OCW WP 057 / V1.0 / 4 NOV 2026

PATIENT GUIDE

Platelet rich plasma *for joints, hair and skin*

Platelet rich plasma is prepared from a small sample of your own blood and placed where repair is wanted. The evidence for it differs a great deal between joints, tendons, hair and skin.

SOURCE	USES	DEVICE	STATUS	SOURCES
Your own blood	Joint, hair, skin	FDA cleared	Off label uses	31 · PMID linked

§ 01

Overview

Platelet rich plasma, usually called PRP, is made from your own blood. A small sample is drawn, spun so the platelets gather into a concentrated layer, and that layer is placed back into a joint, a tendon, the scalp or the skin. Platelets carry growth factors that the body uses in the early stages of healing, and PRP is an attempt to deliver more of them to one place.[1]

At OC Wellness, PRP is offered for a single joint, for hair restoration, for the under eye area, for facial rejuvenation and with microneedling. The research behind these uses is uneven, and we report each one separately, with the type and size of every study, so you can see where the evidence is firm and where it is thin.

288 **Adults in a blinded knee trial published in JAMA.** In RESTORE, three PRP injections did not reduce knee pain or protect cartilage more than saline injections after 12 months.[2]

11 **Placebo controlled knee trials pooled.** Across 1,616 patients, pain was lower with PRP at 3 and 6 months, with no difference by 12 months.[3]

9 **Randomized trials in pattern hair loss.** Together they found higher hair density with PRP than with placebo at 3 and 6 months, in 238 patients.[4]

10% **Of orthopedic PRP studies described their method well enough to repeat.** Preparation varies so much between studies that results are hard to compare.[5]

§ 02

What PRP is

Blood is made of red cells, white cells and platelets floating in a straw colored liquid called plasma. PRP is the plasma portion of your own blood, processed so that it holds more platelets than your blood normally does.[1] Platelets are best known for forming clots, and they also store proteins called growth factors, among them platelet derived growth factor (PDGF), transforming growth factor beta (TGF β) and vascular endothelial growth factor (VEGF).[6]

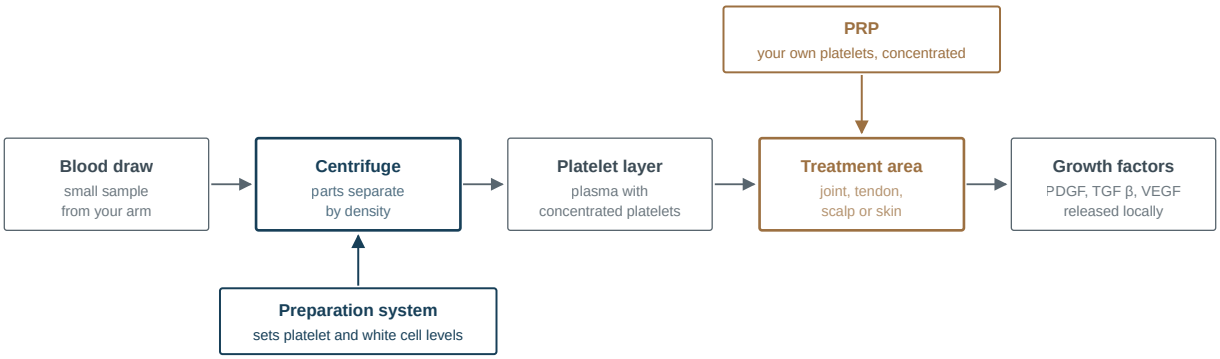
Because it comes from your own body, PRP is called autologous. It is a blood preparation and it is not a stem cell treatment. It is made fresh at the visit, during the same appointment in which it is used.[7]

PRP AT A GLANCE	
Name	Platelet rich plasma (PRP)
Also called	Autologous platelet concentrate, autologous conditioned plasma
What it is	Plasma from your own blood with a platelet concentration above your normal level[1]
Source	A small sample of your blood, drawn and processed at the point of care[7]
Class	Autologous blood preparation, made with an FDA cleared device
How it is given	Injection into a joint, a tendon, the scalp or the skin, or applied to the skin straight after microneedling

§ 03

How PRP works

Healing after an injury runs in three overlapping phases: inflammation, the growth of new tissue, and remodeling. The growth factors stored in platelets help direct each phase, drawing repair cells to the area, encouraging new blood vessels and supporting the matrix that holds tissue together.[1] The idea behind PRP is that placing concentrated platelets where tissue is worn, injured or aging gives that local repair process more of the signals it uses.



