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Integrative Perspectives on Relapse in Addiction: A Comparative Analysis of Contemporary Clinical Models and Ayurvedic Interventions

Dr. Darsh Kishorbhai Pipavat[1], Dr. Prasad Devidas Namewar*[2]

[1]PG Scholar, Department of Agadtantra, Bharati Vidyapeeth (Deemed to be university), College of Ayurved, Pune - 411043, Maharashtra, India

[2*]Dr. Prasad Devidas Namewar, Associate Professor, Department of Agadtantra, Bharati Vidyapeeth (Deemed to be university), College of Ayurved, Pune - 411043, Maharashtra, India

***Corresponding Author:**

Dr. Prasad Devidas Namewar

Department of Agadtantra, Bharati Vidyapeeth (Deemed to be university), College of Ayurved, Pune - 411043, Maharashtra, India

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ABSTRACT

Relapse is generally defined as the return to substance use after a period of abstinence, effectively interrupting progress in recovery. In addiction medicine, relapse is viewed as a dynamic, ongoing process rather than a single event. In practice, it may begin with an *emotional relapse* (growing stress or cravings), followed by a *mental relapse* (internal struggle), and culminate in a *physical relapse* when use resumes. Relapse is *common* in addiction: for example, the National Institute on Drug Abuse (NIDA) reports relapse rates for treated substance disorders are comparable to those for chronic illnesses like hypertension or asthma. Studies worldwide show that 40–60% of treated patients relapse after detoxification and rehabilitation, and even 80–95% relapse after tobacco or alcohol cessation attempts without ongoing support. Behavioral addictions (e.g. gambling, internet use) likewise exhibit high relapse rates, as they share similar neurological pathways of craving and reinforcement. Indeed, relapse has been called "the biggest problem" for recovering addicts. Understanding relapse its definition, patterns, and frequency is therefore crucial in all domains of addiction (substance and behavioral.

1. AIM AND OBJECTIVE

The primary aim of this paper is to explore relapse in addiction through both modern clinical and classical Ayurvedic perspectives. Specific objectives include:

clarifying the concept of relapse in contemporary addiction treatment; (2) reviewing the prevalence and determinants of relapse in substance (drug and alcohol) and behavioral addictions; (3) analyzing the role of relapse within the cycle of addiction, withdrawal, and recovery; (4) presenting the Ayurvedic conceptualization of relapse-related phenomena (e.g. *Vikshay*, *Panapkrama*), referencing classical texts; and (5) comparing modern relapse prevention/management strategies with Ayurvedic de-addiction approaches. By integrating these perspectives, we aim to highlight complementary insights and support for recovery.

2. MATERIALS (SOURCES OF LITERATURE)

This is an integrative review using both modern and classical sources. Modern literature was sourced via PubMed, PMC, Google Scholar, and addiction medicine databases, focusing on peer-reviewed journals in addiction, psychiatry, and public health. Key modern references include clinical reviews, epidemiological studies (e.g. Substance Abuse Treatment Prevention and Policy, Journal of Mental Health and Human Behaviour) and authoritative websites (NIDA, StatPearls). For the Ayurvedic perspective, we consulted classical Sanskrit texts (Charaka Samhita, Sushruta Samhita, Ashtanga Hridayam) via translations and compendia, as well as contemporary Ayurvedic reviews and case reports. The review also included integrative frameworks that bridge Ayurveda and modern science. Notably, Ayurveda papers often emphasize *Pragyaaparadha* (intellectual error), *Rajoguna/Tamoguna* imbalances, and mental therapies (e.g. *Satvavajaya*) in addiction. In sum, sources ranged from classical verses to modern clinical research to ensure a comprehensive analysis

3. METHODS

This review synthesizes evidence from both contemporary research and Ayurvedic doctrine. We performed a qualitative analysis of published materials (as described above) to contrast modern relapse theory with Ayurvedic concepts. The discussion is structured in three parts:

