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PATIENT GUIDE

KPV *for inflammation*

KPV is a three amino acid fragment of a natural hormone called alpha MSH. It has calmed inflammation in cell and animal studies, though it has not yet been studied in people.

COMPOUND	CLASS	ROUTES	HUMAN DATA	SOURCES
KPV acetate	Tripeptide	Skin, by mouth	None published	34 · PMID linked

§ 01

Overview

KPV is one of the smallest peptides in use anywhere in medicine. It is three amino acids long: lysine, proline and valine. Those three are the tail end of a hormone your own body makes, alpha melanocyte stimulating hormone, usually shortened to alpha MSH, which is produced in the pituitary gland and also in the skin and the gut.[1] [2] Alpha MSH has been studied for decades as one of the body's own brakes on inflammation, and a good deal of that braking activity survives in the last three amino acids by themselves. [2]

Almost all of the work on KPV has been done in the laboratory and in animals. We could find no published study of KPV given to human beings by any route, and neither could the FDA when it reviewed the peptide in 2026.[1] This guide sets out what has been shown, in what species, and what remains unknown, with every source listed at the end.

3	**Amino acids long.** KPV is lysine, proline and valine, written Lys Pro Val. These are positions 11 to 13 of alpha MSH, so papers also call it alpha MSH(11 to 13).[1] [2]
0	**Published studies in people.** The FDA's 2026 review states that it identified no clinical studies and no human exposure data for KPV by any route of administration.[1] Our own search of the registry of clinical trials found none either. [3]
8 of 8	**Rabbit corneas healed.** In rabbits whose corneal surface had been scraped, every one of eight eyes treated with KPV drops had healed over by 60 hours, while none of the placebo treated corneas had.[4] This was an animal study.
8 to 6	**Advisory committee vote.** In July 2026 an FDA advisory committee voted 8 to 6, with one abstention, to recommend that KPV be allowed in pharmacy compounding, against the advice of FDA staff.[5] [1]

§ 02

What KPV is

Alpha MSH is a chain of thirteen amino acids cut from a larger protein called pro opiomelanocortin. It has two separate kinds of activity. One is pigmentation, the darkening of skin that gives the hormone its name. The other is a calming effect on inflammation, which has been shown in cell, animal and tissue studies across many organs.[2] Those two activities sit in

different parts of the molecule. The pigment signal lives in the middle of the chain, and the inflammation signal is carried largely by the final three amino acids. [2] [6]

That split is the reason KPV exists as a separate compound. Researchers wanted the calming effect without the tanning effect, and the three amino acid tail gave them a candidate that is small, cheap to make and chemically simple.[2] [6] It is compounded as KPV acetate, the same peptide prepared as an acetate salt. [1]

Three related compounds are easy to confuse with KPV. KdPT is a different tripeptide, built from a sequence in interleukin 1 beta.[7] Afamelanotide and bremelanotide are larger alpha MSH analogues that have been through human trials and hold approvals of their own. [8] [9] None of their human results apply to KPV, and we do not treat them as evidence for it.

KPV AT A GLANCE	
Name	KPV
Also called	Alpha MSH(11 to 13), Lys Pro Val, lysine proline valine; supplied as KPV acetate[1]
Sequence	Lys Pro Val (three amino acids); molecular weight 342.43 as the free peptide and 402.5 as the acetate salt[1]
Origin	The last three amino acids of alpha MSH, a hormone made in the pituitary gland; KPV itself is made synthetically[1] [2]
Class	Short peptide fragment studied for its effect on inflammation and tissue repair[2] [6]
How it is given	Studied on the skin and by mouth in laboratory and animal work; the federal compounding policy covers preparations for the skin and by mouth[10] [1]