PRP is made from a small sample of your own blood. A small blood sample is spun so that its platelets gather in a concentrated layer of plasma, which is then injected or applied to treated skin, where the platelets release growth factors that take part in repair. The device and settings used decide how many platelets and white cells the final preparation holds.[1,6]

Making PRP relies on a simple physical fact. When blood is spun in a centrifuge, its parts separate by density, and platelets, which have the lowest density, collect in a layer of plasma above the red cells.[1] How hard and how long the sample is spun changes how many platelets end up in that layer, and whether white cells come with them.[1] Much of what is known about how PRP acts in tissue comes from laboratory and animal work, which does not always carry over to people,[1] so for each use the question is whether these signals lead to a change a patient can feel or see.

KEY POINT

PRP is not one standard product. Commercial systems produce preparations that differ widely in their platelet, white cell and growth factor content, and to a lesser degree the same system varies from one preparation to the next.[6] White cells matter because PRP that is rich in them is linked to more short term knee soreness than PRP that is poor in them.[8] A review of 105 orthopedic trials found that only 11 described their preparation clearly enough for someone else to repeat it, and only 17 reported what the final product contained.[5] This is one reason studies of the same condition can reach different answers.

§ 04

What the research shows

PRP has been tested in many clinical trials, and their quality and results vary a great deal from one use to the next. We set out each use on its own below, beginning with the largest body of work.

What the evidence supports

Knee osteoarthritis: results point in both directions. RESTORE, a trial published in *JAMA* in 2021 that blinded participants, injectors and assessors, randomized 288 adults aged 50 or older with mild to moderate knee osteoarthritis to three weekly injections of leukocyte poor PRP or of saline. After 12 months, knee pain had improved by 2.1 points on a 10 point scale with PRP and by 1.8 points with saline, a difference that was not significant, and cartilage volume on MRI fell by a similar amount in both groups. Of 31 secondary outcomes, 29 showed no difference, and the authors concluded that the findings do not support PRP for knee osteoarthritis.[2] A 2025 meta analysis of 11 saline controlled trials (1,616 patients) found pain lower with PRP at 3 and 6 months, though with wide variation between trials and no benefit at 12 months; its authors called the effect weak and its clinical relevance debatable.[3] A 2023 meta analysis of 40 studies (3,035 participants) found PRP as effective as, and in some studies more effective than, hyaluronic acid, steroid or saline injections at 6 months, while rating the evidence as low or very low in quality.[9] Professional societies have reached opposite conclusions. The American College of Rheumatology and Arthritis Foundation guideline recommends strongly against PRP for knee osteoarthritis, in part because preparations vary so widely,[10][11] while a 2024 European consensus of knee specialists (ESSKA) judged PRP effective for mild to moderate disease and longer lasting than steroid injections.[12]

Tennis elbow: some positive trials, no clear benefit over saline. In a randomized trial of 100 patients with chronic lateral epicondylitis, 73 percent improved by at least a quarter on a pain score at one year after PRP, compared with 49 percent after a steroid injection; the steroid group did better at first and then declined.[13] A multicenter trial of 230 patients compared tendon needling with PRP against needling alone and found no difference at 12 weeks; at 24 weeks pain had improved by 71.5 percent with PRP and 56.1 percent without.[14] When the five saline controlled trials (276 people) were pooled, PRP was not better than saline for pain or function.[15] For the Achilles tendon the picture is less favorable: in a *JAMA* trial of 240 adults with chronic Achilles tendon pain, a single PRP injection did no better than a sham procedure at 6 months.[16]