- **Modern clinical perspective on relapse:** Examining current definitions, epidemiology, neurobiology, and psychosocial models of relapse in addiction medicine.
- **Relapse in addiction/de-addiction cycles:** Analyzing how relapse fits into the cycle of substance use, withdrawal, craving, and recovery. We emphasize relapse prevention models (e.g. Marlatt's RP model) and the role of triggers, cues, and coping skills.
- **Ayurvedic perspective on relapse:** Presenting classical Ayurvedic explanations for repetitive addictive use (e.g. *Panapkrama*, *Vikshay*, Dosha imbalances) with textual references, and describing traditional interventions (e.g. *Panchakarma*, *Satvavajaya*, *Rasayana*). This includes citing Charaka, Sushruta, and Ashtanga Hridaya, as well as recent Ayurvedic research.

Additionally, we incorporated illustrative materials to clarify concepts. For instance,

Aspect	Modern Perspective	Ayurvedic Perspective
Conceptual Model	Cognitive–behavioral dynamic model: relapse is a transitional, multi-stage process (Marlatt & Gordon, 1985); emphasizes immediate and covert triggers	Dosha centered imbalance: addiction arises from Vata/Kapha disturbances and Pragyaaparadha (intellectual error) as per classical texts
Primary Causes	High-risk situations (negative affect, social pressure), poor coping skills, stress, environmental cues (immediate determinants)	Dosha vitiation (especially Vata and Kapha), depletion of ojas, errors of intellect (Pragyaaparadha)
Prevention Strategies	Cognitive-behavioral therapy (RP model), medication assisted treatment, social support/12-step, mindfulness based relapse prevention)	Satvavajaya Chikitsa (mind- strengthening), Panchakarma detox, Padanshika Krama (gradual tapering), Rasayana rejuvenation
Treatment Approach	Acute detoxification plus long-term RP with monitoring, contingency management, and stepped- care adjustments	Holistic regimen over weeks/months: sequential detox (Vamana, Virechana), lifestyle discipline (Sadvritta), spiritual remedies (Daivavyapashraya)
Disease View	Chronic, relapsing disorder akin to diabetes or asthma; managed rather than "cured"	Disharmony of body mind doshas; addiction viewed as disruption of agni (digestive/metabolic fire) and depletion of ojas (vital essence)

Figure 1 below (the Jellinek addiction-recovery curve) visualizes the cyclical nature of addiction and relapse as understood in modern recovery programs. We also developed a comparative framework (Table 1) summarizing key differences between modern and Ayurvedic views on relapse.

