping women with dyspareunia or just laxity or anorgasmia, all those things that can happen from muscles that are damaged in childbirth.

I want to keep emphasizing and hope that you keep emphasizing to your patients and to your colleagues that all this research that is coming out talking about helping muscle injury, muscle and soft tissue injury, it's not just to return to sport, it's to return to full function as a woman after a, in my opinion, more important muscle has been damaged than the thigh of an NFL football player—the pelvic floor of your wife or your mother.

So these women that we love are not getting the same treatment that million-dollar athletes are getting, and that, I think, is worth getting up in the morning and trying to do something about.



Why We Love Sport: Running and Fighting

We want to see people fight, but we don't want to get hurt. So we can watch people of different sports: sport is always some combination of running and fighting, whether it's tennis, you're running and fighting with the tennis ball. The purest sports are track and boxing or martial arts. It's running and fighting, fight or flight.

That's what sport is.

And that is what all these papers are about.

The Urinary Sphincter Is Three Layers of Muscle

Sexuality, functioning as a woman, even if you're not having sex, having a body that's whole and functioning. And even if you're not in the bedroom with sex, you still must hold your urine, and the urinary sphincter is three layers of muscle. I think part of what might be happening with our O-Shot® is our injection point, because it's so distal from the bladder, it's right in the junction of the muscle of the vagina, where it touches the muscles, the three layers of the urinary sphincter.

Anyway, that's probably overkill, but I want to always emphasize that these papers about muscle apply to women's sexual health as well.

What the Paper Says: Rest, Nonsteroidals, and Cortisone Only Manage Symptoms

Just to give a one-minute summary of what it says here is that you have a regenerative trifecta, and it argues that the standard of care for tendon, ligament, and muscle injuries, which is rest, nonsteroidals, and cortisone, just manages symptoms.

If someone did that for a ten-million-dollar football player as a sports medicine doctor, they would lose their job: cortisone leaves the tissue weak and disorganized with a fibrotic scar. And so it says why reinjury rates are 12% to 13%, and even elite athletes can come back structurally worse.

The Macrophage as Traffic Signal

The macrophage, acting as this traffic signal, and the poorly vascularized tendons, especially in older patients, lead to a scar instead of collagen formation. So he frames the deficits behind poor healing as insufficient paracrine signaling, insufficient growth factor delivery, and pro-fibrotic factors.

The Regenerative Trifecta — and the Metabolic Factors That Sabotage Healing

So this regenerative trifecta he talks about involves combining umbilical cord, PRP, and exosomes, which tend to treat those three things. So he talks about this recent wave of NBA Achilles and hamstring cases, and that's as far as I'll go with that. But you also have metabolic factors like diabetes, low vitamin D, and hormones that can sabotage healing that are worth screening for: low vitamin D, hormone replacement, and diabetes—getting the patient healthier, not just trying to rely on our magic shots.

This is a nice paper to put out to let people know what you're doing, and especially if you are combining some of those modalities.

Know the Laws of Your State Before You Use Exosomes

Be careful. Make sure you know your state's laws if you're going to be doing exosomes or cord blood. In Alabama, they're super strict about it, but if you're in Florida or Utah, maybe nobody cares. Just make sure. You can always just call your board. There's nothing wrong with that, saying, "What are the current rules?"

ChatGPT is good at tracking down all the documentation, too. But right now, I would not use-- using exosomes in Alabama, but if I were in Florida, I probably would. So just check your rules, and this is a great article to share with your people. I think we'll start to see more and more of these combination therapy papers come out.

Three Books: A Way of Life, by William Osler

Let me cover three books

The first is *A Way of Life* by William Osler⁸. Osler wrote this on the train en route to speak to the graduating class at Yale. Let me show you a screenshot. And it turned out it was so profoundly inspiring that it's been reprinted. It's now in the public domain, so you'll see all sorts of various reprints.

⁸ Osler, *A Way of Life*.

Osler's Simple Rules — Including Four to Five Hours of Reading a Day

There's no copyright on it anymore. But he had some simple things: live in daytime compartments, spend 10 minutes a day with the *Bible*, don't smoke, don't drink alcohol, and read for 4 to 5 hours a day. That sounds outrageous, but for four to five hours a day, every day, he said that over time it would change you tremendously.

Difficult to do. It's hard to do that and spend any time watching TV. It may mean you see fewer patients, but it could be life-changing.

David Bowie: The Self-Taught Man Who Traveled with Fifteen Hundred Books

So how does that relate to David Bowie?

David Bowie, most people don't know, but he didn't do so well in school, but he was brilliant.

He was one of those who preferred to self-teach rather than be taught. So he read thousands of books, and he traveled with fifteen hundred books. He liked to travel by train. He didn't like airplanes. And **he would carry one thousand five hundred books with him when he was on tour and had them in trunks so that when he would open the trunks, they were organized.**

But so let me show you that screen, the David Bowie book that I'm talking about. It's called

Bowie's Bookshelf — Buy It for the Introduction

Bowie's Bookshelf.⁹ Let's get it back here where you can see it. And I recommend you buy it just to read the introduction.

You can read the commencement address, *A Way of Life*, by William Osler, in probably 30 minutes. And this one, maybe you don't want to read the whole thing because there's a review of all 100 books, but the introduction is very inspiring because in the introduction they talk about he showed up to make a movie, and at that time he had been struggling with cocaine addiction, and he promised them he would stay straight while he was doing the movie.

Well, what he did was he went to his trailer and read books, hundreds of them. And he, at one time in his life, he had a heart attack and sort of disappeared and became a father and a husband full-time for a while. And during that time, he read books. But even on tour, he carried 1,500 books.