Pattern hair loss: small randomized trials, mostly favorable. In a double blind half head trial of 25 patients, three monthly treatments increased hair density on the PRP side compared with the placebo side at 6 months.[17] A 2023 meta analysis of 9 randomized trials (238 patients) found greater hair density with PRP than with placebo at 3 and 6 months, while hair count and hair thickness did not differ from placebo.[4] In a split scalp trial of 35 people, however, density rose by about 20 hairs per square centimeter on the PRP side and by about 16 on the saline side, and the difference was not significant.[18] A 2024 meta analysis of 5 randomized trials found better density when PRP was added to topical minoxidil than with minoxidil alone, with evidence it rated low to very low in certainty.[19]

Acne scars with microneedling: added benefit in split face studies. In a split face study of 50 patients aged 17 to 32, both sides had microneedling and one side also received PRP; scars improved by 62.20 percent on the PRP side and 45.84 percent on the other.[20] A 2021 meta analysis of 14 controlled studies (472 patients, four of them randomized) found that adding PRP raised the odds of more than 50 percent improvement about threefold compared with microneedling alone, and raised satisfaction, without more severe redness or swelling.[21] In another split face study of 35 patients, both sides improved and satisfaction did not differ significantly between microneedling alone and microneedling with PRP.[22]

What is not yet known

Under eye and facial rejuvenation: small studies. The one randomized trial of PRP for aging facial skin, published in *JAMA Dermatology*, treated one cheek with a single PRP injection and the other with saline in 27 adults, of whom 19 were analyzed. Dermatologists who did not know which side was which found no significant difference, while participants rated texture and wrinkles as better on the PRP side at 6 months.[23] Under the eyes, the evidence comes mainly from small studies without a comparison group. In 10 people given a single treatment, the evenness of under eye color improved at 3 months, while melanin, skin hydration and wrinkle volume did not change significantly.[24] In 20 people given three monthly treatments to the lower eyelid, skin firmness and elasticity measured with a suction device improved.[25] A 2021 meta analysis of 19 periorbital studies (455 patients, 95 percent women) found higher satisfaction with PRP than with controls in the three randomized trials it could pool, and called for larger trials at low risk of bias.[26]

Across every use, the best number of sessions, the best platelet and white cell content, and how long any benefit lasts have not been settled, and differences in preparation make trials hard to compare.[6] [5]

HUMAN STUDIES BY USE Study type and size are given for each.

USE AND STUDY	N	DESIGN	MAIN FINDING
Knee RESTORE 2021[2]	288	RCT, PRP vs saline, 3 weekly injections	No difference in pain or cartilage at 12 months
Knee Auroux 2025[3]	1,616	Meta analysis, 11 saline controlled RCTs	Less pain at 3 and 6 months, none at 12; effect called weak
Knee Costa 2023[9]	3,035	Meta analysis, 40 studies vs other injections	As good or better at 6 months; low quality evidence
Tennis elbow Peerbooms 2010[13]	100	RCT, PRP vs steroid	Success at 1 year 73 vs 49 percent
Tennis elbow Mishra 2014[14]	230	RCT, needling with vs without PRP	No difference at 12 weeks; better at 24 weeks
Tennis elbow Simental Mendía 2020[15]	276	Meta analysis, 5 saline controlled RCTs	No difference from saline
Achilles Kearney 2021[16]	240	RCT, PRP vs sham	No difference at 6 months
Hair Alves 2016[17]	25	RCT, half head, PRP vs placebo	Higher density on PRP side at 6 months
Hair Shapiro 2020[18]	35	RCT, split scalp, PRP vs saline	Density rose on both sides; no significant difference
Hair Zhang 2023[4]	238	Meta analysis, 9 RCTs	Higher density than placebo at 3 and 6 months
Acne scars Asif 2016[20]	50	Split face, microneedling with vs without PRP	62.20 vs 45.84 percent improvement
Acne scars Ibrahim 2018[22]	35	Split face, microneedling with vs without PRP	Both improved; satisfaction similar
Acne scars Kang 2021[21]	472	Meta analysis, 14 controlled studies	About three times the odds of more than 50 percent improvement

USE AND STUDY	N	DESIGN	MAIN FINDING
Face Alam 2018[23]	27	RCT, split face, PRP vs saline	No difference by blinded raters; better self ratings
Under eye Mehryan 2014[24]	10	Single group, one session	More even color; no change in wrinkles
Under eye Aust 2018[25]	20	Single group, three sessions	Firmness and elasticity improved
Periorbital Evans 2021[26]	455	Systematic review, 19 studies	Higher satisfaction than controls in 3 RCTs