§ 03

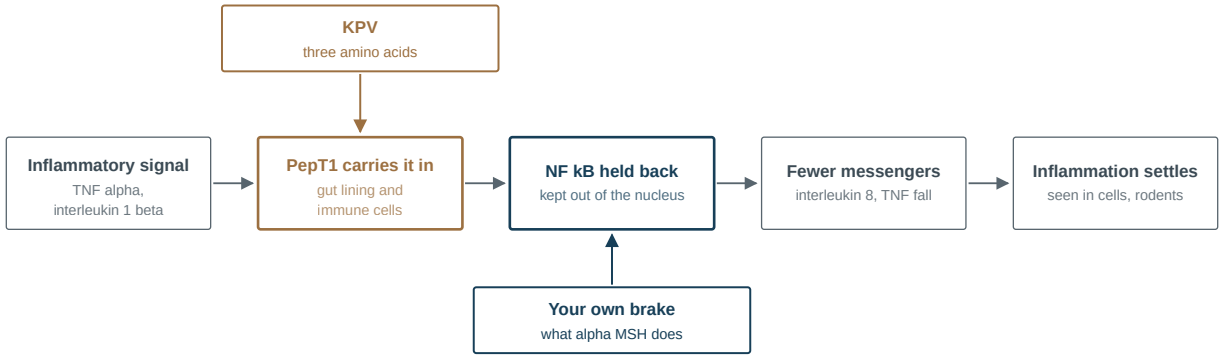
How KPV works

The FDA's 2026 review states that the molecular targets behind the effects of KPV remain unknown.[1] Most of what has been worked out concerns pathways KPV does not appear to use, along with one well supported finding about how it enters cells.

It does not seem to use the melanocortin receptors (cell studies). Alpha MSH acts on a family of five receptors called MC1 to MC5, and its anti inflammatory effects run mainly through MC3, MC4 and MC5, while MC1 drives skin pigmentation.[1] KPV appears not to use them. In mouse macrophages it did not compete with labelled alpha MSH for the MC1 binding sites, and unlike alpha MSH it did not raise cyclic AMP, the usual second messenger of those receptors, in those cells. [11] In human keratinocytes neither alpha MSH nor KPV raised cyclic AMP, and what was seen instead was a rapid rise in calcium inside the cell. [12] Its effect persisted in mice bred with a non functioning MC1 receptor. [13] [14]

It interferes with NF kB signalling (cell studies). NF kB is the switch that turns an inflammatory signal into the production of inflammatory proteins. In mouse macrophages, KPV blocked NF kB from moving into the nucleus and reduced nitric oxide output.[11] In a human airway cell line, it held the NF kB subunit p65RelA out of the nucleus and lowered the release of interleukin 8 and eotaxin. [15] It also appears to blunt the effects of interleukin 1 beta rather than to act on a receptor of its own. [13]

It is carried into cells by a peptide transporter (cell and animal studies). PepT1 is a transporter that normally pulls small peptides out of the small intestine. It is largely absent from the healthy colon, but it appears in the colon of patients with ulcerative colitis and Crohn disease.[16] A 2008 study showed that KPV enters human intestinal cells and human T cells through PepT1, and that nanomolar concentrations were enough to shut down NF kB and MAP kinase signalling and to reduce inflammatory protein release. [17] The same group then showed that KPV given by mouth reduced colitis in two mouse models, and later that its protective effect in mice disappeared when the PepT1 gene was deleted. [17] [18]



KPV appears to work inside the cell rather than on a receptor at its surface. In human cell lines it is carried in by the PepT1 transporter and holds the inflammatory switch NF kB out of the nucleus, which lowers the output of inflammatory messengers.[17] [15] The transporter appears in the colon during inflammatory bowel disease but not in healthy colon.[16] None of this chain has been measured in a living person.

KEY POINT

Because PepT1 appears in inflamed bowel tissue, a small peptide that rides it may concentrate where the inflammation is instead of spreading through the body.[16] [17] This has been demonstrated in cells and in rodents and has not been measured in a person.[1]

§ 04

What the research shows

KPV has been studied since the 1980s, and nearly all of that work is in cells, rodents and rabbits. The results across those studies are consistent, and there are no human studies at all.

