ALKOL ve MADDE KULLANIM BOZUKLUĞU

68. BÖLÜM

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GİRİŞ

Ergenlik dönemi fiziksel, bilişsel ve duygusal işlevlerdeki değişimlerin yanı sıra davranışlarda, kişilik özelliklerinde ve sosyal rollerde de değişimlerin meydana geldiği bir geçiş dönemidir. Ebeveyn onayının etkisi azalır ve akran onayının etkisi önem kazanır. Ergenin özgürleşme arzusu ve ailenin koyduğu kurallar arasında çatışmalar olabilir. Akranlarla zaman geçirme isteğinde artma ve aile ile zaman geçirme arzusunda azalma olur (1,2). Ergenlik dönemi aynı zamanda normal beyin gelişimi açısından da oldukça önemli değişimlerin meydana geldiği bir dönemdir. Ergenin beyin bölgeleri arasındaki gelişimsel uyumsuzluk da ödül ve kontrol mekanizmaları arasında bir dengesizlik doğmasına neden olabilmektedir. Bu durum da ergenin risk alma ve yenilik arama davranışlarına bir zemin hazırlamaktadır (3). Ergenlik döneminde yaşanan tüm bu değişimler de ergenin alkol, nikotin ve yasa dışı madde denemesi gibi riskli davranışlarının ortaya çıkmasına neden olabilmektedir.

Madde kullanımı sıklıkla ergenlik döneminde başlamaktadır. Madde kullanımının erken olması, madde kullanım bozukluğu gelişme riskini de arttırmaktadır (4). On beş yaşından önce alkol almaya başlayan gençlerin, 21 yaşına kadar, almayanlara göre yaşam boyu alkol bağımlılığı oranının, dört ila altı kat daha fazla olduğu bilinmektedir (5). Ergenlik döneminde madde kullanımının, başka bir maddeyi daha kullanma olasılığını arttırdığı, şiddet içeren davranışların ortaya çıkmasına neden olabildiği, psikiyatrik bozukluk yaşama riskini artırdığı, bulaşıcı hastalıklar açısından riski artırdığı, bilişsel gelişimde bozulmaya neden olabildiği, okul ve iş yaşantısında sıkıntılara neden olabildiği, aile ilişkilerini etkilediği ve tıbbî sorunlara neden olabildiği belirtilmektedir (6). Bu nedenlerle de ergenlik dönemi madde kullanımı ve kullanım bozukluklarının anlaşılması oldukça önem kazanmaktadır.

EPİDEMİYOLOJİ

Ergenlik dönemi, madde kullanmaya başlama açısından oldukça hassas bir dönemdir ve madde kullanımına sıklıkla bu dönemde başlanır. Bu nedenlerle ergenlik dönemi madde kullanımını ve yaygınlığını bilmek önemlidir. Diğer taraftan gençlerin madde kullanımı yaygınlığının belirlenmesinde bazı zorluklar vardır. Bazı gençler, sosyal olarak tercih edilirliklerini etkilediğinden veya yasal sonuçlarından korkması nedeniyle kullanımını belirtmeyebilir veya düşük tutabilirken, bazıları da akranları tarafından kabul göreceği düşüncesi ile kullandığını belirtebilir veya kullanımını fazla tutabilir (7).

Alkol-madde yaygınlığıyla ilgili yurt dışında yapılan çalışmalar incelendiğinde, Amerika'da alkol, madde kullanımını araştıran ulusal çalışmalar bulunduğu görülmektedir (8–10). Alkol gençler arasındaki en sık kullanılan maddedir (5). 2017'de 8, 10 ve 12. sınıf öğrencilerinin son 30 günlük alkol kullanımının sırasıyla %8, %20 ve %33 olduğu belirtilmektedir (8). Tek seferde beş veya daha fazla

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tedavi alan gençlerde daha yüksek oranda negatif opioid idrar sonucu alınmıştır. Bununla birlikte buprenorfinin kesilmesini takiben kısa süre içinde nüks geliştiği ve 1 yılın sonunda gruplar arasında fark olmadığı bulunmuştur (108). Sürdürüm tedavisine yeterli sürede devam edilmesi opioid kullanım bozukluğu olan gençler için opioidden uzak kalmada önemli olabilir (287). Buprenorfin diğer opioidlerin yerini alacağı için, orta derecede yoksunluk belirtileri ortaya çıkana kadar ilk doz verilmemelidir (98). Hastanın madde isteği duymadığı ve en az yan etki gördüğü doz yavaş artışlarla tespit edilir. Buprenorfinin kronik kullanımı ile organlarda herhangi bir hasar kanıtı olmamakla birlikte, karaciğer enzimlerinde artışlar görülebilir (310).

Naltreksonun günlük oral (oral naltrekson) ve aylık enjekte edilebilir (uzatılmış salımlı naltrekson [XR-naltrekson]) formları mevcuttur (292). Naltrekson-XR ile ilgili az sayıda vaka serisi şeklinde çalışma bulunmaktadır (311,312). Bir çalışmada 16-20 yaşları arasındaki opioid bağımlılığı olan 16 gençte Naltrekson-XR tedavisi uygulanmıştır. Katılımcıların %56'sının opioid kullanımının önemli ölçüde azaldığı, en az bir psikososyal alanda düzelme olduğu ve madde kullanımından dolayı yeni bir sorun olmadığı belirtilmiştir (311).

Stimülan Kullanım Bozukluğu: Erişkinlerde veya ergenlerde stimülan kullanım bozukluğu tedavisinde kullanılabilen onaylanmış bir ilaç tedavisi yoktur. Metamfetamin kötüye kullanımı ve bağımlılığı olan 19 ergende, bupropion sr 300 mg ve plasebo kullanımı karşılaştırılmıştır. Bupropion alan ergenlerde daha az metamfetamin pozitif idrar testleri elde edilmiştir (313).

NÜKS

Madde kullanımı için tedaviye başlayan ergenler sıklıkla önerilen programı tamamlamaz, düzenli madde kullanımına geri döner ve sürekli bakım/takip hizmeti başlatmazlar (314). Madde kullanım bozukluğu olan ergenlerde nüks oranları yüksektir. Hastaların %66'sında tedaviden 6 ay sonra nüksün olduğu ve bunun da çoğunun tedavinin tamamlanmasından sonraki 3 ay içinde olduğu tespit edilmiştir (315). Bir çalışmada, nüksün en yaygın nedenleri, duygusal (örn. madde olmadan olumsuz duygularla baş edemediğini hissetmek gibi), aile, okul ve akranlarla ilgili stresörler, bilişsel faktörler (düşük motivasyon, aşerme ve düşük özgüven), akran baskısı ve çevresel nedenler (erişim/uygunluk ve tetikleyiciler) olarak gösterilmiştir (316).

Tedavi sonrası nüksü azaltmak için, bakım programları tedavi sonrası dönem için de devam etmelidir (317). Araştırmacılar ayrıca, tedavi sonrası müdahalelere katılımın, pozitif tedavi sonrası sonuçlarla ilişkili olduğunu göstermiştir (318). Bu nedenle, madde kullanımına yönelik akut tedaviden sonra, gencin komorbid psikopatolojileri ile genç ve ailesinin diğer kapsamlı ihtiyaçlarına sürekli olarak dikkat edilmelidir. Kendi kendine destek grupları da tedavi sonrası dönemin genellikle ana unsurlarından biridir (31).

KAYNAKÇA

1. Scherf KS, Behrmann M, Dahl RE. Facing changes and changing faces in adolescence: A new model for investigating adolescent-specific interactions between pubertal, brain and behavioral development. Vol. 2, Developmental Cognitive Neuroscience. 2012. p. 199–219.
2. White A, Hingson R. A Primer on Alcohol and Adolescent Brain Development: Implications for Prevention. In 2019. p. 3–18.
3. Nock NL, Minnes S, Alberts JL. Neurobiology of substance use in adolescents and potential therapeutic effects of exercise for prevention and treatment of substance use disorders. Birth Defects Res. 2017 Dec 1;109(20):1711–29.
4. Behrendt S, Wittchen H-U, Höfler M, Lieb R, Beesdo K. Transitions from first substance use to substance use disorders in adolescence: is early onset associated with a rapid escalation? Drug Alcohol Depend. 2009 Jan 1;99(1–3):68–78.
5. Gray KM, Squeglia LM. Research Review: What have we learned about adolescent substance use? J Child Psychol Psychiatry. 2018 Jun;59(6):618–27.
6. Hall WD, Patton G, Stockings E, Weier M, Lynskey M, Morley KI, et al. Why young people's substance use matters for global health. Vol. 3, The Lancet Psychiatry. Elsevier Ltd; 2016. p. 265–79.
7. Moss JL, Liu B, Zhu L. State Prevalence and Ranks of Adolescent Substance Use: Implications for Cancer Prevention. Prev Chronic Dis. 2018 May 31;15:170345.
8. Johnston LD, Miech RA, O'malley PM, Bachman JG, Schulenberg JE, Patrick ME. Monitoring the Future National Survey Results on Drug Use, 1975-2017: Overview, Key Findings on Adolescent Drug Use. Ann Arbor; 2018.
9. Key Substance Use and Mental Health Indicators in the United States: Results from the 2016 National Survey on Drug Use and Health (HHS Publication No. SMA 17-5044, NSDUH Series H-52). Rockville; 2017.

