



Improving Access to Quality Medical Care Webinar Series

Presented by

The Arizona Telemedicine Program and
Southwest Telehealth Resource Center

Welcome

SWTRC region - AZ, UT, CO, NM & NV

Fellow HRSA Telehealth Resource Centers

All other participants from the US & abroad



The **Arizona Telemedicine Program**, the **Southwest Telehealth Resource Center** & **UA's Department of Pathology** welcomes you to this free webinar. The practice & delivery of healthcare is changing, with an emphasis on **improving quality, safety, efficiency, & access to care.**

Telemedicine can help you achieve these goals!

Webinar Tips & Notes

- Mute your phone &/or computer microphone
- Time is reserved at the end for Q&A, please use the Chat function to ask questions



- Please fill out the post-webinar survey
- Webinar is being recorded
- Recordings will be posted on the SWTRC website

<http://www.southwesttrc.org>

Paying it Forward: Using Plasma from Recovered Patients to Treat COVID-19



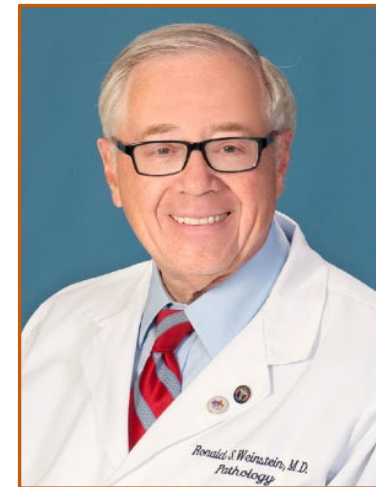
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Roadmap

1. What is convalescent plasma
2. How do we get it
3. Who is eligible to receive it
4. How you can help



Human plasma

- Over half of your total blood volume is plasma
- Plasma is mostly water
- Plasma also contains important proteins that support clotting and immunity
- The composition of plasma can vary by age, sex, blood type, genetics, diet, and environmental factors