What the evidence supports

The anti inflammatory signal has been reproduced by separate groups, in separate models, for more than forty years. Work published in 1984 showed that the tripeptide lowered fever in rabbits given a pyrogen, after both central and peripheral dosing,[19] and in 1989 the same group reported dose related inhibition of ear swelling in mice.[20]

In the bowel, two independent groups reported in 2008 that KPV reduced inflammation in mouse colitis. One gave it in drinking water in two chemically induced models.[17] The other used a chemical model and an immune transfer model, and found that mice with a non functioning MC1 receptor were rescued from death by KPV treatment.[14] Later work in rats delivered KPV into the colon inside a hydrogel and reported less weight loss and recovery of the intestinal lining.[21] Work on repair runs the same way. KPV drops speeded corneal healing in rabbits,[4] a KPV loaded film closed wounds faster in diabetic mice,[22] and a single injection into the abdomen of mice after a head injury left a brain lesion about 24 percent smaller than in control animals, with no difference in neurological testing.[23]

What is not yet known

There is no published study of KPV in people. The FDA's review states that the nomination did not include, and the agency did not identify, any clinical studies or human exposure data for KPV by any route.[1] Our own search of the clinical trials registry found no study with KPV as an intervention.[3] Nothing is therefore known about how much of a dose on the skin or by mouth reaches the tissue it is meant to reach in a person, what dose is reasonable, how long an effect lasts, or what side effects occur and at what rate.[1]

KPV also did not measurably cross donated human skin by simple diffusion, and nothing appeared until the barrier was breached with microneedles or an electric current.[24] The FDA noted that low skin permeability could limit systemic exposure, which would be reassuring for safety, but could equally limit how well a cream reaches the layers below the surface.[1]

WHERE HUMAN TISSUE HAS BEEN INVOLVED No study has given KPV to a person. These are studies in human cells, blood or donated skin

STUDY	HUMAN MATERIAL	WHAT WAS DONE	REPORTED FINDING
Dalmasso et al, 2008[17]	Intestinal cell lines and T cells	Cells stimulated with inflammatory proteins, with or without KPV	Nanomolar KPV blocked NF kB and MAP kinase signalling; uptake occurred through PepT1
Land, 2012[15]	Bronchial airway cell line	Cells stimulated with TNF alpha or a virus	Dose related fall in NF kB activity, interleukin 8 and eotaxin
Pawar et al, 2017[24]	Donated cadaver skin	Permeation measured across skin in the laboratory	No detectable passive permeation; delivery rose with microneedles and iontophoresis
Catania et al, 1998[25]	Whole blood from patients with HIV	Blood stimulated outside the body, with or without peptide	Melanocortins tested, alpha MSH(11 to 13) among them, reduced interleukin 1 and TNF alpha production
Merlin et al, 2001[16]	Colon biopsies	PepT1 measured in diseased and healthy colon	Transporter present in colitis and Crohn disease, absent from normal colon. KPV was not given

SUMMARY

KPV has a long, consistent and biologically sensible preclinical record and no human record. Its effects have been seen in cells, mice, rats and rabbits, while its dose, absorption, benefit and risk in people have never been measured. Some patients may choose it with their physician knowing this, and it is not an established treatment for any condition.

§ 05

How KPV is given

No regulator has set a dose of KPV for a person, and no published human study provides one.[1] The only strengths on record are the 0.1 percent cream and gel described in the compounding nomination and the doses used in animal experiments, labelled below as such. Strength and course length are therefore set by your physician.

On the skin

This is the route the compounding nomination described, as a cream or gel at 0.1 percent, and the federal policy allows pharmacies to prepare KPV acetate for the skin.[1] [10] In donated human skin there was no measurable passive permeation, and delivery appeared only when the barrier was breached by microneedles or iontophoresis.[24] In animals, KPV drops healed rabbit corneas,[4] and a KPV loaded dressing closed wounds faster in diabetic mice.[22] No human study of a KPV cream has been published.[1]

By mouth

The federal policy also covers oral preparations, on the condition that the compounder holds documentation that the particular formulation achieves adequate oral absorption in people.[26] [10] That documentation is the open question, because the FDA found no human pharmacokinetic data for KPV by any route.[1] In animals the oral route has worked. KPV in drinking water reduced colitis in mice,[17] oral KPV lessened weight gain and blood lipid changes in mice fed a high fat diet,[27] and oral delivery inside nanoparticles reduced colitis in mice at far smaller amounts of peptide.[28]