10. Kann L, McManus T, Harris WA, Shanklin SL, Flint KH, Queen B, et al. Youth Risk Behavior Surveillance — United States, 2017. MMWR Surveill Summ. 2018 Jun 15;67(8):1–114.
11. Wang TW, Gentzke A, Sharapova S, Cullen KA, Ambrose BK, Jamal A. Tobacco product use among middle and high school students — United states, 2011–2017. Morb Mortal Wkly Rep. 2018 Jun 8;67(22):629–33.
12. Hammond D, Reid JL, Rynard VL, Fong GT, Cummings KM, McNeill A, et al. Prevalence of vaping and smoking among adolescents in Canada, England, and the United States: Repeat national cross sectional surveys. Vol. 365, The BMJ. BMJ Publishing Group; 2019.
13. Perlmutter AS, Bauman M, Mantha S, Segura LE, Ghandour L, Martins SS. Nonmedical Prescription Drug Use Among Adolescents: Global Epidemiological Evidence for Prevention, Assessment, Diagnosis, and Treatment. Curr Addict Reports. 2018 Jun;5(2):120–7.
14. Kraus L, Seitz N-N, Piontek D, Molinaro S, Siciliano V, Guttormsson U, et al. 'Are The Times A-Changin'? Trends in adolescent substance use in Europe. Addiction. 2018 Jul;113(7):1317–32.
15. Ögel K, Tamar D, Evren C, Çakmak D. İstanbul'da Lise Gençleri Arasında Sigara, Alkol ve Madde Kullanım Yaygınlığı. Klin Psikiyatr. 2000;3(4):242–5.
16. Ögel K, Taner S, Eke CY. Onuncu Sınıf Öğrencileri Arasında Tütün, Alkol Ve Madde Kullanım Yaygınlığı: İstanbul Örneklemi. Bağımlılık Derg. 2006;7(1):18–23.
17. Ünlü A, Evcin U. İstanbul'da Liseli Gençler Arasındaki Madde Kullanım Yaygınlığı ve Demokrafik Faktörlerin Etkileri. Lit Sempozyum. 2014;1:2–11.
18. Arslan HN, Terzi Ö, Dabak Ş, Pekşen Y. Samsun İl Merkezindeki Lise Öğrencilerinde Sigara, Alkol Ve Madde Kullanımı. Erciyes Med J. 2012;34(2):79–84.
19. Ünlü A, Evcin U. 2008 ve 2010 Yılları Arasında İstanbul Bağcılar İlçesinde Gençler Arasında Madde Kullanım Yaygınlığı, Risk ve Koruma Faktörlerinin Değerlendirilmesi. Anadolu Üniversitesi Sos Bilim Derg. 2014;14(3):127–40.
20. Akkuş D, Karaca A, Şener DK, Ankaralı H. Lise Öğrencileri Arasında Sigara, Alkol Kullanım Sıklığı Ve Etkileyen Faktörler. Anadolu Klin Tıp Bilim Derg. 2017 Jan 3;22(1):36–36.
21. Uzun S, Kelleci M. Lise Öğrencilerinde Madde Bağımlılığı: Madde Bağımlılığından Korunma Konusundaki Öz Yeterlikleri ve İlişkili Faktörler. Dusunen Adam J Psychiatry Neurol Sci. 2018;31(4):356–63.
22. Çakıcı M, Dirisu G, Babayiğit A, İskender C. Prevalence and risk factors of use of psychoactive substances among primary school students in TRNC, 2019. Anatol J Psychiatry. 2019;20(Special Issue 1):30.
23. Çakıcı M, Özsoy İ, Özsat K, Kızılgül Z, Karaaziz M, Çakıcı E. The prevalence and risk factors of psychoactive substance in secondary school children in the Turkish Republic of Northern Cyprus: 1999-2019. Anatol J Psychiatry. 2019;20(Special Issue 1):35.
24. Çakıcı M, Ergün D, Eş A, Toprak A, Özer H. The prevalence and risk factors of psychoactive substance use among high school students in Turkish Republic of Northern Cyprus, 1996-2019. Anatol J Psychiatry. 2019;20(Special Issue 1):38.
25. Demirci Çiftçi A, Yalçın Ö. Alkol ve Madde Kullanım Bozuklukları. In: Pekcanlar Akay A, Ercan ES, editors. Çocuk ve Ergen Ruh Sağlığı ve Hastalıkları. Ankara: Türkiye Çocuk ve Genç Psikiyatrisi Derneği; 2016. p. 470–526.
26. Özgür İlhan İ, Demirbaş H, Doğan YB. Çıraklık Eğitimine Devam Eden Çalışan Gençlerde Alkol Kullanımı Üzerine Bir Çalışma. Türk Psikiyatr Derg. 2005;16(4):237–44.
27. Avcı D, Tarı Selçuk K, Doğan S. Çıraklık Eğitimine Devam Eden Ergenlerde Madde Kullanım Sıklığı, Öfke Düzeyi-Öfke İfade Tarzı ve Bağımlılık Şiddeti İlişkisi. Psikiyatr Hemşireliği Derg. 2017;8(1):1–8.
28. Ögel K, Aksoy A. Tutuklu ve Hükümlü Ergenlerde Madde Kullanımı. Bağımlılık Derg. 2007;8:11–7.
29. Sucaklı MH, Keten HS, Çelik M, Ölmez S, Yılmaz A. Yetiştirme Yurdunda Kalan Çocuk ve Ergenlerde Sigara, Alkol ve Madde Kullanımı. Konuralp Tıp Derg. 2015 Apr 1;7(1):23–7.
30. American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. Arlington, VA, American Psychiatric Association, 2013.
31. Bukstein OG, Bernet W, Arnold V, Beitchman J, Shaw J, Benson S, et al. Practice parameter for the assessment and treatment of children and adolescents with substance use disorders. J Am Acad Child Adolesc Psychiatry. 2005;44(6):609–21.
32. Center for Substance Abuse Treatment. Screening and Assessing Adolescents for Substance Use Disorders . Treatment Improvement Protocol (TIP) Series, No. 31. HHS Publication No. (SMA) 12-4079. Rockville; 1998.
33. Gaur N, Gautam M, Singh S, Venkatesh Raju V, Sarkar S. Clinical practice guidelines on assessment and management of substance abuse disorder in children and adolescents. Vol. 61, Indian Journal of Psychiatry. Wolters Kluwer Medknow Publications; 2019. p. S333–49.
34. Collier MG, Doshani M, Asher A. Using Population Based Hospitalization Data to Monitor Increases in Conditions Causing Morbidity Among Persons Who Inject Drugs. J Community Health. 2018 Jun 1;43(3):598–603.
35. Winters KC, Kaminer Y. Screening and assessing adolescent substance use disorders in clinical populations. J Am Acad Child Adolesc Psychiatry. 2008;47(7):740–4.
36. Kandemir H, Aydemir Ö, Ekinci S, Selek S, Kandemir SB, Bayazit H. Validity and reliability of the Turkish version of CRAFFT Substance Abuse Screening Test among adolescents. Neuropsychiatr Dis Treat. 2015 Jun 22;11:1505–9.
37. Dilbaz N, Hendriks V. Screening and assessment. In: I Pompidou Group (eds.), editor. Young people and drugs: care and treatment. Strasbourg: Council of Europe. Co-operation Group to Combat Drug Abuse and Illicit Trafficking in Drugs (Pompidou Group).; 2006. p. 75–97.
38. Evren C, Ovali E, Karabulut V, Cetingok S. Madde Kullanım Bozukluğu Tanıma Testi'nin (DUDIT) eroin bağımlısı erişkinlerde ve madde kullanım bozukluğu olan ergenlerde psikometrik özellikleri. Klin Psikofarmakol Bul. 2014;24(1):39–48.
39. Evren C, Can Y, Yılmaz A, Ovalı E, Çetingök S, Karabulut V, et al. Psychometric properties of the Drug Abuse

