

Vampire therapy?!



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Proponents of Platelet Rich Plasma injections say our own platelets can heal us, and even reverse ageing. But is tissue regeneration as simple as giving blood to yourself?
Caroline Robertson investigates.
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GOOGLE 'PRP' and you'll see a red carpet of celebrity advocates. Kim Kardashian posted her red face fresh from PRP for skin rejuvenation. Basketball pro Kobe Bryant and baseball player Alex Rodriguez credited it for overcoming joint injuries. Many doctors, physiotherapists and cosmetic therapists are now offering PRP to their clients for health and beauty. Aestheticians adore PRP as it promotes the skin's matrix 'mattress' - plumping, repairing and smoothing skin.

What is PRP?

Platelet Rich Plasma (PRP) injections involve drawing blood from the recipient's arm, casting a centrifuge spell on it, and injecting the elixir into the treatment area: this stimulates the inflammatory response and regeneration. Spinning blood separates the red and white blood cells, and platelets. The platelet-rich blood is then mixed with a platelet-activating agent which is used for the treatment. Platelets are small cells with a short life of around 7-10 days. They help to form blood clots and trigger an inflammation that increases over 300 growth factors, stem cells, macrophages and capillary stimulation, to accelerate healing. Evidence suggests that optimal



benefit is obtained when PRP has four times higher platelets than normal blood levels. Normal blood has around 93% red blood cells and 6% platelets, whereas PRP has only 5% red blood cells and 94% platelets. PRP promotes cellular regeneration and is generally given over a series of sessions spaced at least a month apart.

I first heard about PRP from my friend Gary who suffered debilitating osteoarthritis in his knee; he says, “PRP injections, along with massage, fish oil, glucosamine and exercise, have reduced the pain significantly. Now I don’t take any anti-inflammatory drugs.” PRP’s ability to biologically boost healing gives it unlimited uses. It is also simple to prepare, easy to administer and safer than using substances from an outside source. PRP is predominantly used for injured or inflamed connective tissue and to stimulate collagen for cosmetic concerns. One area PRP excels in is tendon and ligament injury or inflammation. Tendons and ligaments are notoriously slow to heal because they have a low blood supply and inflammatory response. Conditions that often respond to PRP include tennis elbow (common extensor tendinosis), golfer’s elbow (medial epicondylitis), jumper’s

knee (patellar tendinosis), achilles tendinosis, plantar fasciitis, hamstring tendons, adductor tendons, and gluteal tendons. Sprains and muscle tears may also respond to PRP. Dr Sunny Misir tried PRP for nagging shoulder strain, and says: “My personal experience has been amazing ... after several months of discomfort and failed local steroids, the day after my second PRP injection I was pain-free and have been since. Professionally, I’ve referred patients with plantar fasciitis and tennis elbow for PRP, all with excellent outcomes.” Even horses have been treated with PRP for tendon and ligament injury, wounds, fractures, bone cysts, and osteoarthritis. Therapists may also consider PRP for arterial and venous leg ulcers, diabetic foot ulcers, pressure sores, osteoarthritis, bone fractures, bursitis, oral surgery, deep thermal burns, surgical wounds and scars.

Does PRP work?

By increasing connective tissue synthesis, PRP is being hailed as a cosmetic cure for wrinkles, sun damage, pigmentation, dull skin, rough skin, and dark circles. It’s often used in conjunction with cosmetic peels, laser skin resurfacing, micro-needling, fillers, and fat transfer. Plastic surgeons have found skin and facial fat grafts mixed with PRP increase vascularity, reduce cysts and fibrosis, and improve survival and quality of fat grafts, as compared to saline. PRP has also been used to smooth scars and deep or fine lines, such as nasolabial folds or a crepey décolletage. Dermatologists are finding promising results with PRP for male pattern alopecia. It appears PRP can reinvigorate dormant hair follicles and stimulate new hair growth in androgenic alopecia. Research published by Pietro Gentile et al showed a significant effect of PRP on hair loss.

PRP injections were initiated in the 1980s to regenerate tissue, post-surgery. In 2006 the first human study using PRP was conducted at Stanford University. Participants suffering chronic elbow tendinosis showed an impressive 93% pain reduction over a two-year follow up. Though there’s abundant anecdotal evidence supporting PRP, the jury is still out as to whether it’s a reliable therapy for tissue regeneration. A meta-analysis of all the studies on PRP suggests one treatment rarely makes a significant or enduring impact; however, a series of treatments shows promising though passing results, with decreasing degeneration, pain, stiffness and tissue damage. The lack of consistency in trial outcomes may be because there is no standardised method for PRP production, and many variations exist. Orthopaedic surgeon Dr Robert LaPrade says, “The use and manipulation of one’s own growth factors will become mainstream medicine. We should require good scientific evidence of these treatments’ efficacy before they are widely utilised.” ❁

❁ Take care

PRP is considered safe for most people, as the only general risk is from the injection site: it’s common to experience mild redness, swelling and bruising which subsides. In rare cases, the pierced skin can get infected. However, there are conditions that preclude one’s suitability for PRP. Those on non-steroidal anti-inflammatory medications (e.g. ibuprofen) should stop taking them 7-10 days prior to PRP. Corticosteroid injections should be avoided a month before PRP, as they can prevent the inflammation necessary for PRP to work. PRP isn’t advised if you’re on anti-coagulation therapy (e.g. warfarin). Those allergic to Bupivacaine HCL, Lidocaine, or Bovine Thrombin should seek their practitioner’s guidance. Doctors recommend patients wait at least 60 days to recover completely from a recent fever or illness before receiving PRP. It’s best not to have PRP with any of the following conditions: anaemia, breastfeeding, pregnancy, critical thrombocytopenia (low platelet count), hypofibrinogenaemia, haemodynamic instability, acute and chronic infections, chronic liver disease, or history of metastatic conditions like cancer (especially lymphoma, leukaemia or bone marrow cancer).

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