SUMMARY

For pattern hair loss and for acne scars treated with microneedling, small randomized and split face studies mostly favor PRP. For knee osteoarthritis, pooled trials show some pain relief over the first six months, while a large trial that blinded participants, injectors and assessors found no benefit over saline at a year, and expert bodies disagree. For tennis elbow, results are mixed, and for facial and under eye rejuvenation the studies are small. Your physician will tell you which group your concern falls into before you decide.

§ 05

How PRP is prepared and given

No regulator has set a dose or a schedule for PRP in any of these uses, so the number of sessions and the spacing between them are set by your physician. The schedules below are those used in published studies.

Preparing PRP

PRP is made at the same visit. Blood is drawn from a vein in the arm into a sterile tube or syringe, spun in a centrifuge, and the platelet rich layer is drawn off for use.[1] In one published under eye study, for example, 15 mL of blood was spun for five minutes and yielded about 5 to 6 mL of PRP, of which 2 mL was injected on each side.[25] The device and its settings decide how concentrated the platelets are and whether white cells are kept or removed, and these differ widely between systems.[1,6]

A single joint

PRP is injected into the joint space with a fine needle, in the same way as other joint injections. In the RESTORE knee trial, participants received three injections of leukocyte poor PRP at weekly intervals.[2]

A tendon

For tendon problems such as tennis elbow, PRP is placed into the tendon itself, often by passing the needle several times through the painful area, after a local anesthetic. This approach was used in the large tennis elbow trial and in the trial comparing PRP with a steroid injection.[14,13]

Hair restoration

PRP is given as small injections into the skin of the scalp over the thinning area. In two randomized hair trials, patients received three sessions one month apart.[17,18]

Under eye area and face

PRP is placed into or just under the skin with a fine needle or cannula. The lower eyelid study used three treatments a month apart,[25] and the facial trial used a single 3 mL injection into one cheek.[23]

Microneedling with PRP

The skin is treated with a microneedling device that makes many tiny channels, and PRP is then applied to the surface, sometimes with small injections into the scars as well. Studies in acne scars used three sessions a month apart or four sessions three weeks apart.[20] [22]

COMPARING THE USES Schedules are those used in published studies.

USE	HOW IT IS PLACED	SCHEDULE IN STUDIES	WHAT STUDIES SHOW
Single joint	Injection into the joint	3 weekly injections[2]	MIXED
Tendon	Injection into the tendon	A single injection[16]	MIXED
Hair	Injections into the scalp	3 sessions a month apart[17]	MOSTLY FAVORABLE
Acne scars	On the skin after microneedling	3 to 4 sessions[20] [22]	MOSTLY FAVORABLE
Under eye, face	Into or under the skin	1 to 3 sessions[23] [25]	SMALL STUDIES

§ 06

What to expect

A PRP visit starts with a blood draw, similar to a routine blood test. While the sample is processed, the area to be treated is cleaned and, where it helps, numbed. The treatment itself is usually brief.

Some soreness afterward is common. In knee trials, the most frequent reaction was mild knee pain and swelling, reported in 10.6 percent of treated knees, and these symptoms usually settled without treatment.[8] After tendon injections, discomfort at the injection site is usual: in the Achilles trial it was reported by 97 of 121 people after PRP and by 73 of 119 after the sham procedure.[16] After facial injection, redness, swelling and bruising were the common reactions, and none persisted at 12 months.[23] Under the eyes, some swelling straight after treatment is expected.[25]

Any change takes time. In the knee trials that showed a benefit, it appeared at 3 and 6 months and had faded by 12.[3] In tennis elbow, the difference from needling alone appeared at 24 weeks and not at 12,[14] and in the steroid comparison the PRP group improved gradually over the year.[13] Hair studies measured density 3 to 6 months after treatment began.[4] [17]

DURING YOUR VISIT

- Tell us about any blood thinner, aspirin or anti inflammatory pain reliever you take. Aspirin and anti inflammatory pain relievers can reduce what platelets release.[1]
- Tell us straight away about pain that is severe, spreading or getting worse, or about any change in your vision after treatment near the eyes.