Screening Test (DAST-10) in heroin dependent adults and adolescents with drug use disorder. Dusunen Adam J Psychiatry Neurol Sci. 2013;26(4):351–9.
40. Ögel K, Aksoy A, Topuz A, Liman O, Coşkun S. Ergenlerde Uçucu Madde Kullanımı Şiddetini Değerlendirme Ölçeğinin Geliştirilmesi ve Güvenilirlik Çalışması. Türk Psikiyatr Derg. 2005;16(3):260–7.
41. Ögel K, Evren C, Karadağ F, Tamar Gürol D. Bağımlılık Profil İndeksi'nin (BAPİ) Geliştirilmesi, Geçerlik ve Güvenilirliği. Türk Psikiyatr Derg. 2012;23:264–73.
42. Ögel K, Karadayı G, Şenyuva G, Hatipoğlu S. Bağımlılık profil indeksi'nin (BAPİ) ergen formunun geliştirilmesi. Klin Psikofarmakol Bul. 2012;22(Ek Sayı 1):109.
43. Yalın Sapmaz Ş, Sargın E, Ergin C, Özek Erkuran H, Öztürk M, Aydemir Ö. DSM-5 Düzey 2 Madde Kullanımı Ölçeğinin Türkçe Formunun Güvenirliği ve Geçerliği. Bağımlılık Derg. 2016;17(3):116–22.
44. Levy S, Siqueira LM, Ammerman SD, Gonzalez PK, Ryan SA, Smith VC, et al. Testing for drugs of abuse in children and adolescents. Pediatrics. 2014 Jun 1;133(6).
45. Drug testing practice guidelines, substance abuse and mental health services administration. National Center on Substance Abuse and Child Welfare. 2011. Available from: https://ncsacw. samhsa.gov/files/IA_Drug_Testing_Bench_Card_508.pdf.
46. Conway KP, Swendsen J, Husky MM, He JP, Merikangas KR. Association of Lifetime Mental Disorders and Subsequent Alcohol and Illicit Drug Use: Results from the National Comorbidity Survey-Adolescent Supplement. J Am Acad Child Adolesc Psychiatry. 2016;55(4):280–8.
47. Marmorstein NR. Longitudinal associations between depressive symptoms and alcohol problems: The influence of comorbid delinquent behavior. Addict Behav. 2010;35(6):564–71.
48. Swendsen JD, Merikangas KR. The comorbidity of depression and substance use disorders. Clin Psychol Rev. 2000;20(2):173–89.
49. Groenman AP, Janssen TWP, Oosterlaan J. Childhood Psychiatric Disorders as Risk Factor for Subsequent Substance Abuse: A Meta-Analysis. Vol. 56, Journal of the American Academy of Child and Adolescent Psychiatry. Elsevier Inc.; 2017. p. 556–69.
50. Principles of Substance Abuse Prevention for Early Childhood: A research-Based Guide. National Institute on Drug Abuse; National Institutes of Health; U.S. Department of Health and Human Services; 2016. Retrieved from https://www.drugabuse.gov/publications/principles-substance-abuse-prevention-early-childhood/table-contents
51. Whitesell M, Bachand A, Peel J, Brown M. Familial, Social, and Individual Factors Contributing to Risk for Adolescent Substance Use. J Addict. 2013;2013:1–9.
52. Buckingham ET, Daniolos P. Longitudinal outcomes for victims of child abuse. Curr Psychiatry Rep. 2013;15(2).
53. Shin SH, Hong HG, Hazen AL. Childhood sexual abuse and adolescent substance use: A latent class analysis. Drug Alcohol Depend. 2010;109(1–3):226–35.
54. Carliner H, Keyes KM, McLaughlin KA, Meyers JL, Dunn EC, Martins SS. Childhood Trauma and Illicit Drug Use in Adolescence: A Population-Based National Comorbidity Survey Replication–Adolescent Supplement Study. J Am Acad Child Adolesc Psychiatry. 2016;55(8):701–8.
55. Huang S, Trapido E, Fleming L, Arheart K, Crandall L, French M, et al. The long-term effects of childhood maltreatment experiences on subsequent illicit drug use and drug-related problems in young adulthood. Addict Behav. 2011;36(1–2):95–102.
56. Dube SR, Felitti VJ, Dong M, Chapman DP, Giles WH, Anda RF. Childhood abuse, neglect, and household dysfunction and the risk of illicit drug use: The adverse childhood experiences study. Pediatrics. 2003;111(3):564–72.
57. Cox RG, Zhang L, Johnson WD, Bender DR. Academic performance and substance use: Findings from a state survey of public high school students. J Sch Health. 2007;77(3):109–15.
58. Lee KTH, Vandell DL. Out-of-School Time and Adolescent Substance Use. J Adolesc Heal. 2015 Nov 1;57(5):523–9.
59. McDonough MH, Jose PE, Stuart J. Bi-directional Effects of Peer Relationships and Adolescent Substance Use: A Longitudinal Study. J Youth Adolesc. 2016 Aug 1;45(8):1652–63.
60. Koob GF, Volkow ND. Neurobiology of addiction: a neurocircuitry analysis. Vol. 3, The Lancet Psychiatry. Elsevier Ltd; 2016. p. 760–73.
61. Uhl GR, Koob GF, Cable J. The neurobiology of addiction. Ann N Y Acad Sci. 2019 Sep 15;1451(1):5–28.
62. Volkow ND, Koob GF, Croyle RT, Bianchi DW, Gordon JA, Koroshetz WJ, et al. The conception of the ABCD study: From substance use to a broad NIH collaboration. Vol. 32, Developmental Cognitive Neuroscience. Elsevier Ltd; 2018. p. 4–7.
63. Steinberg L. A social neuroscience perspective on adolescent risk-taking. Dev Rev. 2008 Mar;28(1):78–106.
64. Galvan A. Adolescent development of the reward system. Vol. 4, Frontiers in Human Neuroscience. Frontiers Media S. A.; 2010.
65. Lipari RN, Williams MR, Copello EAP, Pemberton MR. Risk and Protective Factors and Estimates of Substance Use Initiation: Results from the 2015 National Survey on Drug Use and Health. CBHSQ Data Review. 2012.
66. Luciana M, Bjork JM, Nagel BJ, Barch DM, Gonzalez R, Nixon SJ, et al. Adolescent neurocognitive development and impacts of substance use: Overview of the adolescent brain cognitive development (ABCD) baseline neurocognition battery. Vol. 32, Developmental Cognitive Neuroscience. Elsevier Ltd; 2018. p. 67–79.
67. Telzer EH, Rogers CR, Van Hoorn J. Neural Correlates of Social Influence on Risk Taking and Substance Use in Adolescents. Curr Addict reports. 2017 Sep 29;4(3):333–41.
68. Chein J, Albert D, O'Brien L, Uckert K, Steinberg L. Peers increase adolescent risk taking by enhancing activity in the brain's reward circuitry. Dev Sci. 2011 Mar;14(2):F1–10.
69. Segalowitz SJ, Santesso DL, Willoughby T, Reker DL, Campbell K, Chalmers H, et al. Adolescent peer interaction and trait surgency weaken medial prefrontal cortex responses to failure. Soc Cogn Affect Neurosci. 2012 Jan;7(1):115–24.
70. Urošević S, Collins P, Muetzel R, Schissel A, Lim KO, Luciana M. Effects of reward sensitivity and regional brain volumes on substance use initiation in adolescence. Soc Cogn Affect Neurosci. 2015 Jan;10(1):106–13.