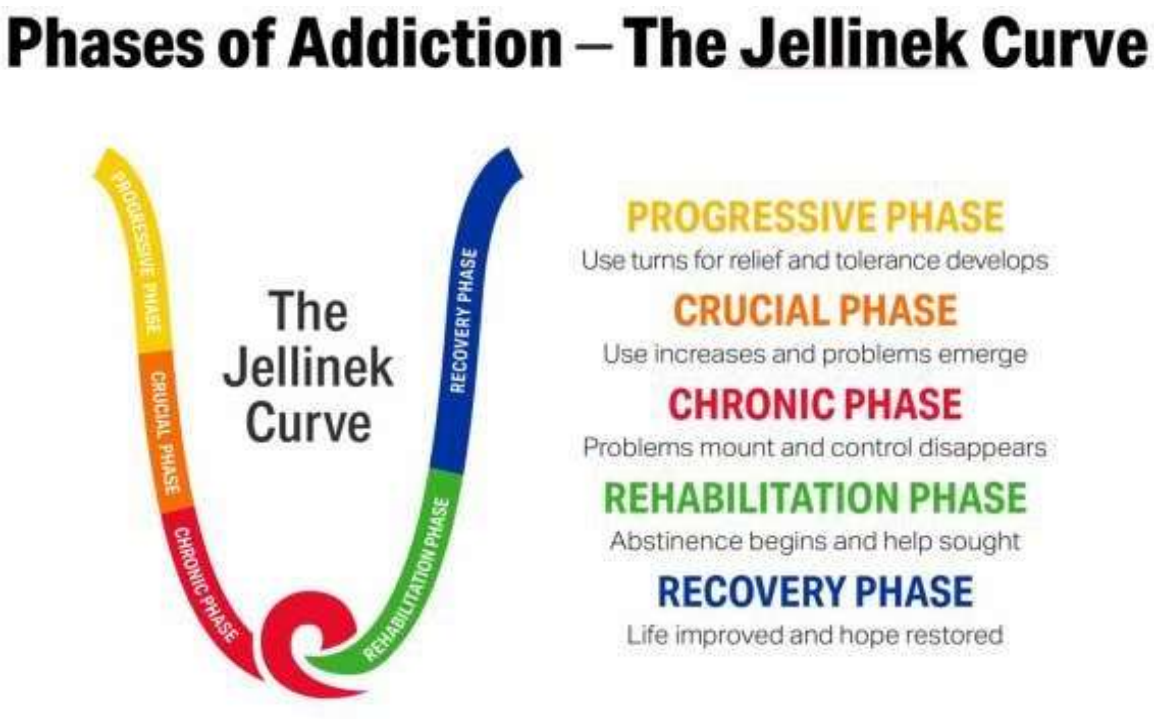

Figure 1: Jellinek's curve of alcoholism. The graph shows cycles of substance use and progressive addiction (left side), and stages of rehabilitation and potential relapse risk (right side). This conceptual aid illustrates how addiction advances then, after treatment, may enter lapses or relapses before sustained recovery (modified from Jellinek's model).

Table 1: Comparative Framework of Relapse in Modern vs Ayurvedic Perspectives

Aspect	Modern Perspective	Ayurvedic Perspective
Definition	"A setback in behavior change a return to substance use after abstinence"; conceptualized as any use meeting prior consumption levels	*Panapkrama*: compulsive return to substance after abstinence; *Vikshay*: disease of repeated excessive consumption described by Charaka

Relapse in the Addiction Cycle

Relapse is embedded within the cycle of addiction. A typical model (Figure 1) begins with initial use, progresses to regular use, then to tolerance and dependence. Without intervention, uncontrolled use leads to negative consequences and an eventual attempt to quit. After detoxification or self- initiated cessation, individuals enter a vulnerable recovery phase, where cravings and withdrawal may persist for weeks or months. If not adequately supported, an individual may experience a lapse. Left unchecked (through coping skills failures or high-risk situations), this can escalate to a full relapse (return to prior consumption levels).

To prevent progression through these stages, modern treatment uses relapse prevention (RP) strategies. Marlatt's cognitive-behavioral RP model (now 30+ years old) conceptualizes relapse as occurring after high-risk situations (negative affect, interpersonal conflict, withdrawal). Advanced models view relapse as non-linear and dynamic, with multiple interacting influences. Key prevention approaches include cognitive therapy (identifying and coping with triggers), social support (peer groups, family), and, where available, maintenance medications (e.g. naltrexone, buprenorphine) that reduce craving. These interventions address risk factors identified above: for example, coping skills training for stress, contingency management for environmental triggers, and medications for craving. Recent trends include mindfulness-based relapse prevention as an adjunct therapy.

In practice, treatment protocols often involve multidisciplinary relapse prevention: psychology (CBT, counselling), pharmacotherapy, lifestyle support, and community resources. For instance, Recovery-oriented systems of care integrate medical treatment with social support networks to promote resilience. A summarized list of modern relapse prevention elements includes:

- Cognitive-behavioral therapy (CBT) focusing on skills to handle cravings and high-risk thoughts.
- Pharmacological aids, such as anti-craving drugs (methadone, buprenorphine, disulfiram, etc.) in substance dependence.
- Social support/12-step programs (AA, NA) provide peer reinforcement and accountability.
- Lifestyle modification, including managing stress, exercise, nutrition, and sleep.
- Monitoring and follow-up: regular check-ins to catch early relapse signs (urinalysis, therapy sessions).