§ 07

Safety

Most reported side effects of PRP are short lived soreness, swelling or bruising where it was given. In a 2025 meta analysis of 24 knee trials (2,751 patients), complications occurred in 18.66 percent of people given PRP and 9.14 percent of those given other injections. That rate was similar to hyaluronic acid and steroid injections and higher than saline, and all but one complication were mild or moderate and settled on their own.[27] A 2026 meta analysis found that mild knee pain and swelling were more frequent than with hyaluronic acid only when the PRP was rich in white cells.[8] In two tennis elbow

trials, pain for a few days after injection was reported by 16 to 20 percent after PRP and 8 to 16 percent after saline. [15] The hair meta analysis found no serious side effects, [4] and adding PRP to microneedling did not increase severe redness or swelling. [21]

A rare but serious risk applies to injections on the face. A published case described permanent loss of vision in one eye in a 49 year old woman after cosmetic PRP injections between the eyebrows, caused by a blockage of the artery that supplies the eye. [28] Any change in vision after treatment near the eyes needs urgent care.

TELL YOUR PHYSICIAN BEFORE STARTING IF ANY OF THESE APPLY

- You have a bleeding disorder, a low platelet count or a disorder of platelet function.
- You take a blood thinner, aspirin or an anti inflammatory pain reliever.
- You have an infection, or a rash or other active skin condition in the area to be treated.
- You have a current or past cancer diagnosis.
- You smoke, or you are pregnant or breastfeeding.
- You take any prescription medication, over the counter product or supplement. Please bring the full list.

Several of these were reasons for exclusion in published PRP studies, so less is known about PRP in these situations. [25] Long term data is also limited: the longest trials summarized here followed patients for about one year, so the effects of repeated treatment over many years have not been studied. [2] [13]

§ 08

Is this right for you

Whether PRP makes sense depends on what you want to treat, because the evidence differs so much between uses. Your consultation is where you and your physician weigh that together.

Before we begin

- [ ] A review of your medical history, current medications and supplements, including anything that thins the blood
- [ ] An examination of the area to be treated, with imaging of a joint if your physician feels it is needed
- [ ] Bloodwork if your physician feels it is warranted, for example a blood count
- [ ] A written note of your goals, with photographs for hair or skin, or a pain and function score for a joint, so we can judge progress together

For a painful knee, exercise and, where weight is a factor, weight loss carry strong recommendations from the American College of Rheumatology, so they belong in your plan whatever else you choose. [10] Thinning hair has causes other than pattern hair loss, and a treatable cause found at your consultation would be addressed first.

Reviewing your progress

We will compare your result against your documented starting point after a defined period. If PRP is helping, we will plan whether and when to repeat it. If it is not, we will say so and look at other options. You are welcome to stop at any time.

QUESTIONS TO ASK YOUR PHYSICIAN

How strong is the evidence for PRP in my particular concern? How many sessions would you suggest, and why? What other treatments would you consider for me, and how do they compare? How will we measure whether it has worked?

§ 09

Regulatory status

PRP is prepared from your own blood using a device cleared by the U.S. Food and Drug Administration through the 510(k) process. The clearances for PRP systems, including one issued in March 2026, cover the preparation of autologous PRP from a small sample of blood at the point of care, for mixing with bone graft material before it is placed into a bony defect.[7] These clearances do not include injection into joints or tendons, treatment of hair loss, or skin treatments, so each of the uses described here is off label.

A physician may lawfully use a cleared device off label. Federal law states that it does not limit a physician's authority to use a legally marketed device for any condition within a legitimate physician and patient relationship.[29] It does mean that no regulator has reviewed PRP for your specific use, and you should know that before you consent.

For athletes, the World Anti Doping Agency states that platelet derived preparations such as PRP are not prohibited. Individual growth factors from other sources remain prohibited under section S2 of the 2026 Prohibited List.[30] If you are subject to testing, check with your sport's antidoping organization before treatment.

If you would like details about the preparation used in your treatment, please ask.