71. Cheetham A, Allen NB, Whittle S, Simmons J, Yücel M, Lubman DI. Orbitofrontal Cortex Volume and Effortful Control as Prospective Risk Factors for Substance Use Disorder in Adolescence. Eur Addict Res. 2017;23(1):37–44.
72. Cheetham A, Allen NB, Whittle S, Simmons J, Yücel M, Lubman DI. Amygdala volume mediates the relationship between externalizing symptoms and daily smoking in adolescence: A prospective study. Psychiatry Res Neuroimaging. 2018 Mar 9;0(0).
73. Cheetham A, Allen NB, Whittle S, Simmons J, Yücel M, Lubman DI. Volumetric differences in the anterior cingulate cortex prospectively predict alcohol-related problems in adolescence. Psychopharmacology (Berl). 2014;231(8):1731–42.
74. Jacobus J, Thayer RE, Trim RS, Bava S, Frank LR, Tapert SF. White matter integrity, substance use, and risk taking in adolescence. Psychol Addict Behav. 2013 Jun;27(2):431–42.
75. Ramage AE, Lin A-L, Olvera RL, Fox PT, Williamson DE. Resting-state regional cerebral blood flow during adolescence: associations with initiation of substance use and prediction of future use disorders. Drug Alcohol Depend. 2015 Apr 1;149:40–8.
76. Whelan R, Watts R, Orr CA, Althoff RR, Artiges E, Banaschewski T, et al. Neuropsychosocial profiles of current and future adolescent alcohol misusers. Nature. 2014 Aug 14;512(7513):185–9.
77. J. Conrod P, Nikolaou K. Annual Research Review: On the developmental neuropsychology of substance use disorders. J Child Psychol Psychiatry. 2016 Mar;57(3):371–94.
78. Trucco EM, Madan B, Villar M. The Impact of Genes on Adolescent Substance Use: a Developmental Perspective. Curr Addict Reports. 2019 Sep 3;
79. Kendler KS, Maes HH, Sundquist K, Ohlsson H, Sundquist J. Genetic and family and community environmental effects on drug abuse in adolescence: A swedish national twin and sibling study. Am J Psychiatry. 2014 Feb 1;171(2):209–17.
80. Li MD, Cheng R, Ma JZ, Swan GE. A meta-analysis of estimated genetic and environmental effects on smoking behavior in male and female adult twins. Vol. 98, Addiction. 2003. p. 23–31.
81. Kendler KS, Thornton LM, Pedersen NL. Tobacco consumption in swedish twins reared apart and reared together [In Process Citation]. Arch Gen Psychiatry. 2000;57(9):886–92.
82. Kendler KS, Sundquist K, Ohlsson H, Palmeŕ K, Maes H, Winkleby MA, et al. Genetic and familial environmental influences on the risk for drug abuse: A national Swedish adoption study. Arch Gen Psychiatry. 2012 Jul;69(7):690–7.
83. Wang J-C, Kapoor M, Goate AM. The Genetics of Substance Dependence. Annu Rev Genomics Hum Genet. 2012 Sep 22;13(1):241–61.
84. Edenberg HJ. The genetics of alcohol metabolism: Role of alcohol dehydrogenase and aldehyde dehydrogenase variants. Vol. 30, Alcohol Research and Health. 2007. p. 5–13.
85. Takeshita T, Morimoto K. Self-reported alcohol-associated symptoms and drinking behavior in three ALDH2 genotypes among Japanese university students. Alcohol Clin Exp Res. 1999 Jun;23(6):1065–9.
86. Cope LM, Munier EC, Trucco EM, Hardee JE, Burmeister M, Zucker RA, et al. Effects of the serotonin transporter gene, sensitivity of response to alcohol, and parental monitoring on risk for problem alcohol use. Alcohol. 2017 Mar 1;59:7–16.
87. Miranda R, Ray L, Justus A, Meyerson LA, Knopik VS, McGeary J, et al. Initial evidence of an association between OPRM1 and adolescent alcohol misuse. Alcohol Clin Exp Res. 2010 Jan;34(1):112–22.
88. Ehringer MA, Clegg H V., Collins AC, Corley RP, Crowley T, Hewitt JK, et al. Association of the neuronal nicotinic receptor β2 subunit gene (CHRNB2) with subjective responses to alcohol and nicotine. Am J Med Genet Part B Neuropsychiatr Genet. 2007 Jul 5;144(5):596–604.
89. Adkins DE, Clark SL, Copeland WE, Kennedy M, Conway K, Angold A, et al. Genome-Wide Meta-Analysis of Longitudinal Alcohol Consumption Across Youth and Early Adulthood. Twin Res Hum Genet. 2015 Aug 4;18(4):335–47.
90. Minică CC, Verweij KJH, van der Most PJ, Mbarek H, Bernard M, van Eijk KR, et al. Genome-wide association meta-analysis of age at first cannabis use. Addiction. 2018 Nov 1;113(11):2073–86.
91. Trucco EM, Villafuerte S, Heitzeg MM, Burmeister M, Zucker RA. Rule breaking mediates the developmental association between GABRA2 and adolescent substance abuse. J Child Psychol Psychiatry. 2014 Dec;55(12):1372–9.
92. Trucco EM, Hicks BM, Villafuerte S, Nigg JT, Burmeister M, Zucker RA. Temperament and externalizing behavior as mediators of genetic risk on adolescent substance use. J Abnorm Psychol. 2016 May 1;125(4):565–75.
93. Pieters S, Van Der Zwaluw CS, Van Der Vorst H, Wiers RW, Smeets H, Lambrichs E, et al. The Moderating Effect of Alcohol-Specific Parental Rule-Setting on the Relation between the Dopamine D2 Receptor Gene (DRD2), the Mu-Opioid Receptor Gene (OPRM1) and Alcohol Use in Young Adolescents. Alcohol Alcohol. 2012 Nov 1;47(6):663–70.
94. Daw J, Shanahan M, Harris KM, Smolen A, Haberstick B, Boardman JD. Genetic Sensitivity to Peer Behaviors. J Health Soc Behav. 2013 Mar 4;54(1):92–108.
95. Daw J, Boardman JD, Peterson R, Smolen A, Haberstick BC, Ehringer MA, et al. The interactive effect of neighborhood peer cigarette use and 5HTTLPR genotype on individual cigarette use. Addict Behav. 2014;39(12):1804–10.
96. Lofwall MR, Yule AM. The Treatment and Prevention of Adolescent Opioid and Prescription Misuse and Abuse. In 2018. p. 215–31.
97. Rao V, Ward EN. Opioid Use Disorders and Related Emergencies. In 2019. p. 3–25.
98. Sharma B, Bruner A, Barnett G, Fishman M. Opioid Use Disorders. Child Adolesc Psychiatr Clin N Am. 2016 Jul;25(3):473–87.
99. Hammond CJ. The Role of Pharmacotherapy in the Treatment of Adolescent Substance Use Disorders. Vol. 25, Child and Adolescent Psychiatric Clinics of North America. W.B. Saunders; 2016. p. 685–711.

100. Levy S, Ryan SA, Gonzalez PK, Patrick SW, Quigley J, Siqueira L, et al. Medication-assisted treatment of adolescents with opioid use disorders. Pediatrics. 2016 Sep 1;138(3).
101. Schwartz RH. Adolescent heroin use: A review. Vol. 102, Pediatrics. American Academy of Pediatrics; 1998. p. 1461–6.
102. Boyer EW. Management of opioid analgesic overdose. N Engl J Med. 2012 Jul 12;367(2):146–55.
103. Kim HK, Nelson LS. Reducing the harm of opioid overdose with the safe use of naloxone : a pharmacologic review. Expert Opin Drug Saf. 2015 Jul;14(7):1137–46.
104. Tetrault J, O'Connor P. Management of opioid intoxication and withdrawal. In: Cavacuiti CA, editor. Principles of Addiction Medicine Essentials. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins; 2011. p. 223–8.
105. Farrell M. Opiate withdrawal. Addiction. 1994 Nov;89(11):1471–5.
106. Mattick RP, Hall W. Are detoxification programmes effective? Lancet (London, England). 1996 Jan 13;347(8994):97–100.
107. Marsch LA, Bickel WK, Badger GJ, Stothart ME, Quesnel KJ, Stanger C, et al. Comparison of pharmacological treatments for opioid-dependent adolescents: a randomized controlled trial. Arch Gen Psychiatry. 2005 Oct;62(10):1157–64.
108. Woody GE, Poole SA, Subramaniam G, Dugosh K, Bogenschutz M, Abbott P, et al. Extended vs short-term buprenorphine-naloxone for treatment of opioid-addicted youth: a randomized trial. JAMA. 2008 Nov 5;300(17):2003–11.
109. Ferrant O, Papin F, Clin B, Lacroix C, Saussereau E, Remoué J-E, et al. Fatal poisoning due to snorting buprenorphine and alcohol consumption. Forensic Sci Int. 2011 Jan 30;204(1–3):e8-11.
110. Johnston LD, Miech RA, O'Malley PM, Bachman JG, Schulenberg JE, Patrick ME. Monitoring the Future: National survey results on drug use 1975-2018. 2018 Overview: Key findings on adolescent drug use. Natl Inst Drug Abus Natl Institutes Heal. 2019;1–104.
111. Morales P, Hurst DP, Reggio PH. Molecular Targets of the Phytocannabinoids: A Complex Picture. Vol. 103, Progress in the chemistry of organic natural products. 2017. p. 103–31.
112. Simpson AK, Magid V. Cannabis Use Disorder in Adolescence. Vol. 25, Child and Adolescent Psychiatric Clinics of North America. 2016. p. 431–43.
113. Kelly TH, Harvanko A, Pierce ME, Rayapati AO, Martin CA. A Biological/Genetic Perspective: The Addicted Brain. In 2018. p. 23–65.
114. Gobbi G, Atkin T, Zytynski T, Wang S, Askari S, Boruff J, et al. Association of Cannabis Use in Adolescence and Risk of Depression, Anxiety, and Suicidality in Young Adulthood: A Systematic Review and Meta-analysis. JAMA Psychiatry. 2019;
115. Mustonen A, Niemelä S, Nordström T, Murray GK, Mäki P, Jääskeläinen E, et al. Adolescent cannabis use, baseline prodromal symptoms and the risk of psychosis. Br J Psychiatry. 2018 Apr 1;212(4):227–33.
116. Hasin DS. US Epidemiology of Cannabis Use and Associated Problems. Vol. 43, Neuropsychopharmacology. Nature Publishing Group; 2018. p. 195–212.
117. Mashhoon Y, Sagar KA, Gruber SA. Cannabis Use and Consequences. Vol. 66, Pediatric Clinics of North America. W.B. Saunders; 2019. p. 1075–86.
118. Sagar KA, Gruber SA. Marijuana matters: reviewing the impact of marijuana on cognition, brain structure and function, & exploring policy implications and barriers to research. Vol. 30, International Review of Psychiatry. Taylor and Francis Ltd; 2018. p. 251–67.
119. Lisdahl KM, Gilbart ER, Wright NE, Shollenbarger S. Dare to delay? The impacts of adolescent alcohol and marijuana use onset on cognition, brain structure, and function. Front Psychiatry. 2013;4(JUL).
120. Batalla A, Bhattacharyya S, Yücel M, Fusar-Poli P, Crippa JA, Nogué S, et al. Structural and Functional Imaging Studies in Chronic Cannabis Users: A Systematic Review of Adolescent and Adult Findings. Lu L, editor. PLoS One. 2013 Feb 4;8(2):e55821.
121. Jacobus J, Tapert S. Effects of Cannabis on the Adolescent Brain. Curr Pharm Des. 2014 May 31;20(13):2186–93.
122. Crippa JA, Derenusson GN, Chagas MH, Atakan Z, Martín-Santos R, Zuardi AW, et al. Pharmacological interventions in the treatment of the acute effects of cannabis: a systematic review of literature. Harm Reduct J. 2012;9:7.
123. Azofeifa A, Mattson ME, Lyerla R. Driving Under the Influence of Alcohol, Marijuana, and Alcohol and Marijuana Combined Among Persons Aged 16-25 Years - United States, 2002-2014. MMWR Morb Mortal Wkly Rep. 2015 Dec 11;64(48):1325–9.
124. Smith NT. A review of the published literature into cannabis withdrawal symptoms in human users. Addiction. 2002 Jun;97(6):621–32.
125. Budney AJ, Roffman R, Stephens RS, Walker D. Marijuana dependence and its treatment. Addict Sci Clin Pract. 2007 Dec;4(1):4–16.
126. National Instute on Drug Abuse for Teens. Spice [Internet]. National Instute on Drug Abuse for Teens. 2019. Available from: https://teens.drugabuse.gov/drug-facts/spice
127. Mills B, Yepes A, Nugent K. Synthetic Cannabinoids. Am J Med Sci. 2015 Jul;350(1):59–62.
128. Cohen K, Weinstein A. The Effects of Cannabinoids on Executive Functions: Evidence from Cannabis and Synthetic Cannabinoids-A Systematic Review. Brain Sci. 2018 Feb 27;8(3).
129. Brewer TL, Collins M. A review of clinical manifestations in adolescent and young adults after use of synthetic cannabinoids. J Spec Pediatr Nurs. 2014 Apr;19(2):119–26.
130. Bhatty S, Wu W. Organic and synthetic cannabinoid use in adolescents. Pediatr Ann. 2013 Jan;42(1):31–5.
131. Castellanos D, Gralnik LM. Synthetic cannabinoids 2015: An update for pediatricians in clinical practice. World J Clin Pediatr. 2016 Feb 8;5(1):16–24.
132. Grigg J, Manning V, Arunogiri S, Lubman DI. Synthetic cannabinoid use disorder: an update for general psychiatrists. Australas Psychiatry. 2019 Jun 1;27(3):279–83.