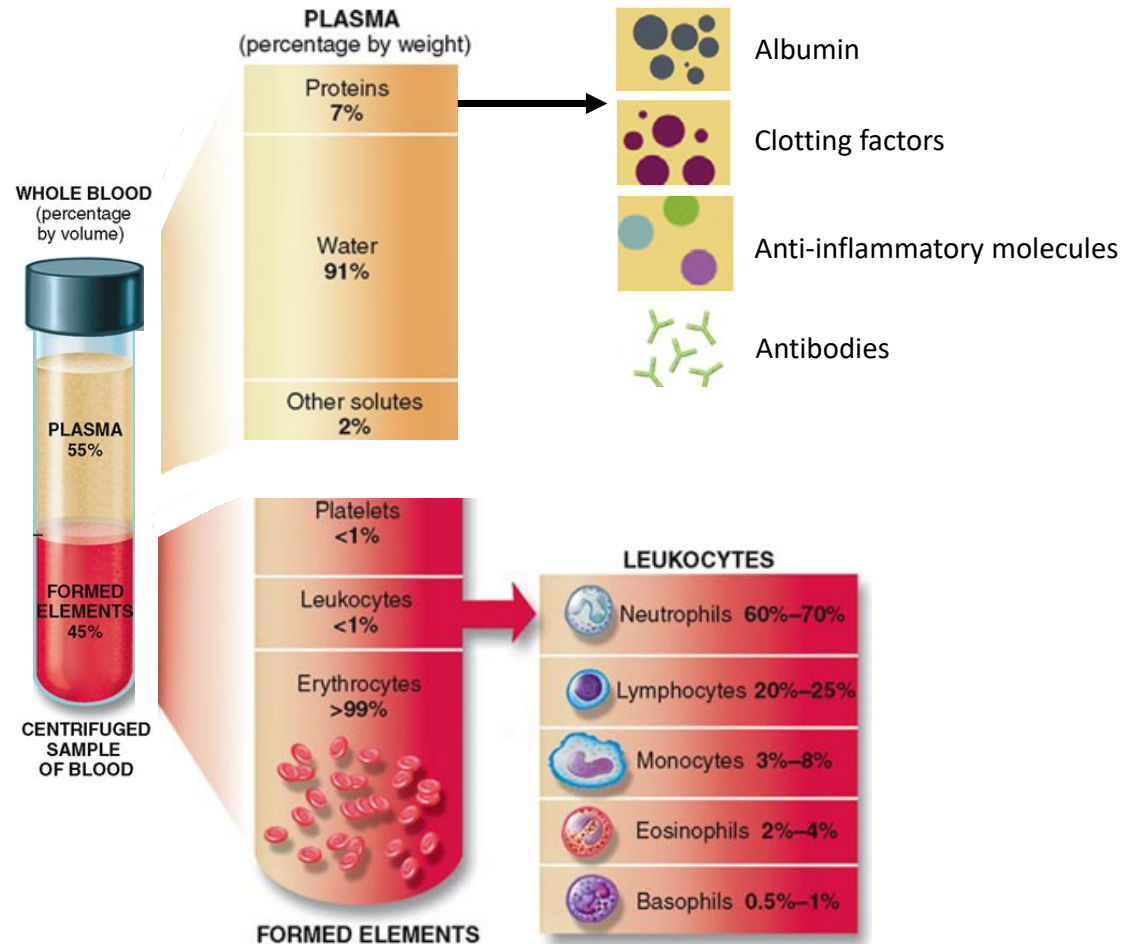


Image Adaptations: Components of blood. (From Patton KT, Thibodeau FA: *The human body in health and disease*, ed. 6, St. Louis, 2014, Mosby) Rojas, M., et al. *Autoimmunity reviews* 2020

Convalescent plasma

- Plasma from a recovered patient that has antibodies specific to an infection that may help patients with the same infection
- “Passive immunity”

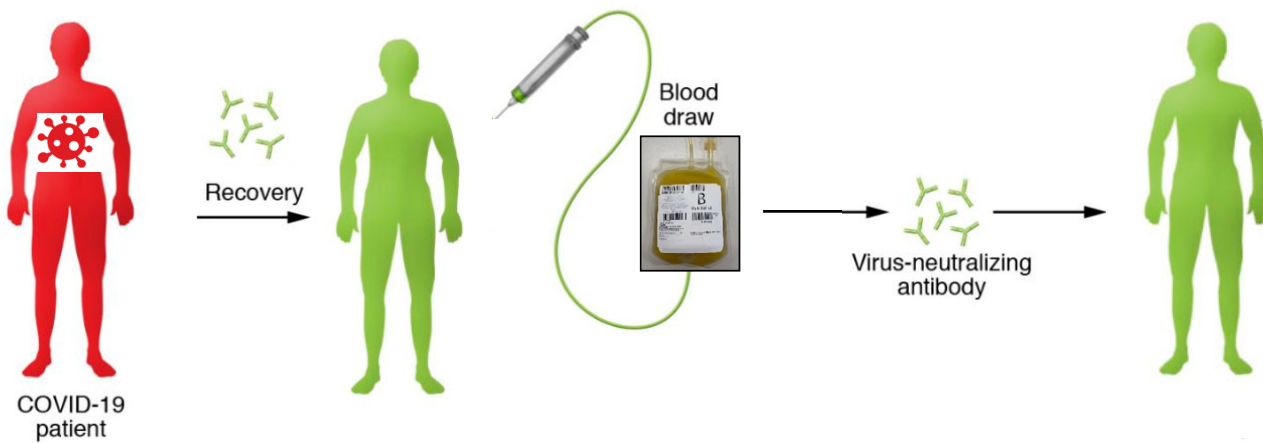


Image Adaptations: J Clin Invest. 2020;130(4):1545-1548

Rationale for convalescent plasma

- Convalescent plasma has been used when new diseases emerged quickly but specific therapies/medications/vaccines were not yet available
- Examples

- Spanish influenza A (H1N1)
- Pandemic influenza A 2009 (H1N1)
- Avian influenza (H5N1)
- SARS (SARS-CoV-1)
- MERS (MERS-CoV)
- Ebola



Image: <https://www.livescience.com/new-coronavirus-pneumonia-outbreak-china.html>

COVID-19 convalescent plasma

- Recent studies have shown that the neutralizing antibodies in convalescent plasma resulted in:
 - Resolution of viremia
 - Improved oxygen saturation
- March 2020: FDA announced an initiative to support convalescent plasma to treat patients with severe or life-threatening COVID-19 disease
- Considered an **investigational new drug (IND)**
 - Informed consent is required