By addressing multiple domains, modern protocols aim to make relapse less likely and, if it does occur, shorter and less severe.

Ayurvedic Perspective on Relapse

Classical Ayurveda does not use the Western term "relapse," but it describes phenomena corresponding to withdrawal and recurrence of addiction. The condition of alcoholism is termed *Madatyaya*. Ayurveda identifies stages of intoxication (*Mada*) and alcoholism (*Madatyaya*, *Murcha*, *Avapeedaka*, etc.), and notes that excessive use depletes *ojas* (vital essence) and disrupts *agni* (digestive fire). After a period of abstinence, the insistent craving for alcohol is recognized as *Panapkrama*, literally "return step". Panapkrama is essentially withdrawal syndrome: the body and mind *"demand alcohol continuously"* in its absence.

If drinking resumes heavily after abstinence, Ayurveda calls the condition *Vikshay* or *Madatyaya Upadrava*. Charaka explicitly notes that **"**one who, after abstaining, consumes liquor in excess, suffers from the disease called Vikshay".Thus, Vikshay corresponds to chronic alcoholism with relapse. Charaka's texts recommend treating Vikshay like Vataja Madatyaya, using therapies that pacify Vata and detoxify the body. Acharyas prescribe Satvavajaya (psychological therapy), Yoga, Shamana (palliative medicines), and Shodhana (cleansing) to restore balance. For example, Chauhan et al. report using Rasayana medicines, Panchakarma, and Yoga with significant benefit in Vikshay.

Ayurveda also emphasizes underlying causes of addictive relapse: *Pragyaaparadha* (errors of intellect, meaning poor judgment or ethical lapses) and predominance of *Rajas* and *Tamas* (agitation and inertia) in the mind. For instance, one review notes that *Pragyaaparadha* is considered a key etiological factor in all addictions. In practice, prevention of relapse involves strengthening one's mental resilience and lifestyle. Traditional measures include:

- Satvavajaya Chikitsa: strengthening the mind and intellect through counseling, meditation, and moral discipline.
- Daivavyapashraya (spiritual remedies): Mantra, prayer, or Ayurvedic tonics to bolster willpower (e.g. *Brahmi*, *Ashwagandha*, *Shankhpushpi*).
- Panchakarma (detox): Sequential therapies like *Vamana* (emesis), *Virechana* (purgation), and *Basti* (medicated enema) to eliminate toxins (*ama*) created by chronic substance use. This aligns with "timely elimination of toxins" as crucial for managing addiction.
- Rasayana therapy: Rejuvenative herbs and formulations to replenish *ojas* and vitality.
- Anulomana and Padanshika Krama: Gradual dietary adjustments and tapering protocols (such as *druti vibhajana* slowly reducing dose) to wean off substances instead of abrupt cessation. Charaka specifically prescribes *Padanshika Krama* (stepwise abstinence) for strong detoxification of "hazardous" substances.

Ayurvedic classics also classify subtypes of alcoholism (*Vataja, Pittaja, Kaphaja Madatyaya*) with corresponding features and treatments. For example, *Kaphaja Madatyaya* is pacified by light diets and exercise, while *Vataja t*ype (which overlaps with *Vikshay*) requires nourishment and grounding therapies. Though ancient texts lack the modern term "screen addiction" or "gambling," the underlying principles apply: addiction is seen as an imbalance in mind-body constitution requiring systemic restoration.

Ayurvedic experts have described frameworks similar to relapse models. For instance, Ibrahim et al. present a table of addiction causes and therapies drawing on Triguna theory and dosha imbalances Solanki et al. emphasize the chronic nature of nicotine addiction and recommend ongoing lifestyle measures (Yoga, family support) to prevent relapse. These classical and modern Ayurveda sources align in recognizing that repeated use despite harm, withdrawal craving, and mental-physical

imbalance are central to addiction (*Madatyaya/Vikshay*).