133. Ciccarone D. Stimulant Abuse: Pharmacology, Cocaine, Methamphetamine, Treatment, Attempts at Pharmacotherapy. Vol. 38, Primary Care - Clinics in Office Practice. 2011. p. 41–58.
134. Park TM, Haning WF. Stimulant Use Disorders. Child Adolesc Psychiatr Clin N Am. 2016;25(3):461–71.
135. Courtney KE, Ray LA. Methamphetamine: An update on epidemiology, pharmacology, clinical phenomenology, and treatment literature. Vol. 143, Drug and Alcohol Dependence. Elsevier Ireland Ltd; 2014. p. 11–21.
136. Green AS. Stimulant Use Disorders and Related Emergencies. In 2019. p. 51–68.
137. Ryan SA. Cocaine Use in Adolescents and Young Adults. Vol. 66, Pediatric Clinics of North America. W.B. Saunders; 2019. p. 1135–47.
138. National Instute on Drug Abuse for Teens. Bath Salts [Internet]. National Instute on Drug Abuse for Teens. 2019. Available from: https://teens.drugabuse.gov/drug-facts/bath-salts
139. Williams JF, Lundahl LH. Focus on Adolescent Use of Club Drugs and "Other" Substances. Vol. 66, Pediatric Clinics of North America. W.B. Saunders; 2019. p. 1121–34.
140. Miotto K, Striebel J, Cho AK, Wang C. Clinical and pharmacological aspects of bath salt use: A review of the literature and case reports. Vol. 132, Drug and Alcohol Dependence. 2013. p. 1–12.
141. Wilens TE, Kaminski TA. Prescription Stimulants: From Cognitive Enhancement to Misuse. Vol. 66, Pediatric Clinics of North America. W.B. Saunders; 2019. p. 1109–20.
142. McCabe SE, Veliz P, Wilens TE, Schulenberg JE. Adolescents' Prescription Stimulant Use and Adult Functional Outcomes: A National Prospective Study. J Am Acad Child Adolesc Psychiatry. 2017 Mar 1;56(3):226–233.e4.
143. Luikinga SJ, Kim JH, Perry CJ. Developmental perspectives on methamphetamine abuse: Exploring adolescent vulnerabilities on brain and behavior. Prog Neuropsychopharmacol Biol Psychiatry. 2018;87(Pt A):78–84.
144. Lyoo IK, Yoon S, Kim TS, Lim SM, Choi Y, Kim JE, et al. Predisposition to and effects of methamphetamine use on the adolescent brain. Mol Psychiatry. 2015 Dec 1;20(12):1516–24.
145. Dean AC, Morales AM, Hellemann G, London ED. Cognitive deficit in methamphetamine users relative to childhood academic performance: Link to cortical thickness. Neuropsychopharmacology. 2018 Jul 1;43(8):1745–52.
146. McAvoy BR. Methamphetamine--what primary care practitioners need to know. J Prim Health Care. 2009 Sep;1(3):170–6.
147. Won S, Hong RA, Shohet R V, Seto TB, Parikh NI. Methamphetamine-associated cardiomyopathy. Clin Cardiol. 2013 Dec;36(12):737–42.
148. Ruha A-M, Yarema MC. Pharmacologic treatment of acute pediatric methamphetamine toxicity. Pediatr Emerg Care. 2006 Dec;22(12):782–5.
149. Winslow BT, Voorhees KI, Pehl KA. Methamphetamine abuse. Am Fam Physician. 2007 Oct 15;76(8):1169–74.
150. Matsumoto RR, Seminerio MJ, Turner RC, Robson MJ, Nguyen L, Miller DB, et al. Methamphetamine-induced toxicity: an updated review on issues related to hyperthermia. Pharmacol Ther. 2014 Oct;144(1):28–40.
151. Pennay AE, Lee NK. Putting the call out for more research: the poor evidence base for treating methamphetamine withdrawal. Drug Alcohol Rev. 2011 Mar;30(2):216–22.
152. Zweben JE, Cohen JB, Christian D, Galloway GP, Salinardi M, Parent D, et al. Psychiatric symptoms in methamphetamine users. Am J Addict. 13(2):181–90.
153. Zorick T, Nestor L, Miotto K, Sugar C, Hellemann G, Scanlon G, et al. Withdrawal symptoms in abstinent methamphetamine-dependent subjects. Addiction. 2010 Oct;105(10):1809–18.
154. Nova Scotia. Nova Scotia Adolescent Withdrawal Management Guidelines 2013 [Internet]. 2013. Available from: https://novascotia.ca/dhw/addictions/documents/Adolescent-Withdrawal-Management-Guidelines.pdf
155. Moreland-Capuia A, Moreland-Capuia A. Substances of Abuse and the Brain. In: Training for Change. Springer International Publishing; 2019. p. 85–146.
156. Adger H, Saha S. Alcohol use disorders in adolescents. Pediatr Rev. 2013 Mar;34(3):103–14.
157. Bagley SM, Levy S, Schoenberger SF. Alcohol Use Disorders in Adolescents. Vol. 66, Pediatric Clinics of North America. W.B. Saunders; 2019. p. 1063–74.
158. McCambridge J, McAlaney J, Rowe R. Adult consequences of late adolescent alcohol consumption: a systematic review of cohort studies. PLoS Med. 2011 Feb 8;8(2):e1000413.
159. Olsson CA, Romaniuk H, Salinger J, Staiger PK, Bonomo Y, Hulbert C, et al. Drinking patterns of adolescents who develop alcohol use disorders: Results from the Victorian Adolescent Health Cohort Study. BMJ Open. 2016;6(2).
160. Feldstein Ewing SW, Sakhardande A, Blakemore S-J. The effect of alcohol consumption on the adolescent brain: A systematic review of MRI and fMRI studies of alcohol-using youth. NeuroImage Clin. 2014;5:420–37.
161. Squeglia LM, Jacobus J, Tapert SF. The influence of substance use on adolescent brain development. In: Clinical EEG and Neuroscience. EEG and Clinical Neuroscience Society (ECNS); 2009. p. 31–8.
162. Squeglia LM, Jacobus J, Tapert SF. The effect of alcohol use on human adolescent brain structures and systems. In: Handbook of Clinical Neurology. Elsevier B.V.; 2014. p. 501–10.
163. Chung T, Creswell KG, Bachrach R, Clark DB, Martin CS. Adolescent Binge Drinking. Vol. 39, Alcohol research : current reviews. NLM (Medline); 2018. p. 5–15.
164. Lovegrove MT. Adolescent presentations with alcohol intoxication to the emergency department at Joondalup Health Campus in 2013. Emerg Med Australas. 2015 Sep 30;
165. Margret CP, Ries RK. Assessment and Treatment of Adolescent Substance Use Disorders: Alcohol Use Disorders. Child Adolesc Psychiatr Clin N Am. 2016;25(3):411–30.

