



GUIDE

# Understanding Peptides:

A Q&A Guide for  
Payment Processors and  
Online Platforms



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# Introduction

Peptides are gaining popularity in medicine, fitness, and cosmetics, but not all are legal or safe. While some are FDA-approved drugs, many others are experimental substances marketed online for a variety of purposes such as muscle growth, tanning, or anti-aging. These unapproved peptides are often disguised as “research chemicals” but are intended for human use, creating compliance and legal risks.

For payments companies and online platforms, it's critical to recognize the red flags of unapproved peptide sales to protect consumers, stay compliant with regulations, and avoid reputational harm. This Q&A highlights the key issues and risk indicators to watch for.

# 1. What are peptides?

Peptides are **short chains of amino acids**, which are the same molecules that serve as the building blocks for proteins. Some of the body's most important functions require peptides; they act as hormones, signaling molecules, and building blocks depending on their sequence and length. Some peptides such as insulin are naturally produced by the body, whereas others appear in the foods that we eat.

Peptides are also synthesized in labs for research or medical use. Drugs containing peptides are increasingly common because they have the potential to be more precisely targeted while offering fewer side effects. According to [research published by the National Institutes of Health](#), 31 out of 370 drugs approved by the FDA between 2016 and 2023 were peptide-based.

Although proteins are also made of amino acids, the two are different. Peptides comprise short chains of amino acids while proteins are longer and more complex. The two serve different roles in the body.

Learn More

[Biochemistry, Peptide](#) (NIH)

## 2. What are peptides used for, and how are they administered?

Synthetic or processed peptides have many pharmacological applications. They can:

- Replace deficient peptides for essential [cardiovascular, gastrointestinal, or endocrine functions](#)
- [Guide drugs](#) to specific cells to improve uptake
- Help in the research, diagnostic, and testing of new drugs

As a result, peptide-based drugs have the potential to prevent, treat, mitigate, or cure myriad disease conditions. There are FDA-approved peptide-based drugs to address bacterial infections, prostate cancer, HIV infections, cystic fibrosis, diabetes, osteoporosis, and much more. Peptide drugs have garnered intense public interest in recent years with the advent of **semaglutide and other peptide-based GLP-1 drugs**, which are used to treat type 2 diabetes and obesity.

Additionally, peptides are often included in cosmetics and supplements for their potential [health and cosmetic benefits](#) such as skin rejuvenation, joint function, and muscle recovery. However, the efficacy of peptides for these purposes lacks substantial evidence.

Peptides are administered in many different ways. Cosmetics containing peptides are generally administered topically, and supplements containing peptides are generally taken orally. FDA-approved peptide drugs can be administered in any number of ways, including orally, transdermally, intravenously, subcutaneously, nasally, and more.

Learn More

[Peptides for Health Benefits](#) (NIH)

### 3. Who regulates peptides in the U.S.?

In the United States, the **Food and Drug Administration (FDA)** is the **primary regulator of synthetic or processed peptides**. Peptides intended for diagnosis, cure, mitigation, treatment, or prevention of disease are considered drugs under the [Federal Food, Drug, and Cosmetic Act](#) (FDCA). Depending on their source or chemical structure, some peptide products can also be regulated as [biological products](#) under the [Public Health Service Act](#). FDA has issued [warning letters](#) and guidance documents related to synthetic peptides, including enforcement against unapproved sales as well as false and misleading claims.

Even if a drug is not FDA-approved, it falls under the purview of the FDA. For example, some peptide drugs are **compounded**, which means that a pharmacist or physician combines, mixes, or alters various drug ingredients to create a new drug, typically for a specific patient for whom an approved drug may not be appropriate. Although these drugs are not evaluated by FDA prior to marketing, the FDCA authorizes the agency to regulate compounded drugs.

Additionally, the dispensing of drugs falls under the authority of the various state boards of pharmacy in the U.S., which regulate the practice of pharmacy in their jurisdictions, such as licensing, dispensing, compounding, and scope of practice. That means pharmacies and telemedicine companies prescribing and/or dispensing peptide drugs must adhere to the laws of **every jurisdiction** where they are located and where they operate.

#### Learn More

[Emerging Threat: Melanotan, Repackaging, and Online Sales](#)  
(LegitScript)

[World Anti-Doping Agency Prohibited List](#) (WADA)

## 4. Which peptides are unapproved for use, and what are they used for?

The status of a peptide depends on what the peptide is, how it's being used, how it's being marketed, and whether regulatory approval exists. LegitScript sees many synthetic peptides being sold online as "research chemicals" but are actually intended for human consumption. These products are unapproved because they are experimental peptides that **have not undergone proper FDA vetting and approval**, which includes clinical trials for safety or efficacy as well as the study of proper dosing. These products are not necessarily illegal to possess in research labs for legitimate professional study, but they are illegal to market or sell for human consumption without FDA approval.