Routes outside the federal policy

KPV is promoted on various websites as an injection and as a nasal spray, which the FDA noted in its review.[1] Neither route is covered by the federal compounding policy for KPV, which names preparations for the skin and by mouth only, so a pharmacy has no federal pathway to prepare an injectable or nasal KPV product at present.[10] There are no human data for those routes either.[1] Animal studies have also used routes that are not forms of treatment at all, giving KPV into the colon as an enema inside a hydrogel or into the abdomen as a single injection.[21][23]

COMPARING THE OPTIONS

	ON THE SKIN	BY MOUTH	INJECTION	NASAL SPRAY
Covered by federal policy	YES[10]	YES, WITH ABSORPTION DOCUMENTATION[10][26]	NO[10]	NO[10]
Human research	Donated skin only[24]	None published[1]	None published[1]	None published[1]
Animal research	Rabbits, mice[4][22]	Mice[17][27]	Mice[13][23]	None found in our search
Published dose in people	None; 0.1 percent was the strength proposed to the FDA[1]	None	None	None

Your physician can talk through whether KPV fits what you are trying to achieve, and which form makes sense if you decide to go ahead.

§ 06

What to expect

No published study has measured what a person feels on KPV, how soon, or for how long, because no published study has given it to a person.[1] Anything you read that promises a timeline is not drawing on human data.

The rabbit corneal study used drops four times a day for four days and read the healing surface every twelve hours.[4] The mouse colitis studies ran about a week and measured weight, tissue under the microscope and inflammatory proteins.[17][14] These are short, local, tissue level effects in animals. If KPV does something comparable in people, it is more likely to show up as a gradual change in one specific symptom than as anything you notice within hours.

DURING A COURSE

- Write down the one or two symptoms you most want to change, and rate them before you start.
- Keep a short note of those ratings while you use it, so we can look at the change together rather than relying on memory.
- Tell us about anything unexpected, including redness, itching or irritation where a cream is applied, or any stomach upset with an oral form.
- Let us know if you start or stop any other medication, supplement or peptide during the course.

§ 07

Safety

There is very little safety information because the studies have not been done. The FDA searched its adverse event system for reports involving KPV through 3 December 2025 and retrieved none, searched the complaint system covering food, supplements and cosmetics from 1 January 2004 to the same date and found no case where KPV had been administered, and found no case reports in the medical literature.[1] The agency was careful to add that an absence of reports does not by itself show that a substance is safe, particularly for compounded products, where adverse events are not routinely reported to it.[1]

Animal safety testing is also absent. The FDA found no acute toxicity studies, no repeat dose toxicity studies, no genotoxicity testing, no reproductive or developmental studies and no cancer studies of KPV or KPV acetate.[1] The animal experiments offer some incidental reassurance, since they gave KPV to mice, rats and rabbits without reporting harm, and the peptide did not produce the pigment darkening that limited interest in alpha MSH itself.[2] None of them was designed as a safety study.

The FDA raised immunogenicity and aggregation as open questions for KPV, as it does for peptides generally, and there are no data to settle them.[1] The peptide is also chemically delicate: under acid, alkaline or oxidative stress it breaks down, mainly into a ring shaped product called lysine proline diketopiperazine.[29] Quality of preparation and storage therefore matter as much as the prescription itself.[1]

TELL YOUR PHYSICIAN BEFORE STARTING IF ANY OF THESE APPLY

- You have an inflammatory or autoimmune condition under treatment, or you take an immune suppressing medicine.
- You have active inflammatory bowel disease, or you are under the care of a gastroenterologist.
- You are pregnant, trying to conceive, or breastfeeding.
- You have a current or past cancer diagnosis, or you are under surveillance for one.
- You have had an allergic reaction to a peptide, a topical medicine or an injected medicine before.
- You compete in a sport that tests for drugs.
- You take any prescription medication, over the counter product or supplement. Please bring the full list.

Long term safety data on KPV in people do not exist, because short term data do not exist either.[1] For that reason it is used for a defined period against a defined goal, with a review of whether it helped and a plan to stop if it did not.

§ 08

Is this right for you

KPV suits a patient with a specific inflammatory or healing problem, who has already worked through the treatments approved for it and is comfortable with early evidence. It is not a sensible first step for a new problem, and it is not a general purpose anti inflammatory. Your consultation is there to work out which description fits you.