166. Baum CR. Ethanol intoxication in children: Epidemiology, estimation of toxicity, and toxic effects - UpToDate [Internet]. 2017. Available from: https://www.uptodate.com/contents/ethanol-intoxication-in-children-epidemiology-estimation-of-toxicity-and-toxic-effects
167. Miotto K, Heydari A, Molly T, Chang E, Thomas PS, Ray LA. Adolescent Alcohol Use. In: Rosner R, editor. Clinical Handbook of Adolescent Addiction. first ed. Chichester; 2013. p. 179–89.
168. Wittmann C, Donovan AL, Nisavic M. Alcohol and Sedative Use Disorders and Related Emergencies. In 2019. p. 27–50.
169. Connor JP, Haber PS, Hall WD. Alcohol use disorders. Vol. 387, The Lancet. Lancet Publishing Group; 2016. p. 988–98.
170. Clark DB. Pharmacotherapy for adolescent alcohol use disorder. Vol. 26, CNS Drugs. 2012. p. 559–69.
171. Youth Support Advocacy Service. Adolescent Withdrawal Guidelines [Internet]. 2016. p. 1–78. Available from: https://www.ysas.org.au/node/686
172. Nguyen J, O'Brien C, Schapp S. Adolescent inhalant use prevention, assessment, and treatment: A literature synthesis. Vol. 31, International Journal of Drug Policy. Elsevier B.V.; 2016. p. 15–24.
173. Storck M, Black L, Liddell M. Inhalant Abuse and Dextromethorphan. Vol. 25, Child and Adolescent Psychiatric Clinics of North America. W.B. Saunders; 2016. p. 497–508.
174. Lipari RN. Understanding Adolescent Inhalant Use. The CBHSQ Report. 2013.
175. Bowen SE. Two serious and challenging medical complications associated with volatile substance misuse: Sudden sniffing death and fetal solvent syndrome. Subst Use Misuse. 2011 May 24;46(SUPPL. 1):68–72.
176. Crossin R, Cairney S, Lawrence AJ, Duncan JR. Adolescent inhalant abuse leads to other drug use and impaired growth; implications for diagnosis. Aust N Z J Public Health. 2017 Feb;41(1):99–104.
177. Mustonen A, Niemelä S, McGrath JJ, Murray GK, Nordström T, Mäki P, et al. Adolescent inhalant use and psychosis risk – a prospective longitudinal study. Schizophr Res. 2018 Nov 1;201:360–6.
178. Scott KD, Scott AA. Adolescent inhalant use and executive cognitive functioning. Child Care Health Dev. 2014 Jan;40(1):20–8.
179. Takagi M, Yücel M, Cotton SM, Baliz Y, Tucker A, Elkins K, et al. Verbal memory, learning, and executive functioning among adolescent inhalant and cannabis users. J Stud Alcohol Drugs. 2011;72(1):96–105.
180. Yücel M, Takagi M, Walterfang M, Lubman DI. Toluene misuse and long-term harms: A systematic review of the neuropsychological and neuroimaging literature. Vol. 32, Neuroscience and Biobehavioral Reviews. 2008. p. 910–26.
181. Yücel M, Zalesky A, Takagi MJ, Bora E, Fornito A, Ditchfield M, et al. White-matter abnormalities in adolescents with long-term inhalant and cannabis use: a diffusion magnetic resonance imaging study. J Psychiatry Neurosci. 2010 Nov;35(6):409–12.
182. Ross S, Mack AH. Hallucinogens and Inhalants. In: Mack AH, Brady KT, Miller SI, Frances RJ, editors. Clinical textbook of addictive disorders. fourth. New York: The Guilford Press; 2016. p. 152–82.
183. Rosner R. Clinical Handbook of Adolescent Addiction. Clinical Handbook of Adolescent Addiction. 2012. 1-499 p.
184. Bhad R, Jain R, Dhawan A, Mehta M. A Clinic-Based Study in Treatment-Seeking Adolescent Inhalant Users in India: Implications for Management. J Child Adolesc Subst Abuse. 2017 Jan 2;26(1):91–101.
185. Cruz SL. Inhalant misuse management. The experience in Mexico and a literature review. J Subst Use. 2018 Sep 3;23(5):485–91.
186. Weaver M. Hallucinogens. In: Encyclopedia of Adolescence. Cham: Springer International Publishing; 2016. p. 1–13.
187. Rocha A, Hart N, Trujillo KA. Differences between adolescents and adults in the acute effects of PCP and ketamine and in sensitization following intermittent administration. Pharmacol Biochem Behav. 2017 Jun 1;157:24–34.
188. Hardaway R, Schweitzer J, Suzuki J. Hallucinogen Use Disorders. Child Adolesc Psychiatr Clin N Am. 2016;25(3):489–96.
189. Kim J, Fan B, Liu X, Kerner N, Wu P. Ecstasy Use and Suicidal Behavior among Adolescents: Findings from a National Survey. Suicide Life-Threatening Behav. 2011 Aug;41(4):435–44.
190. Nisavic M, Lai-Becker MW. Management of Acute Substance Use Disorders: Hallucinogens and Associated Compounds. In 2019. p. 83–91.
191. Suzuki J, Halpern JH, Torsten P, Huertas PE. Hallucinogens. In: Cohen LM, Collins Jr FL, Young AM, McChargue DE, Leffingwell TR, Cook KL, editors. Pharmacology and treatment of substance abuse : evidence- and outcome-based perspectives. New York: Routledge; 2009. p. 393–418.
192. Sadock BJ, Sadock VA, Ruiz P. Kaplan and Sadock's Synopsis of Psychiatry: Behavioral ... 11th ed. Philadelphia: Wolters Kluwer; 2014.
193. Journey JD, Bentley TP. Phencyclidine (PCP) Toxicity [Internet]. StatPearls. 2018. Available from: http://www.ncbi.nlm.nih.gov/pubmed/29939642
194. Gerlach M, Warnke A. Anxiolytics and sedative-hypnotics. In: Psychiatric Drugs in Children and Adolescents: Basic Pharmacology and Practical Applications. Springer-Verlag Wien; 2013. p. 219–55.
195. Boyd CJ, Austic E, Epstein-Ngo Q, Veliz PT, McCabe SE. A prospective study of adolescents' nonmedical use of anxiolytic and sleep medication. Vol. 29, Psychology of Addictive Behaviors. Educational Publishing Foundation; 2015. p. 184–91.
196. Votaw VR, Geyer R, Rieselbach MM, McHugh RK. The epidemiology of benzodiazepine misuse: A systematic review. Vol. 200, Drug and Alcohol Dependence. Elsevier Ireland Ltd; 2019. p. 95–114.
197. McCabe SE, Veliz P, Boyd CJ, Schulenberg JE. Medical and nonmedical use of prescription sedatives and anxiolytics: Adolescents' use and substance use disorder symptoms in adulthood. Addict Behav. 2017 Feb 1;65:296–301.

198. Rigg KK, Ford JA. The misuse of benzodiazepines among adolescents: Psychosocial risk factors in a national sample. Drug Alcohol Depend. 2014;137(1):137–42.
199. Behere PB, Das A, Behere AP, Behere PB, Das A, Behere AP. Anxiolytics and Hypnotics. In: Clinical Psychopharmacology. Springer Singapore; 2019. p. 89–98.
200. Sharma AN, Hoffman RS. Withdrawal Syndromes. In: Critical Care Toxicology. Cham: Springer International Publishing; 2016. p. 1–13.
201. Sharma S, Kukreti P, Kataria D. Sedative hypnotics overdose: Epidemiology, diagnosis and management. Indian J Med Spec. 2018 Jul;9(3):134–9.
202. Kang M, Ghassemzadeh S. Benzodiazepine Toxicity [Internet]. StatPearls. 2018. Available from: http://www.ncbi.nlm.nih.gov/pubmed/29489152
203. Suddock J, Cain M. Barbiturate Toxicity [Internet]. StatPearls. 2018. Available from: https://www.ncbi.nlm.nih.gov/books/NBK499875/
204. Centers for Disease Control and Prevention. Youth and Tobacco Use | CDC [Internet]. Available from: https://www.cdc.gov/tobacco/data_statistics/fact_sheets/youth_data/tobacco_use/index.htm
205. Ren M, Lotfipour S. Nicotine gateway effects on adolescent substance use. Vol. 20, Western Journal of Emergency Medicine. eScholarship; 2019. p. 696–709.
206. Slotkin TA. Nicotine and the adolescent brain: Insights from an animal model. Neurotoxicol Teratol. 2002;24(3):369–84.
207. Anthony JC, Warner LA, Kessler RC. Comparative Epidemiology of Dependence on Tobacco, Alcohol, Controlled Substances, and Inhalants: Basic Findings From the National Comorbidity Survey. Exp Clin Psychopharmacol. 1994;2(3):244–68.
208. Dutra LM, Glantz SA. Electronic cigarettes and conventional cigarette use among US adolescents: A cross-sectional study. JAMA Pediatr. 2014;168(7):610–7.
209. Moore GF, Littlecott HJ, Moore L, Ahmed N, Holliday J. E-cigarette use and intentions to smoke among 10-11-year-old never-smokers in Wales. Tob Control. 2016 Mar 1;25(2):147–52.
210. Chadi N, Schroeder R, Jensen JW, Levy S. Association between Electronic Cigarette Use and Marijuana Use among Adolescents and Young Adults: A Systematic Review and Meta-analysis. JAMA Pediatr. 2019 Oct 1;173(10).
211. Dierker L, Braymiller J, Rose J, Goodwin R, Selya A. Nicotine dependence predicts cannabis use disorder symptoms among adolescents and young adults. Drug Alcohol Depend. 2018 Jun 1;187:212–20.
212. Cavallo DA, Krishnan-Sarin S. Nicotine Use Disorders in Adolescents. Vol. 66, Pediatric Clinics of North America. 2019. p. 1053–62.
213. Camenga DR, Klein JD. Tobacco Use Disorders. Vol. 25, Child and Adolescent Psychiatric Clinics of North America. 2016. p. 445–60.
214. Oberstar J V., Bernstein GA, Thuras PD. Caffeine Use and Dependence in Adolescents: One-Year Follow-up. J Child Adolesc Psychopharmacol. 2002 Jun;12(2):127–35.
215. Temple JL. Review: Trends, Safety, and Recommendations for Caffeine Use in Children and Adolescents. Vol. 58, Journal of the American Academy of Child and Adolescent Psychiatry. Elsevier Inc.; 2019. p. 36–45.
216. Marmorstein NR. Energy Drink and Coffee Consumption and Psychopathology Symptoms Among Early Adolescents: Cross-Sectional and Longitudinal Associations. J Caffeine Res. 2016 Jun;6(2):64–72.
217. Ludden AB, Wolfson AR. Understanding adolescent caffeine use: Connecting use patterns with expectancies, reasons, and sleep. Heal Educ Behav. 2010 Jun;37(3):330–42.
218. Miller KE, Dermen KH, Lucke JF. Caffeinated energy drink use by U.S. adolescents aged 13-17: A national profile. Psychol Addict Behav. 2018 Sep 1;32(6):647–59.
219. Miyake ER, Marmorstein NR. Energy drink consumption and later alcohol use among early adolescents. Addict Behav. 2015 Apr 1;43:60–5.
220. Emond JA, Gilbert-Diamond D, Tanski SE, Sargent JD. Energy drink consumption and the risk of alcohol use disorder among a national sample of adolescents and young adults. J Pediatr. 2014 Dec 1;165(6):1194–200.
221. Mann MJ, Smith ML s., Kristjansson AL. Energy drink consumption and substance use risk in middle school students. Prev Med Reports. 2016 Jun 1;3:279–82.
222. Kamal RM, Van Noorden MS, Franzek E, Dijkstra BAG, Loonen AJM, De Jong CAJ. The neurobiological mechanisms of gamma-hydroxybutyrate dependence and withdrawal and their clinical relevance: A review. Vol. 73, Neuropsychobiology. S. Karger AG; 2016. p. 65–80.
223. Ritter D, Ouellette L, Sheets JD, Riley B, Judge B, Cook A, et al. "Robo-tripping": Dextromethorphan toxicity and abuse. Am J Emerg Med. 2019 Nov;
224. Qiu Y wei, Lv X fei, Jiang G hua, Su HH, Ma X fen, Tian J zhang, et al. Potential gray matter unpruned in adolescents and young adults dependent on dextromethorphan-containing cough syrups: evidence from cortical and subcortical study. Brain Imaging Behav. 2017 Oct 1;11(5):1470–8.
225. Kandel DB, Johnson JG, Bird HR, Weissman MM, Goodman SH, Lahey BB, et al. Psychiatric comorbidity among adolescents with substance use disorders: Findings from the MECA study. J Am Acad Child Adolesc Psychiatry. 1999;38(6):693–9.
226. Grella CE, Hser YI, Joshi V, Rounds-Bryant J. Drug treatment outcomes for adolescents with comorbid mental and substance use disorders. J Nerv Ment Dis. 2001;189(6):384–92.
227. Mason MJ, Aplasca A, Morales-Theodore R, Zaharakis N, Linker J. Psychiatric Comorbidity and Complications. Vol. 25, Child and Adolescent Psychiatric Clinics of North America. W.B. Saunders; 2016. p. 521–32.
228. Deas D. Adolescent substance abuse and psychiatric comorbidities. J Clin Psychiatry. 2006;67 Suppl 7:18–23.
229. Hills HA. Treating Adolescents with Co-Occurring Disorders. 2007.
230. Kandel DB, Johnson JG, Bird HR, Canino G, Goodman SH, Lahey BB, et al. Psychiatric disorders associated with substance use among children and adolescents: Findings from the methods for the epidemiology of child and adolescent mental disorders (MECA) study. J Abnorm Child Psychol. 1997;25(2):121–32.