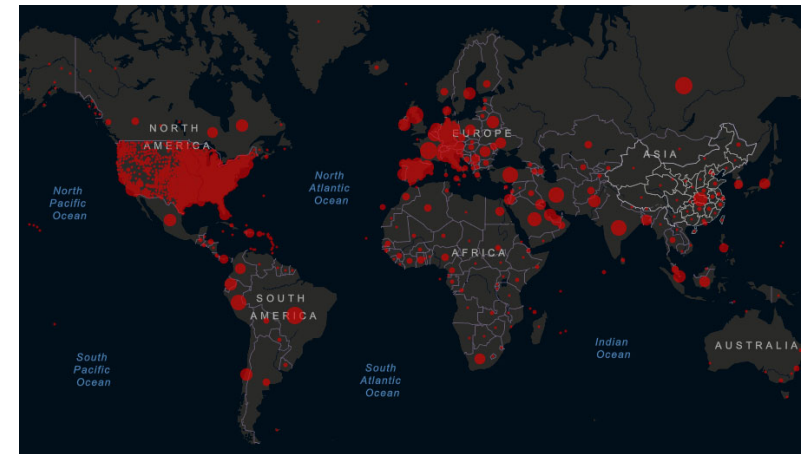


Image of current pandemic: <https://coronavirus.jhu.edu/map.html>

Convalescent plasma collection and processing

1. Collect plasma from healthy, recovered donors

- Must have documented evidence of COVID-19:
 - Diagnostic test at time of illness, or
 - SARS-CoV-2 antibodies after recovery
- Must be free of symptoms for at least 14 days
- Must meet all other blood donation criteria



Image: <https://abcnews.go.com/Health/privilege-donate-convalescent-plasma-reporters-notebook/story?id=70313437>

Convalescent plasma collection and processing

1. Collect plasma from healthy, recovered donors

2. Test the product for safety

- ✓ Blood type (ABO)
- ✓ HIV
- ✓ Hepatitis B virus
- ✓ Hepatitis C virus
- ✓ Human T-Lymphotropic virus
- ✓ Syphilis
- ✓ Zika virus
- ✓ *Trypanosoma cruzi*
- ✓ Antibodies that may cause lung problems in recipients (HLA antibodies)



Image (test tubes): <https://www.ucsfhealth.org/education/donating-blood-before-your-hospital-stay>

Convalescent plasma collection and processing

1. Collect plasma from healthy, recovered donors
2. Test the product for safety
3. Store it frozen

Transport to hospital and thaw

Transfuse

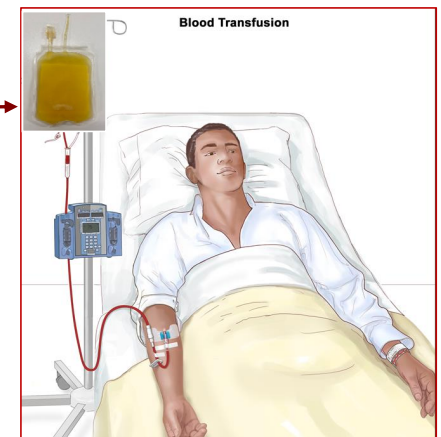


Image (right): <https://www.cancer.gov/images/cdr/live/CDR755979-750.jpg>

COVID-19 convalescent plasma pathways

1. Expanded Access Program (EAP)

- Sponsored by the US government
 - Any institution and physician may participate
- For the treatment of patients with COVID-19 who are severely ill, have life-threatening disease, or are at high risk of progressing to severe or critical disease
 - Each patient receives at least one unit of ABO-compatible convalescent plasma
 - Adult patients only