4. DISCUSSION

Literature Summary on Relapse

Extensive research has documented relapse as a pervasive challenge in addiction recovery. A number of reviews and studies have reached consistent conclusions: first, relapse is normal and often expected in severe addictions. NIDA and other agencies explicitly compare relapse to flare-ups in chronic diseases. Second, relapse rates are high: systematic reviews have found wide-ranging rates (3–90%) depending on population and follow-up length, but typically around half of treated patients return to use within a year. Third, relapse is multifactorial. Predictors identified across studies include biological (e.g. genetic susceptibility), psychological (e.g. coping deficits, comorbid mental disorders), and social factors (peer use, family discord). No single factor dominates; rather, relapse often involves interactions (e.g. a stressed individual in a tempting environment).

Notably, newer research refines the concept of relapse. Modern work conceptualizes relapse as a process or trajectory. Neuroimaging and longitudinal studies highlight that lapses often occur shortly after triggers, but cognitive interventions can re-stabilize recovery (i.e. a lapse does not inevitably become a full relapse). There is growing interest in neurobiological "relapse markers" (e.g. cue-reactivity in brain scans), though practical relapse prediction remains limited. The focus has shifted towards proactive relapse prevention and recovery capital (strengthening resources to support long-term abstinence).

Few studies directly address relapse in behavioral addictions, but theory and limited data suggest parallels. Gambling relapse, for example, has similar triggers (e.g. stress, return to gambling venues) and high rates unless cognitive therapy is sustained. Internet/gaming addiction interventions are beginning to apply RP techniques. In summary, the literature emphasizes that treating addiction must include relapse management – not just acute detox, but long-term plans to handle setbacks.

Modern De-Addiction Protocols and Relapse

In practice today, modern de-addiction programs incorporate relapse prevention (RP) as a core component. Most treatment guidelines (e.g. NIDA, WHO) advise that services be ongoing, combining medication (for SUDs) with behavioral support and aftercare. For example, opioid addiction is often managed with maintenance therapy (methadone, buprenorphine), which itself is a relapse- prevention measure reducing illicit use. Psychosocially, cognitive- behavioral therapy, motivational interviewing, and 12-step facilitation are widely used to strengthen coping skills. The evidence base for RP is solid: meta-analyses show that intensive CBT-based RP programs reduce relapse risk compared to standard care.

Key elements in modern protocols include:

- Individual therapy with RP focus: Identifying personal high-risk situations (negative emotions, interpersonal conflicts) and training in coping responses (cognitive restructuring, stimulus control). Marlatt's RP model underlies many of these interventions Group therapy / peer support: Group programs (e.g. 12-step groups) provide social accountability and shared strategies to resist relapse. The concept of a "sober network" is emphasized.
- Medication-assisted treatment (MAT): For alcohol and opioid dependence, FDA-approved drugs (acamprosate, naltrexone, disulfiram, buprenorphine, etc.) help reduce craving and withdrawal, thereby lowering relapse probability.
- Family involvement: Counseling family and involving them in support (such as Al-Anon, CRAFT programs) is now common, since family dynamics strongly influence relapse.
- Lifestyle and Wellness Plans: Many programs incorporate exercise, stress reduction, nutrition, and sleep hygiene to enhance resilience. Stress management (meditation, breathing exercises) is often taught to prevent stress-induced relapse.
- Technology-assisted monitoring: Some recent programs use mobile apps, digital reminders, or wearable monitors to alert when high-risk triggers are encountered and connect to support.