231. Henry B, Feehan M, McGee R, Stanton W, Moffitt TE, Silva P. The importance of conduct problems and depressive symptoms in predicting adolescent substance use. J Abnorm Child Psychol. 1993 Oct;21(5):469–80.
232. Hussong AM, Ennett ST, Cox MJ, Haroon M. A systematic review of the unique prospective association of negative affect symptoms and adolescent substance use controlling for externalizing symptoms. Vol. 31, Psychology of Addictive Behaviors. Educational Publishing Foundation; 2017. p. 137–47.
233. Kaminer Y, Connor DF, Curry JF. Comorbid adolescent substance use and major depressive disorders: a review. Psychiatry (Edgmont). 2007 Dec;4(12):32–43.
234. Hides L, Carroll S, Catania L, Cotton SM, Baker A, Scaffidi A, et al. Outcomes of an integrated cognitive behaviour therapy (CBT) treatment program for co-occurring depression and substance misuse in young people. J Affect Disord. 2010 Feb;121(1–2):169–74.
235. Hides LM, Elkins KS, Scaffidi A, Cotton SM, Carroll S, Lubman DI. Does the addition of integrated cognitive behaviour therapy and motivational interviewing improve the outcomes of standard care for young people with comorbid depression and substance misuse? Med J Aust. 2011 Aug 1;195(3 SUPPL.).
236. Zhou X, Qin B, Del Giovane C, Pan J, Gentile S, Liu Y, et al. Efficacy and tolerability of antidepressants in the treatment of adolescents and young adults with depression and substance use disorders: A systematic review and meta-analysis. Vol. 110, Addiction. Blackwell Publishing Ltd; 2015. p. 38–48.
237. Deady M, Teesson M, Kay-Lambkin FJ. Treatments for co-occurring depression and substance use in young people: A systematic review. Curr Drug Abuse Rev. 2014 Jan 1;7(1):3–17.
238. Riggs PD. Treating adolescents for substance abuse and comorbid psychiatric disorders. Sci Pract Perspect. 2003;2(1):18–29.
239. Shlosberg D, Zalsman G, Shoval G. Emerging issues in the relationship between adolescent substance use and suicidal behavior. Isr J Psychiatry Relat Sci. 2014 Aug 11;51(4):262–9.
240. Park S, Cho S-C, Hong Y-C, Oh S-Y, Kim J-W, Shin M-S, et al. Association between dietary behaviors and attention-deficit/hyperactivity disorder and learning disabilities in school-aged children. Psychiatry Res. 2012 Aug 15;198(3):468–76.
241. Adams ZW, McCauley JL, Back SE, Flanagan JC, Hanson RF, Killeen TK, et al. Clinician Perspectives on Treating Adolescents with Co-occurring Post-Traumatic Stress Disorder, Substance Use, and Other Problems. J Child Adolesc Subst Abuse. 2016 Nov 10;25(6):575–83.
242. Winningham RD, Banks DE, Buetlich MR, Aalsma MC, Zapolski TCB. Substance use disorder and posttraumatic stress disorder symptomology on behavioral outcomes among juvenile justice youth. Am J Addict. 2019 Jan 21;28(1):29–35.
243. Fortuna LR, Porche M V., Padilla A. A treatment development study of a cognitive and mindfulness-based therapy for adolescents with co-occurring post-traumatic stress and substance use disorder. Psychol Psychother Theory, Res Pract. 2018 Mar;91(1):42–62.
244. Bushnell GA, Gaynes BN, Compton SN, Dusetzina SB, Olfson M, Stürmer T. Incident Substance Use Disorder Following Anxiety Disorder in Privately Insured Youth. J Adolesc Heal. 2019 Oct 1;65(4):536–42.
245. Buckner JD, Schmidt NB, Lang AR, Small JW, Schlauch RC, Lewinsohn PM. Specificity of social anxiety disorder as a risk factor for alcohol and cannabis dependence. J Psychiatr Res. 2008 Feb;42(3):230–9.
246. Horigian VE, Weems CF, Robbins MS, Feaster DJ, Ucha J, Miller M, et al. Reductions in anxiety and depression symptoms in youth receiving substance use treatment. Am J Addict. 2013 Jul;22(4):329–37.
247. Wilens TE, Biederman J, Martelon M, Zulauf C, Anderson JP, Carrellas NW, et al. Further evidence for smoking and substance use disorders in youth with bipolar disorder and comorbid conduct disorder. J Clin Psychiatry. 2016 Oct 1;77(10):1420–7.
248. Elizabeth Sublette M, Carballo JJ, Moreno C, Galfalvy HC, Brent DA, Birmaher B, et al. Substance use disorders and suicide attempts in bipolar subtypes. J Psychiatr Res. 2009 Jan;43(3):230–8.
249. DelBello MP, Hanseman D, Adler CM, Fleck DE, Strakowski SM. Twelve-month outcome of adolescents with bipolar disorder following first hospitalization for a manic or mixed episode. Am J Psychiatry. 2007;164(4):582–90.
250. Ostacher MJ, Perlis RH, Nierenberg AA, Calabrese J, Stange JP, Salloum I, et al. Impact of substance use disorders on recovery from episodes of depression in bipolar disorder patients: prospective data from the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD). Am J Psychiatry. 2010 Mar;167(3):289–97.
251. Mazza M, Mandelli L, Di Nicola M, Harnic D, Catalano V, Tedeschi D, et al. Clinical features, response to treatment and functional outcome of bipolar disorder patients with and without co-occurring substance use disorder: 1-year follow-up. J Affect Disord. 2009 May;115(1–2):27–35.
252. Goldstein BI, Strober MA, Birmaher B, Axelson DA, Esposito-Smythers C, Goldstein TR, et al. Substance use disorders among adolescents with bipolar spectrum disorders. Bipolar Disord. 2008 Jun;10(4):469–78.
253. Meade CS, Fitzmaurice GM, Sanchez AK, Griffin ML, McDonald LJ, Weiss RD. The relationship of manic episodes and drug abuse to sexual risk behavior in patients with co-occurring bipolar and substance use disorders: A 15-month prospective analysis. AIDS Behav. 2011 Nov;15(8):1829–33.
254. Geller B, Cooper TB, Sun K, Zimerman B, Frazier J, Williams M, et al. Double-blind and placebo-controlled study of lithium for adolescent bipolar disorders with secondary substance dependency. J Am Acad Child Adolesc Psychiatry. 1998;37(2):171–8.
255. Mustonen A, Ahokas T, Nordström T, Murray GK, Mäki P, Jääskeläinen E, et al. Smokin' hot: adolescent smoking and the risk of psychosis. Acta Psychiatr Scand. 2018 Jul;138(1):5–14.
256. Barnett JH, Werners U, Secher SM, Hill KE, Brazil R, Masson K, et al. Substance use in a population-based clinic sample of people with first-episode psychosis. Br J Psychiatry. 2007 Jun;190(JUNE):515–20.