The types of unapproved peptides LegitScript typically sees marketed online are experimental ones that are used for one of the following purposes:

- Bodybuilding, muscle growth, and sports performance
- Weight loss
- Tanning
- Sexual enhancement
- Anti-aging and recovery

LegitScript also sees illegally compounded versions of approved drugs, such as semaglutide. Furthermore, FDA declared a number of peptides (including BPC-157, CJC-1295, and Melanotan II) to be impermissible for compounding due to [safety concerns](#).

### Learn More

[Drug Compounding](#) (congress.gov)

[Telemedicine Compliance Guide](#) (LegitScript)

State Boards of Pharmacy Examples: [California](#), [New York](#), and [Texas](#)

## 5. What red flags should payments companies and online platforms watch out for?

Since there are many legitimate laboratories synthesizing and studying peptides, it's important to **recognize the risk factors** for merchants engaged in the illegal sale of unapproved peptides.

Here are some of the most common red flags:

### “Not for Human Consumption”

In LegitScript's experience, merchants offering research chemicals that prominently state that their products are not intended for human consumption are, perhaps counterintuitively, more likely to be engaged in unapproved peptides sales. These sellers may post this language in the hopes that it provides legal protection.

### Insufficient Safeguards

Check the merchant's website or seller page to see what safeguards are in place to prevent the sale of peptides to individuals for personal use. For example, does the merchant require buyers to provide proof that they are professional researchers? Legitimate sellers will often require a buyer to first contact them for a quote rather than permitting the seller to complete a purchase online with no direct contact.

### Known Problematic Peptides

Know the names of peptides most commonly sold for unapproved human consumption and then check a merchant's catalog to see if it mainly comprises these products. It's also important to know how these products are misused so that you can search for language that may indicate its intended use.



Examples include:

- **Melanotan 2** (tanning)
- **Ipamorelin** (muscle growth, healing/recovery, and more)
- **Tesamorelin** (weight loss)
- **CJC-1295** (performance-enhancing)
- **BPC-157** (injury recovery, anti-aging)
- **Thymosin beta-4 / TB-500** (muscle growth, injury recovery)
- **GHRPs** (growth hormone releasing peptides)

Additionally, carefully scrutinize any website offering in-demand peptides, such as **semaglutide** and **tirzepatide**, which are used for weight management and type 2 diabetes. While there are legitimate, approved products available for sale, some merchants may be selling these peptides illegally.

## Improper Rx Drug Sales

Of course, any merchant selling prescription peptide drugs needs to adhere to the fundamental principles by which most countries worldwide adhere. If a merchant selling prescription drugs is violating any one of the principles below, with rare exceptions, it is operating unlawfully.

1. **Licensure.** Pharmacies need to be licensed or registered where they offer to ship drugs.
2. **Prescriptions.** Selling prescription drugs without requiring a valid prescription is unlawful.
3. **Shipping.** Drugs must be approved for sale in the jurisdictions where they are shipped.