§ 10

Common questions

Is PRP approved by the FDA?

PRP is made with FDA cleared devices, and those clearances cover preparing PRP for use with bone grafts.[7] Its use in a joint, a tendon, the scalp or the skin is off label, which a physician may lawfully choose with you.[29] No regulator has reviewed PRP for these specific uses.

Is PRP a stem cell treatment?

PRP is a blood preparation and is not a stem cell treatment. It is the plasma portion of your own blood with a higher than normal concentration of platelets, the cell fragments that store growth factors,[1] and it is drawn and prepared at the same visit.[7]

Will PRP help my knee?

The evidence points in both directions. Pooled saline controlled trials found less pain with PRP at 3 and 6 months and no difference by 12 months,[3] while a blinded *JAMA* trial in 288 adults found no benefit over saline at 12 months.[2] Professional societies disagree on whether to recommend it, and your physician can explain how this applies to your knee.[10][12]

Is it safe, and what side effects should I expect?

Most side effects are short lived: soreness and swelling after joint or tendon injection, and redness, swelling or bruising after facial treatment.[8][23] In knee trials, complications were more frequent than with saline and similar to other joint injections, and almost all were mild or moderate.[27] Rare cases of vision loss after cosmetic injections near the eyes and brow have been reported.[28]

How soon would I notice anything, and how many sessions will I need?

Changes in studies were measured over months: knee benefits appeared at 3 to 6 months,[3] tennis elbow differences at 24 weeks,[14] and hair density 3 to 6 months after starting.[4] Study schedules ranged from a single session for a tendon to three or four sessions for hair and acne scars.[13][17][20][22] No regulator has set a schedule, so your physician sets one with you.

Can PRP be combined with other treatments?

PRP is often paired with another treatment. In acne scars, adding PRP to microneedling improved results in pooled studies,[21] and in pattern hair loss, adding PRP to topical minoxidil improved hair density, though the evidence was of low certainty.[19] Your physician can advise whether a combination suits you.

Who should not have PRP?

Tell your physician before starting if you have a bleeding or platelet disorder, take a blood thinner or aspirin, have an infection or active skin condition in the treatment area, or have a current or past cancer diagnosis. These were reasons for exclusion in published studies, so less is known in these situations.[25] Please also mention if you smoke, are pregnant or are breastfeeding, and bring the full list of your medications and supplements.

How long do results last, and how will we know if it is working?

Durability is not well defined. In knee trials, the benefit seen at 6 months had faded by 12,[3] and studies of hair and skin mostly followed patients for months rather than years.[4][26] Before you begin, you and your physician record a starting point, such as photographs or a pain score, so the result can be judged against it.

Is my PRP made by a compounding pharmacy?

No. Your blood is drawn at your visit and separated in the clinic with an FDA cleared device, so your PRP is made from your own blood at the point of care and is never ordered in from a pharmacy.[7] Compounding is a different activity, in which a pharmacy or a physician combines or alters drug ingredients to make a medicine for one patient, and a compounded preparation is not FDA approved.[31] What matters for PRP is the device used, the way the blood is prepared and who performs the procedure, and your physician can go through all of that with you.

References

Sources cited in this guide

1 **Everts P, et al.** Platelet rich plasma: new performance understandings and therapeutic considerations in 2020.
Int J Mol Sci. 2020;21(20):E7794. PMID 33096812

2 **Bennell KL, et al.** Effect of intra articular platelet rich plasma vs placebo injection on pain and medial tibial cartilage volume in patients with knee osteoarthritis: the RESTORE randomized clinical trial.
JAMA. 2021;326(20):2021 to 2030. PMID 34812863

3 **Auroux M, et al.** Efficacy of intra articular platelet rich plasma compared with placebo in knee osteoarthritis: a systematic review and meta analysis.
Joint Bone Spine. 2025;92(6):105947. PMID 40653151

4 **Zhang X, et al.** Platelet rich plasma for androgenetic alopecia: a systematic review and meta analysis of randomized controlled trials.
J Cutan Med Surg. 2023;27(5):504 to 508. PMID 37533146