Before we begin

- [ ] A review of your medical history, current medications and supplements
- [ ] Relevant vitals, and an examination of the area or the symptom you want treated
- [ ] Baseline bloodwork, so that anything we see later can be compared against a starting point
- [ ] A written note of what you are hoping to change, so we can tell together whether it worked

The conditions KPV is promoted for, including wounds, eczema and psoriasis, have treatments tested in people and shown to work, as the FDA pointed out.[1] Where one of those applies to you, we will start there. Skipping an effective treatment in favour of a peptide with no human data would not serve you, and we would say so.

Reviewing your progress

We will set a defined period, reassess against the starting point you wrote down, and decide together whether to continue. If it has not made a difference, we will stop and look at other options.

> **QUESTIONS TO ASK YOUR PHYSICIAN**
>
> What specifically would you expect this to change for me? How will we measure it, and over what period? What approved treatment exists for my problem, and why are we not using it first? What would make you recommend stopping?

§ 09

Regulatory status

KPV is not approved by the U.S. Food and Drug Administration for any use. There is no FDA approved KPV product, no United States Pharmacopeia standard for the peptide or its acetate salt, and it is not a component of any approved medicine.[1] Since 30 October 2026, a federal enforcement discretion policy from the U.S. Department of Health and Human Services has allowed licensed pharmacies to compound KPV acetate under strict conditions.[26] [10] The conditions that matter most to you are these:

- The preparation is made on a prescription written for you personally, by a state licensed pharmacy or physician.[26]
- KPV is its only active ingredient. Blends that combine it with other peptides fall outside the policy.[26]
- It is prepared only for use on the skin or by mouth. An injectable or nasal KPV preparation is outside the policy, and an oral form requires documentation that the formulation is adequately absorbed in people.[10] [26]
- The ingredient comes from an FDA registered manufacturer that meets federal manufacturing quality standards, with a valid certificate of analysis.[26]
- Serious side effects and quality problems are reported to the FDA and to the state.[26]

The policy is temporary. It applies until the FDA addresses KPV in a final rule on the list of substances pharmacies may use in compounding, and HHS may revisit it before then. It is also not an approval. The policy itself states that compounded drugs are not FDA approved, and that the FDA does not review their safety, effectiveness or quality before they are sold.[26] Prescribing a compounded preparation is lawful and common in American medicine, and it is a decision your physician makes with you. It does mean that no regulator has reviewed this preparation for your use, and you should know that before you consent.

The policy follows a review that ran through 2026. KPV was withdrawn from the FDA's list of bulk substances that may present significant safety risks, last updated in April 2026.[30] The pharmacy that had nominated KPV for compounding later withdrew the nomination; the FDA continued the review on its own initiative and proposed not adding KPV to the list, citing the absence of human data and gaps in the chemical characterisation of the ingredient. [1] In July 2026 its Pharmacy Compounding Advisory Committee considered KPV for wound healing and inflammatory conditions and voted 8 to 6, with one abstention, in favour of adding it. [5] [1] That vote is advisory, and the FDA must still decide and complete a rulemaking process, so KPV is not yet on the final list.

If you compete in sport, please know that KPV is not named on the 2026 World Anti Doping Agency Prohibited List. The list does prohibit at all times, in and out of competition, any substance not addressed elsewhere on it that has no current approval by any government health authority for human therapeutic use, and KPV has no such approval.[31] [1] The federal compounding policy does not change that. If you are subject to drug testing, please tell us before starting and check your own organization's rules.

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

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§ 10

Common questions

Has KPV ever been tested in people?

Not in any published study. The FDA's 2026 review identified no clinical studies and no human exposure data for KPV by any route, and our own search of the clinical trials registry found no registered study of it.[1] [3] Work has used human cells, human blood outside the body and donated human skin. [17] [25] [24]

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

We cannot give you a side effect rate, because no human study has measured one.[1] The FDA found no adverse event reports for KPV in its databases through December 2025 and no case reports in the literature, and it also found no animal toxicity studies, so the safety profile is unknown. [1] With a cream, local redness or irritation where it is applied is the kind of thing to watch for and to tell us about.

How soon will I notice a difference?