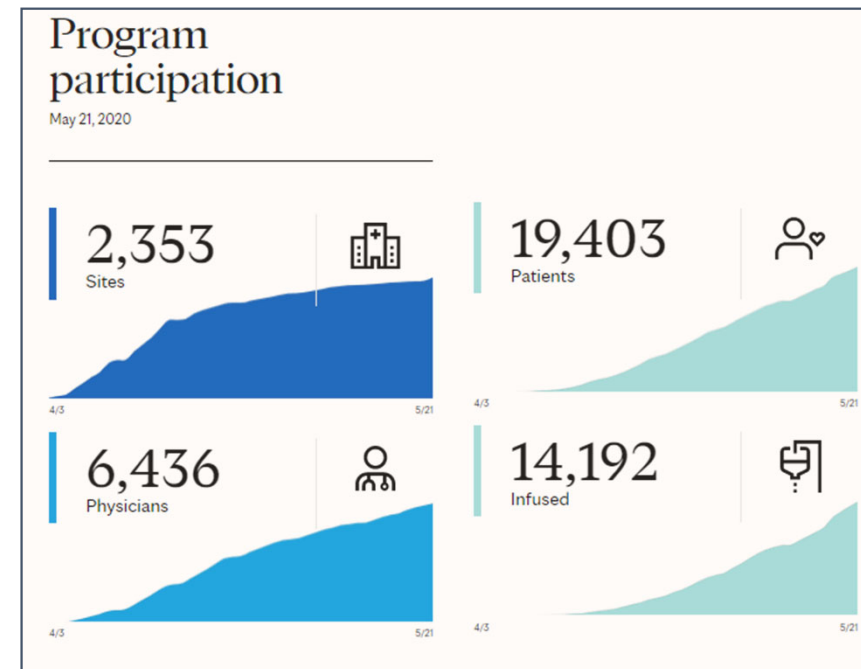


Image: <https://www.uscovidplasma.org/>

COVID-19 convalescent plasma pathways

1. Expanded Access Program (EAP)

2. Clinical Trials

- Many FDA-approved trials (traditional INDs) are in progress
- These are investigating convalescent plasma use in expanded populations

- After COVID-19 exposure but before symptoms occur
- In patients with mild or moderate disease
- In severe and life-threatening illness
- In children (< 18 years)



Image: <https://www.fda.gov/emergency-preparedness-and-response/counterterrorism-and-emerging-threats/coronavirus-disease-2019-covid-19>

COVID-19 convalescent plasma pathways

1. Expanded Access Program (EAP)
2. Clinical Trials
3. Emergency Pathway
 - Single-patient emergency application (eIND) when other access pathways are not readily available
 - FDA can review/approve the case in matter of hours



COVID-19 convalescent plasma experience

- Is it safe?
 - As safe as standard plasma transfusions
 - No evidence of SARS-CoV-2 transmission in blood transfusions
- Is it effective?
 - It may be too soon to tell
 - Anecdotal experience has been favorable
 - Treatment earlier in the disease appears to be better than later
 - Many variables exist: types and quantities of antibodies in each plasma unit, dosing, timing of transfusion, etc.
 - Rigorous studies aim to answer these questions

Convalescent plasma donation

- COVID-19 convalescent plasma therapy is only possible because of donations by recovered individuals



You may qualify to donate plasma for coronavirus patients if you meet specific convalescent plasma and regular blood donation eligibility requirements:



You are at least 17 years old and weigh 110 lbs. Additional weight requirements apply for donors age 18 or younger.



In good health. You generally feel well, even if you're being treated for a chronic condition. [View blood donation FAQs.](#)



Have a prior, verified diagnosis of COVID-19, but are now symptom free and fully recovered from COVID-19.

Image (left): <https://keyt.com/health/coronavirus/2020/04/24/lost-actor-daniel-dae-kim-donates-plasma-after-recovering-from-covid-19/>

Image (right): <https://www.redcrossblood.org/donate-blood/dlp/plasma-donations-from-recovered-covid-19-patients.html>

Blood donations are always needed

- There are no substitutes for blood components
- A single donation can save up to three lives
- While 38% of the US population is eligible to donate, only 2% actually donates
- Donating blood is safe
- Blood centers use strict safety and infection control measures

“You can still go out and give blood. We’re worried about potential blood shortages in the future. Social distancing does not have to mean social disengagement.”

U.S. Surgeon General

Image: <https://www.redcrossblood.org/donate-blood/dlp/coronavirus--covid-19--and-blood-donation.html>

Summary



COVID-19 convalescent plasma is the passive transfer of antibodies from a recovered individual into a recipient infected with SARS-CoV-2

Most patients receiving convalescent plasma are severely ill, but clinical trials are exploring expanded applications

Benefits include a strong safety profile and encouraging preliminary data, especially while we wait for an effective vaccination or treatment

Transfusion risks and questions about efficacy, optimal dosing, and timing remain

Convalescent plasma donors are critical to providing all patients access to this potential treatment

Thank you



Our Blood Bank's first convalescent plasma product for a COVID-19 patient



Images: <https://www.survivorcorps.com/>

Resources

- FDA response: <https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19>
- How you can help fight this pandemic: <https://www.survivorcorps.com/>
- Clinical trials and the Expanded Access Program: <https://www.uscovidplasma.org/>
- Find your local blood donation site: <http://www.aabb.org/tm/donation/Pages/Blood-Bank-Locator.aspx>



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Your opinion is valuable to us.
Please participate in this brief survey:

<https://www.surveymonkey.com/r/PeoplesLabMay21>

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