5 **Chahla J, et al.** A call for standardization in platelet rich plasma preparation protocols and composition reporting: a systematic review of the clinical orthopaedic literature.
J Bone Joint Surg Am. 2017;99(20):1769 to 1779. PMID 29040132

6 **Oudelaar BW, et al.** Concentrations of blood components in commercial platelet rich plasma separation systems: a review of the literature.
Am J Sports Med. 2019;47(2):479 to 487. PMID 29337592

7 **U.S. Food and Drug Administration, Center for Biologics Evaluation and Research.** 510(k) clearance BK251299, PlateletQuick PRP, 11 March 2026 (21 CFR 864.9245, product code ORG).
Indications for use: preparation of autologous PRP from a small sample of peripheral blood at the patient point of care, to be mixed with autograft and/or allograft bone before application to a bony defect. fda.gov/media/191584, accessed 4 November 2026. Other cleared PRP systems, such as BK241095 (20 November 2024), carry the same indication.

8 **Nakagawa HF, et al.** Assessment of adverse events and safety associated with intra articular platelet rich plasma injections compared to other injectates for knee osteoarthritis: a systematic review and meta analysis.
PM R. 2026;18(9):1072 to 1084. PMID 42101047

9 **Costa LAV, et al.** How does platelet rich plasma compare clinically to other therapies in the treatment of knee osteoarthritis? A systematic review and meta analysis.
Am J Sports Med. 2023;51(4):1074 to 1086. PMID 35316112

10 **Kolasinski SL, et al.** 2019 American College of Rheumatology/Arthritis Foundation guideline for the management of osteoarthritis of the hand, hip, and knee.
Arthritis Rheumatol. 2020;72(2):220 to 233. PMID 31908163

11 **Pavone V, et al.** Injection based management of osteoarthritis of the knee: a systematic review of guidelines.
Front Pharmacol. 2021;12:661805. PMID 33959026 · records the American College of Rheumatology recommendation as a strong recommendation against PRP for knee osteoarthritis

12 **Laver L, et al.** The use of injectable orthobiologics for knee osteoarthritis: a European ESSKA ORBIT consensus. Part 1, blood derived products (platelet rich plasma).
Knee Surg Sports Traumatol Arthrosc. 2024;32(4):783 to 797. PMID 38436492

13 **Peerbooms JC, et al.** Positive effect of an autologous platelet concentrate in lateral epicondylitis in a double blind randomized controlled trial: platelet rich plasma versus corticosteroid injection with a 1 year follow up.
Am J Sports Med. 2010;38(2):255 to 262. PMID 20448192

14 **Mishra AK, et al.** Efficacy of platelet rich plasma for chronic tennis elbow: a double blind, prospective, multicenter, randomized controlled trial of 230 patients.
Am J Sports Med. 2014;42(2):463 to 471. PMID 23825183

15 **Simental Mendía M, et al.** Clinical efficacy of platelet rich plasma in the treatment of lateral epicondylitis: a systematic review and meta analysis of randomized placebo controlled clinical trials.
Clin Rheumatol. 2020;39(8):2255 to 2265. PMID 32103373

16 **Kearney RS, et al.** Effect of platelet rich plasma injection vs sham injection on tendon dysfunction in patients with chronic midportion Achilles tendinopathy: a randomized clinical trial.
JAMA. 2021;326(2):137 to 144. PMID 34255009

17 **Alves R, Grimalt R.** Randomized placebo controlled, double blind, half head study to assess the efficacy of platelet rich plasma on the treatment of androgenetic alopecia.
Dermatol Surg. 2016;42(4):491 to 497. PMID 27035501

18 **Shapiro J, et al.** Evaluation of platelet rich plasma as a treatment for androgenetic alopecia: a randomized controlled trial.
J Am Acad Dermatol. 2020;83(5):1298 to 1303. PMID 32653577

19 **Yao J, et al.** The additive value of platelet rich plasma to topical minoxidil in the treatment of androgenetic alopecia: a systematic review and meta analysis.
PLoS One. 2024;19(8):e0308986. PMID 39197003

20 **Asif M, Kanodia S, Singh K.** Combined autologous platelet rich plasma with microneedling verses microneedling with distilled water in the treatment of atrophic acne scars: a concurrent split face study.
J Cosmet Dermatol. 2016;15(4):434 to 443. PMID 26748836