The studies did not measure that. Every published study is in cells or animals, and the animal work followed tissue healing and inflammatory markers over days.[4] [17] We set a defined period with you, write down what you want to change, and review it.

How is it given, and for how long?

Under the current federal policy, compounded KPV acetate is prepared for use on the skin or by mouth, and an oral form also requires documentation that it is adequately absorbed in people.[10] [26] No regulator has set a dose or a course length, and no human study offers one, so your physician sets both with you. [1] The only strength on the public record is the 0.1 percent cream or gel described in the compounding nomination. [1]

Can I take it together with other peptides?

The federal policy covers preparations with a single active ingredient, so a blend or stack containing KPV falls outside it.[26] The FDA specifically noted that KPV is promoted online in combination products, and no study has tested any such combination. [1] If you already take other peptides or supplements, please bring the full list so we can review it with you.

Who should not use it?

Anyone who is pregnant, trying to conceive or breastfeeding should not use it, since no reproductive or developmental studies exist.[1] Talk with us first if you have an inflammatory or autoimmune condition under treatment, take an immune suppressing medicine, have active inflammatory bowel disease, have a current or past cancer diagnosis, or have reacted to a peptide or a topical medicine before. Where an approved treatment exists for your condition, we will work through that first. [1]

How will we know if it is working?

Before you start, we write down the one or two symptoms you most want to change and rate them, and we record a starting point including relevant bloodwork. After the defined period we reassess against that record and decide together whether to continue. Keeping your own short notes during the course makes that conversation a great deal more useful than memory alone.

Where is a compounded medicine made, and who oversees it?

Federal law sets out two kinds of compounding. Under section 503A, a state licensed pharmacy or physician prepares a medicine for one patient against that patient's own prescription, and the state board of pharmacy carries the day to day oversight while the FDA inspects for cause and on surveillance.[32] Under section 503B, an outsourcing facility registers with the FDA, works to federal manufacturing quality standards, reports adverse events and the products it makes to the agency, and is inspected by the FDA on a risk based schedule; it may also supply a clinic directly rather than for one named patient. [33] We use both kinds, and which one prepares your medicine depends on the preparation. For KPV the October 2026 federal policy applies to section 503A compounding only. [26]

Is a compounded medicine the same as an FDA approved one?

No, and the difference matters. A compounded preparation is not FDA approved, and the agency does not check its safety, effectiveness or quality before it is sold, which is why an approved product is the first choice whenever one fits your situation.[32] What a prescription from a licensed pharmacy or a registered outsourcing facility does give you is a named prescriber, a facility answerable to a state board or to the FDA, ingredients that meet federal requirements, and a route for reporting a problem. A vial bought online and labelled for research use only has none of that: the FDA treats those products as unapproved new drugs when they are meant for people, and has written to the companies selling them. [34] Please do not use one.

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States that compounded drugs are not FDA approved and that the FDA does not verify their safety, effectiveness or quality before they are marketed; describes state board and FDA oversight. Page current as of 16 September 2025. fda.gov, accessed 4 November 2026.

33 **U.S. Food and Drug Administration.** Compounding laws and policies.
Describes the conditions of sections 503A and 503B, including patient specific prescriptions, current good manufacturing practice requirements for outsourcing facilities, adverse event and product reporting, and risk based inspection. Page current as of 17 December 2024. fda.gov, accessed 4 November 2026.

34 **U.S. Food and Drug Administration.** Warning letter to Royal Peptides LLC.
Center for Drug Evaluation and Research, 24 August 2026. States that products marketed for research use only are intended to be drugs for human use and are unapproved new drugs under section 505(a) of the Federal Food, Drug, and Cosmetic Act. fda.gov, accessed 4 November 2026.

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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. **KPV is not approved by the U.S. Food and Drug Administration for any use; since 30 October 2026 a temporary federal enforcement discretion policy allows licensed pharmacies to compound KPV acetate for use on the skin or by mouth, as a single ingredient on a patient specific prescription, which is not an FDA approval.** Statements in this document have not been evaluated by the FDA, and this therapy is not intended to diagnose, treat, cure or prevent any disease. Individual results vary, and no outcome can be predicted from the studies cited here.

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PATIENT SIGNATURE _____ DATE _____ REVIEWING PHYSICIAN _____

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