Remember, he's a musician. How does his reading compare to the physicians you know?

My Challenge: Your Own Hundred Life-Changing Books

⁹ O'Connell, *Bowie's Bookshelf*.

So, three years before he died, Bowie made a list of his 100, not really favorite books, but life-changing books.

My challenge to you is that if someone asks you to pick from your shelf the 100 books that were most life-changing for you, that's a nice exercise, I think. Just thinking about that, I think you would review your self-education because all smart people, who you are, might be in a class, but you're really self-educated.

Your teacher can't give you anything in your brain. They just kind of direct our reading, at least for scholars, which you are, or you wouldn't be on this call. So I think you'll find that combination of William Osler's advice and David Bowie's, the introduction to his reading habits, perhaps inspiring, and maybe cut out some extra time to sit and read.

How All of That Relates to Your Marketing

Obviously, that much reading relates to your work as a doctor, but how does it relate to your marketing and your, what we just talked about, your responsibility to teach people what you know so that they'll come to you for it?

Because they can't read your mind. They're not thinking about you unless it's time for an appointment or something goes wrong.

And so they have no way of knowing that you learned something and you have a new way to treat their problems. But if you just make a habit of reading, even if it's just 30 minutes every morning, about some topic that is especially interesting to you, and then you write about what you read. You read, and you write about what you read, and then you make it easy for you patients to read what you write, they will show up.

The Book Dr. Pfeiffer Gave Me When I Got Out of Medical School

There's another book that was given to me when I first started practice. It was one of the books that changed my life, which was given to me when I first got out of medical school by a very smart and very wise Dr. Pfeiffer, a brilliant vascular surgeon in Mobile, Alabama. And the book, you can see it's been around a while. It's over 100 years old: *The Physician Himself and What He Should Add to the Strictly Scientific* (1882).¹⁰

Forty-Year-Old Women Control Medicine — and the Old Ethics of Advertising

This 144-year-old book is still surprisingly relevant and helpful for living your life. This is where I was first introduced to the idea that 40-year-old women control medicine. And he talks about the idea of not really advertising yourself; you know, not that long ago, when I trained in medicine, it was

¹⁰ Cathell, *The Physician Himself And What He Should Add to the Strictly Scientific* 1882.

considered unethical to have before-and-after pictures because it might promise more than you could deliver to some patients.

And it was thought that all you really needed was a sign on the door with your name on it. More than that was unethical. It's hard to believe now, with people doing outrageous things on TikTok. Not saying that's bad, but it's changed a lot.

What I'm saying is that you can still follow his very, very inspiring instructions in a way that is both profitable and soul-satisfying.

Read Like Bowie, Write One Email a Week, and You Will Not Lack for Patients

This book is not about how to do medicine.¹¹ It is about how to be a doctor, how to live your life. Very inspiring book, read it once a year. And you can do that if you practice what I just showed you. If you try to read as much as David Bowie, as a physician, read that much, as much as he did as a rock star, and just send out a little email every now and then telling people about what you're reading, you will not lack for patients if you just do that once a week.

Savage Factors, the Cryo Machine, and the Marketing That Did Not Work

Okay. I think I've covered everything. Oh, I want to tell you about one of the doctors who has been in our group and has an upcoming webinar. I put the details in the chat box. I have a book I wrote called [Savage Factors](#), and I'd put it out when I had a business with a cryo machine.¹²

And I bought a cryo machine, wound up putting it in my house. It's one case where my marketing didn't work. I didn't have enough people or enough interest to make a business out of it. But it was, it's a machine that takes you down to minus 200 degrees by using liquid nitrogen. And I based it on a paper that came out in *Medical Hypotheses*¹³, where they took some people, and they did things that people would have been exposed to in primitive days: fasting, hypoxia, they went hiking at altitude, they were dehydrated, they, did aerobic exercise, they were exposed to cold and heat.

Hormesis: The Stress That Makes the Organism Stronger

And the idea is that, with hormesis (and this is something that's been studied in everything from spiders to people to monkeys to many different organisms), if you stress the organism in a way that if you kept

¹¹ Cathell, *The Physician Himself And What He Should Add to the Strictly Scientific* 1882.

¹² MD, *Savage Factors*TM.

¹³ Pruimboom and Muskiet, "Intermittent Living; the Use of Ancient Challenges as a Vaccine against the Deleterious Effects of Modern Life – A Hypothesis."

going, it would die, but you stop before there's permanent damage, the body recovers by becoming stronger and healthier.

The opposite of that would be an astronaut in space, where there's no physical weight-bearing stress at all. You climb off the spaceship when you get back to Earth, and you can't walk because you've become weak. When you go walking or running or jogging or swimming or lifting weights, you're stressing, you're applying hormetic stress.

The Podcast with Jeff Piccirillo, MD

And the same thing happens when you get in a tub of water at forty degrees or in a sauna bath at 200 degrees. This is what we talked about on Jeff Piccirillo's podcast: [the recording is here<=](#). And I discuss it in my book, *Savage Factors*.¹⁴

Closing: Share Those Papers with Your Patients

And I think, with that, let's see if there are any questions, and we'll call it a day. Let's see. Okay, no questions. I hope that was helpful. Have a wonderful day. You can drag those papers out of the handout section, and I hope you'll share them with your patients.

See you next week.

[=>Benefits of the Cellular Medicine Association<=](#)

[=> Apply for Online Training for Multiple PRP Procedures <=](#)

[=>Next Hands-On Workshops with Live Models<=](#)

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Tags

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