Despite these efforts, relapse still occurs frequently. Treatment outcomes are rarely presented as "cure" but rather as phases of recovery. Clinicians adopt a non-punitive attitude: a lapse is not seen as failure but as an opportunity to reassess and intensify care. For example, if a patient slips, the protocol may involve "stepping up" therapy level or restarting detox. In sum, modern de-addiction sees relapse prevention as an ongoing process that extends well beyond the initial treatment episode.

Ayurveda's Role in Relapse and Recovery

Ayurveda offers a holistic approach to relapse, emphasizing mind-body balance and multi-dimensional therapy. Whereas modern relapse prevention focuses on external triggers and coping skills, Ayurveda targets internal strengths and systemic detoxification. Several avenues by which Ayurveda can support recovery from relapse include:

- Mental fortification (Satvavajaya Chikitsa): This is Ayurveda's tradition of psychological therapy. It uses counseling, meditation, and willpower training to overcome *Ajnyaparadha* (errors of self-control) and strengthen *Satva* (mind). For instance, classic guidance advises developing self- discipline and detachment from sensory indulgence to break habits. Family and community support (Guru, parents) are also explicitly emphasized to help prevent repeated *Pragyaaparadha*. In modern terms, this parallels cognitive and social strategies to improve motivation and coping.
- Therapeutic detox (Shodhana and Rasayana): Ayurveda prescribes a sequence of cleanses (*Virechana*, *Basti* etc.) tailored to the individual's dosha imbalance. These therapies remove accumulated toxins (*ama*) from long-term substance abuse. Shodhana is often followed by *Rasayana* (rejuvenation) with herbs like *Guduchi*, *Brahmi*, or *Shankhpushpi* to restore vitality (*Ojas*) and repair neural damage. Case reports show that Ayurveda regimens (Panchakarma + Rasayana + Yoga) can alleviate withdrawal symptoms and improve general health.
- Gradual dose reduction (Padanshika Krama): Ayurveda traditionally avoids abrupt shock to the system. *Padanshika Krama* is a tapering method of gradually reducing the addictive substance or replacing it with milder alternatives. This reduces stress on the body, reflecting a pharmacological approach to mitigate withdrawal, akin to using nicotine patches or methadone tapering in modern practice.
- Gradual dose addition - **दुग्धसेवन - पादांशिक कमः न चेन्मद्यविधिं मुक्त्वा क्षीरमस्य प्रयोजयेत्** | use of milk has to be recommended. As per experience of Vaidya other dravya like ghee etc can be the wholesome substance of choice. It is an important Ayurvedic principle mentioned in Charaka Chikitsa 24/195*, which advises reducing alcohol consumption gradually while substituting it with wholesome substances like milk (***दुग्धसेवन***). If a person cannot quit alcohol abruptly, milk should be introduced in increasing quantities to counteract the harmful effects of alcohol.

As per Vaidya's clinical experience, other nourishing substances like ghee (**घृत(**, manda (rice gruel), or yavagu (light porridge) can also be used as substitutes based on the patient's condition. This method ensures a smooth transition, minimizes withdrawal effects, and helps restore balance (**धातुसाम्य**) in the body. Milk, being **सात्म्य** (compatible) and **बृहण** (nourishing), is especially recommended for its calming and restorative properties.

- Balancing doshas and Prakrti: The Ayurvedic view assigns addictive behaviors to an underlying dosha imbalance (often *Vata* and *Kapha* dominance in alcoholism). Thus treatment also includes dosha-pacifying diets, herbs, and routines. For example, in alcohol de-addiction, herbs like *Punarnava*, *Haritaki*, and *Ashwagandha* are used to calm Vata and replenish nerves. Similarly, exercise and heat therapies are applied to manage Kapha-related sluggishness and craving. These strategies aim to restore the body's internal milieu, reducing the *"field"* in which relapse cravings grow.
- Spiritual and community dimensions: Ayurveda sees recovery as encompassing *Dharma* (duty/righteousness) and *Sattva* (purity). Thus, spiritual practices (japa, puja) and community involvement are recommended. Contemporary Ayurveda clinics often incorporate yoga, pranayama, and meditation to promote *Santosa* (contentment) and *Atma-shakti* (inner strength). This reflects evidence that mindfulness and breathing exercises can reduce relapse risk.
- **हर्षणी चिकित्सा** (Recreational therapy) - It can be considered as Recreational therapy in the form of listening music, involvement in amusement/entertaining functions.