21 **Kang C, Lu D.** Combined effect of microneedling and platelet rich plasma for the treatment of acne scars: a meta analysis.
Front Med (Lausanne). 2021;8:788754. PMID 35237616

22 **Ibrahim MK, Ibrahim SM, Salem AM.** Skin microneedling plus platelet rich plasma versus skin microneedling alone in the treatment of atrophic post acne scars: a split face comparative study.
J Dermatolog Treat. 2018;29(3):281 to 286. PMID 28782384

23 **Alam M, et al.** Effect of platelet rich plasma injection for rejuvenation of photoaged facial skin: a randomized clinical trial.
JAMA Dermatol. 2018;154(12):1447 to 1452. PMID 30419125

24 **Mehryan P, et al.** Assessment of efficacy of platelet rich plasma (PRP) on infraorbital dark circles and crow's feet wrinkles. J Cosmet Dermatol. 2014;13(1):72 to 78. PMID 24641609

25 **Aust M, et al.** Platelet rich plasma for skin rejuvenation and treatment of actinic elastosis in the lower eyelid area. Cureus. 2018;10(7):e2999. PMID 30515364

26 **Evans AG, et al.** Rejuvenating the periorbital area using platelet rich plasma: a systematic review and meta analysis. Arch Dermatol Res. 2021;313(9):711 to 727. PMID 33433716

27 **Fucaloro SP, et al.** Complications of platelet rich plasma injection for knee osteoarthritis are similar to those of corticosteroids and hyaluronic acid but are significantly greater than those of placebo injections: a meta analysis of randomized controlled trials. Arthroscopy. 2025;41(11):4789 to 4803. PMID 40409439

28 **Kalyam K, et al.** Irreversible blindness following periocular autologous platelet rich plasma skin rejuvenation treatment. Ophthalmic Plast Reconstr Surg. 2017;33(3S Suppl 1):S12 to S16. PMID 27015236

29 **United States Code.** 21 U.S.C. 396, Practice of medicine. Federal law does not limit a health care practitioner from prescribing or administering a legally marketed device for any condition or disease within a legitimate practitioner patient relationship. govinfo.gov, accessed 4 November 2026.

30 **World Anti Doping Agency.** Prohibited List, questions and answers, and the 2026 Prohibited List (in force from 1 January 2026). "Platelet derived preparations such as Platelet Rich Plasma (PRP) and Platelet Rich Fibrin (PRF) are not prohibited." Individual growth factors remain prohibited under S2. link, accessed 4 November 2026.

31 **U.S. Food and Drug Administration.** Compounding and the FDA: questions and answers. Describes drug compounding as combining, mixing or altering ingredients to make a medicine for an individual patient, and states that compounded drugs are not FDA approved and that the FDA does not verify their safety, effectiveness or quality before they are marketed. Content current as of 16 September 2025. fda.gov, accessed 4 November 2026.

OC WELLNESS
NEWPORT BEACH

IMPORTANT NOTICE

This document is patient education prepared by OC Wellness. It is not medical advice, not a prescription, and not a promise of any clinical outcome. **Platelet rich plasma is prepared from your own blood with devices cleared by the U.S. Food and Drug Administration for use with bone grafts; its use in joints, tendons, hair and skin is off label.** Individual results vary, and no outcome can be predicted from the studies cited here.

Clinical services at OC Wellness are provided by licensed physicians and clinicians through the supervising professional medical corporation. Family MSO Holdings LLC provides management and administrative services only. It does not practice medicine, employ physicians in the practice of medicine, or influence clinical judgment. All treatment decisions are made solely by your licensed treating physician.

Do not begin, stop, or change any medication or supplement based on this document. Discuss it with your physician, and disclose every prescription drug, over the counter product, and supplement you take.

PATIENT SIGNATURE _____ DATE _____ REVIEWING PHYSICIAN _____

OCW WP 057 · Version 1.0 · 4 November 2026 · Next scheduled literature review: May 2027 · Prepared with sources indexed in PubMed and federal public records. OC Wellness · Newport Beach, California · ocwellness.com · (949) 222 0232