### Learn More

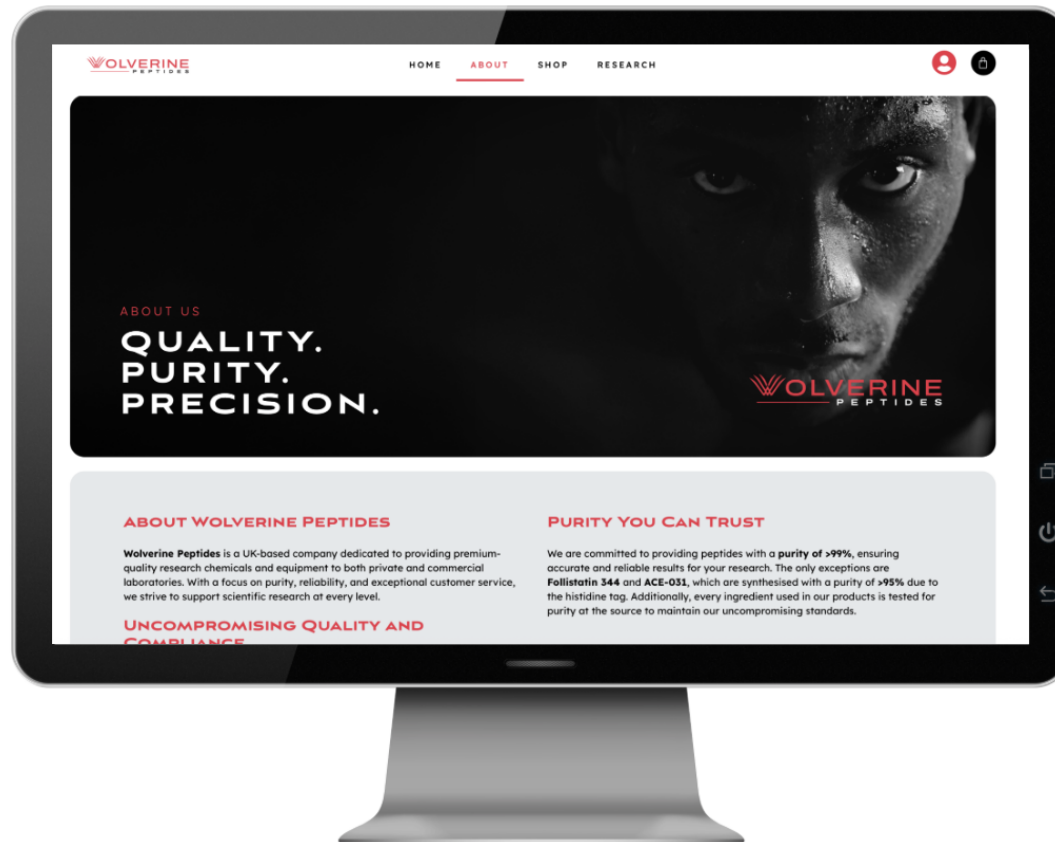
[Internet Pharmacy Guide for Payments Companies](#) (LegitScript)

## 6. What do problematic merchant websites or seller listings look like?

Because the uses of unapproved peptides are so varied, the marketing can look different from seller to seller depending on their niche. As far as the product catalog, however, the majority of unapproved peptides are usually offered in vials for injection.

Merchants who offer a large, broad catalog of unapproved peptides often favor a clinical look with branding reminiscent of a laboratory. Be sure to review the red flags in section 5 to distinguish them from legitimate merchants offering research chemicals.

Merchants selling unapproved peptides for muscle growth may use language, design, and visuals meant to appeal to bodybuilders. This can include images of bodybuilders, classically masculine branding, and terms like “wolverine,” “adamantium,” and “swole.”



Some merchants specialize in a particular peptide, such as ones offering melanotan 2 for tanning. These merchants often depict bronzed models and may feature before and after photos of skin tone.



# LegitScript's Risk Management and Certification Solutions

At LegitScript, our mission is to make the internet and payment ecosystems safer and more transparent for businesses and internet users. Merchants offering experimental peptides for human consumption face risk of legal action, and businesses that facilitate these transactions may face fines, regulatory scrutiny, and reputational harm.

## Risk Solutions

LegitScript's [Merchant Risk Solutions](#) helps payments companies more confidently assess merchant risk of every type, including products containing peptides, to better avoid fines and expand growth opportunities. LegitScript's [Platform Risk Solutions](#) helps internet platforms more effectively and efficiently vet sellers and advertisers marketing a variety of products, such as ones containing peptides.

## Certification

Healthcare is among the most complex industries, with strict rules to ensure consumer safety. Pharmacies, telemedicine companies, and med spas offering prescription drugs through card-not-present transactions are categorized as high-risk merchants by card networks.

LegitScript's [Healthcare Merchant Certification](#) provides a recognized stamp of approval for businesses that facilitate the sale of pharmaceuticals, including approved peptide drugs. Our certification process helps online pharmacies and other healthcare merchants meet the required compliance and best practice standards, and enables them to promote their business and process payments.

## Take the Next Step

Want to find out how LegitScript can help your business reduce regulatory risk, avoid fines, and keep your customers safe? Reach out to us to learn how our risk solutions and policy expertise can help you grow your business with confidence.

### About LegitScript

At LegitScript, we are committed to making the internet and payment ecosystems safer and more transparent. LegitScript experts proactively track high-risk trends to help keep our partners in compliance and reduce the risk of regulatory scrutiny and expensive card network fines. Our best-in-class risk management solutions identify and flag high-risk merchants, seller listings, and ads to help our clients quickly and accurately remove problematic content from their platforms and portfolios.

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