The concept of **हर्षणी चिकित्सा (**Harshani Chikitsa) is described in *Charaka Chikitsa 24/191-194* as a therapeutic approach aimed at uplifting the mind and body through joyful and engaging activities. This form of treatment aligns with modern recreational therapy, emphasizing mental well-being alongside physical health. According to Ayurveda, engaging in pleasurable activities such as listening to soothing music (**स्वरसंगीत)**, participating in entertaining events (**क्रीडा एवं मनोरंजन)**, and surrounding oneself with positive company helps alleviate stress, anxiety, and depressive disorders. Such practices stimulate **प्रसन्नता (**cheerfulness), balance **मनोदोष (**mental imbalances), and promote overall **स्वास्थ्य (**health).

Charaka emphasizes that a happy mind accelerates healing, making **हर्षणी चिकित्सा** an integral part of **सात्म्य चिकित्सा (**wholesome therapy). Modern research also supports the role of recreational activities in reducing cortisol levels and enhancing endorphin release. Thus, this ancient Ayurvedic concept holds significant relevance in contemporary holistic medicine, offering a non-pharmacological approach to mental and emotional well-being.

Incorporating these, Ayurvedic treatment protocols for addiction often last weeks to months, reflecting its chronic disease approach. Importantly, Ayurveda underscores continuity of care: even after acute treatment, lifestyle

measures (Sadvritta proper daily routine, diet, and mental hygiene) must continue to prevent relapse.

In practice, integrative approaches are emerging. For example, Ayurvedic rehabilitation centers use counseling (Satvavajaya), group therapy (analogous to AA groups), along with Panchakarma regimens. Some studies (e.g. by Sorathiya et al.) propose frameworks blending cognitive-behavioral relapse prevention with Ayurvedic emphasis on *Pragya* and *Ojas*. While controlled trials of Ayurveda in relapse prevention are limited, case series suggest benefit and patient satisfaction. At minimum, Ayurveda highlights strengthening the individual's constitution (via diet, herbs, routines) as a means to reduce relapse vulnerability – a point increasingly recognized in holistic addiction medicine.

5. CONCLUSION

Relapse is a central challenge in treating addictions. Modern research shows that for both substance and behavioral addictions, relapse is common, multifactorial, and must be addressed with long-term, multifaceted care. Contemporary protocols focus on cognitive-behavioral therapy, social support, and medical aids to prevent or mitigate relapse, viewing addiction as a chronic condition. Classical Ayurveda, while framed differently, also recognizes the chronic and recurrent nature of excessive substance use. It conceptualizes relapse phenomena (withdrawal, craving, and return to use) as *Panapkrama* and *Vikshay*, prescribing mind-body therapies (*Satvavajaya*, *Panchakarma*, *Rasayana*) to restore balance.

Understanding relapse from both perspectives enriches de-addiction strategies. The modern view reminds us to treat addiction like other chronic diseases and to maintain vigilance after initial success. The Ayurvedic view adds emphasis on strengthening intrinsic resilience (ojas, sattva) and detoxifying accumulated "impurities," suggesting that recovery is not merely abstaining but rebalancing the whole person. Integrating insights—such as routine meditation, gradual tapering of substances, and supportive community (Ayurvedic)* with evidence-based relapse prevention—may improve outcomes. In sum, a comprehensive approach that acknowledges relapse risk and proactively addresses it through both psychosocial and traditional means is essential. Recognizing relapse not as failure but as part of the recovery journey enables sustained support and encourages therapeutic innovations from all healing traditions

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