257. Kane JM, Robinson DG, Schooler NR, Mueser KT, Penn DL, Rosenheck RA, et al. Comprehensive versus usual community care for first-episode psychosis: 2-Year outcomes from the NIMH RAISE early treatment program. Am J Psychiatry. 2016 Apr 1;173(4):362–72.
258. Barrowclough C, Gregg L, Lobban F, Bucci S, Emsley R. The Impact of Cannabis Use on Clinical Outcomes in Recent Onset Psychosis. Schizophr Bull. 2015 Mar 1;41(2):382–90.
259. Jones HJ, Gage SH, Heron J, Hickman M, Lewis G, Munafò MR, et al. Association of combined patterns of tobacco and cannabis use in adolescence with psychotic experiences. JAMA Psychiatry. 2018 Mar 1;75(3):240–6.
260. Barkhuizen W, Taylor MJ, Freeman D, Ronald A. A Twin Study on the Association Between Psychotic Experiences and Tobacco Use During Adolescence. J Am Acad Child Adolesc Psychiatry. 2019 Feb 1;58(2):267–276.e8.
261. Colder CR, Scalco M, Trucco EM, Read JP, Lengua LJ, Wieczorek WF, et al. Prospective associations of internalizing and externalizing problems and their co-occurrence with early adolescent substance use. Vol. 41, Journal of Abnormal Child Psychology. 2013. p. 667–77.
262. Groenman AP, Oosterlaan J, Rommelse N, Franke B, Roeyers H, Oades RD, et al. Substance use disorders in adolescents with attention deficit hyperactivity disorder: a 4-year follow-up study. Addiction. 2013 Aug;108(8):1503–11.
263. Molina BSG, Howard AL, Swanson JM, Stehli A, Mitchell JT, Kennedy TM, et al. Substance use through adolescence into early adulthood after childhood-diagnosed ADHD: findings from the MTA longitudinal study. J Child Psychol Psychiatry. 2018 Jan;
264. Charach A, Yeung E, Climans T, Lillie E. Childhood Attention-Deficit/Hyperactivity Disorder and Future Substance Use Disorders: Comparative Meta-Analyses. J Am Acad Child Adolesc Psychiatry. 2011 Jan;50(1):9–21.
265. Sihvola E, Rose RJ, Dick DM, Korhonen T, Pulkkinen L, Raevuori A, et al. Prospective relationships of ADHD symptoms with developing substance use in a population-derived sample. Psychol Med. 2011 Dec;41(12):2615–23.
266. Sibley MH, Pelham WE, Molina BSG, Coxe S, Kipp H, Gnagy EM, et al. The role of early childhood ADHD and subsequent CD in the initiation and escalation of adolescent cigarette, alcohol, and marijuana use. J Abnorm Psychol. 2014 May;123(2):362–74.
267. Arias AJ, Gelernter J, Chan G, Weiss RD, Brady KT, Farrer L, et al. Correlates of co-occurring ADHD in drug-dependent subjects: Prevalence and features of substance dependence and psychiatric disorders. Addict Behav. 2008 Sep;33(9):1199–207.
268. van Emmerik-van Oortmerssen K, van de Glind G, van den Brink W, Smit F, Crunelle CL, Swets M, et al. Prevalence of attention-deficit hyperactivity disorder in substance use disorder patients: a meta-analysis and meta-regression analysis. Drug Alcohol Depend. 2012 Apr 1;122(1–2):11–9.
269. Carroll KM, Rounsaville BJ. History and significance of childhood attention deficit disorder in treatment-seeking cocaine abusers. Compr Psychiatry. 1993;34(2):75–82.
270. Humphreys KL, Eng T, Lee SS. Stimulant medication and substance use outcomes: a meta-analysis. JAMA psychiatry. 2013 Jul;70(7):740–9.
271. Schoenfelder EN, Faraone S V., Kollins SH. Stimulant treatment of ADHD and cigarette smoking: A meta-analysis. Vol. 133, Pediatrics. American Academy of Pediatrics; 2014. p. 1070–80.
272. Groenman AP, Schweren LJS, Weeda W, Luman M, Noordermeer SDS, Heslenfeld DJ, et al. Stimulant treatment profiles predicting co-occurring substance use disorders in individuals with attention-deficit/hyperactivity disorder. Eur Child Adolesc Psychiatry. 2019 Sep 1;28(9):1213–22.
273. Upadhyay N, Chen H, Mgbere O, Bhatara VS, Aparasu RR. The Impact of Pharmacotherapy on Substance Use in Adolescents With Attention-Deficit/Hyperactivity Disorder: Variations Across Subtypes. Subst Use Misuse. 2017;52(10):1266–74.
274. Carrellas N, Wilens TE, Anselmo R. Treatment of Comorbid Substance Use Disorders and ADHD in Youth. Vol. 3, Current Treatment Options in Psychiatry. Springer; 2016. p. 15–27.
275. Marmorstein NR, White HR. Comorbidity with Substance Abuse. In: The Wiley Handbook of Disruptive and Impulse-Control Disorders. Chichester, UK: John Wiley & Sons, Ltd; 2017. p. 73–88.
276. Krueger RF, Markon KE, Patrick CJ, Benning SD, Kramer MD. Linking antisocial behavior, substance use, and personality: An integrative quantitative model of the adult externalizing spectrum. J Abnorm Psychol. 2007;116(4):645–66.
277. Krueger RF, South SC. Externalizing disorders: Cluster 5 of the proposed meta-structure for DSM-V and ICD-11. Vol. 39, Psychological Medicine. 2009. p. 2061–70.
278. Jayarajan D, Jacob P. Psychosocial interventions among children and adolescents. Vol. 60, Indian Journal of Psychiatry. Medknow Publications; 2018. p. S546–52.
279. Winters KC, Botzet AM, Stinchfield R, Gonzales-Castaneda R, Finch AJ, Piehler TF, et al. Adolescent Substance Abuse Treatment: A Review of Evidence-Based Research. In 2018. p. 141–71.
280. National Institute on Drug Abuse. Principles of adolescent substance use disorder treatment: A research-based guide [Internet]. Bethesda, MD; 2014. Available from: https://www.drugabuse.gov/publications/principles-adolescent-substance-use-disorder-treatment-research-based-guide/principles-adolescent-substance-use-disorder-treatment
281. Waldron HB, Turner CW. Evidence-Based Psychosocial Treatments for Adolescent Substance Abuse. J Clin Child Adolesc Psychol. 2008 Mar 3;37(1):238–61.
282. Tanner-Smith EE, Wilson SJ, Lipsey MW. The comparative effectiveness of outpatient treatment for adolescent substance abuse: A meta-analysis. J Subst Abuse Treat. 2013 Feb;44(2):145–58.
283. Winters KC, Tanner-Smith EE, Bresani E, Meyers K. Current advances in the treatment of adolescent drug use. Vol. 5, Adolescent Health, Medicine and Therapeutics. Dove Medical Press Ltd.; 2014. p. 199–209.

284. Hogue A, Henderson CE, Ozechowski TJ, Robbins MS. Evidence base on outpatient behavioral treatments for adolescent substance use: updates and recommendations 2007-2013. J Clin Child Adolesc Psychol. 2014;43(5):695–720.
285. Randall J. Challenges and Possible Solutions for Implementing Contingency Management for Adolescent Substance Use Disorder in Community-Based Settings. J Child Adolesc Subst Abus. 2017 Jul 4;26(4):332–7.
286. Kelly JF, Kaminer Y, Kahler CW, Hoeppner B, Yeterian J, Cristello J V., et al. A pilot randomized clinical trial testing integrated 12-Step facilitation (iTSF) treatment for adolescent substance use disorder. Addiction. 2017 Dec;112(12):2155–66.
287. Hammond CJ, Sharma P. Medications for Substance Use and Relapse Prevention. In: Treating Adolescent Substance Use. Springer International Publishing; 2019. p. 77–90.
288. Squeglia LM, Fadus MC, McClure EA, Tomko RL, Gray KM. Pharmacological Treatment of Youth Substance Use Disorders. J Child Adolesc Psychopharmacol. 2019 Aug 1;29(7):559–72.
289. Fanshawe TR, Halliwell W, Lindson N, Aveyard P, Livingstone-Banks J, Hartmann-Boyce J. Tobacco cessation interventions for young people. Vol. 2017, Cochrane Database of Systematic Reviews. John Wiley and Sons Ltd; 2017.
290. Myung SK, Park JY. Efficacy of Pharmacotherapy for Smoking Cessation in Adolescent Smokers: A Meta-analysis of Randomized Controlled Trials. Nicotine Tob Res. 2018 Aug 29;21(11):1473–9.
291. Scherphof CS, van den Eijnden RJJM, Engels RCME, Vollebergh WAM. Short-term efficacy of nicotine replacement therapy for smoking cessation in adolescents: a randomized controlled trial. J Subst Abuse Treat. 2014 Feb;46(2):120–7.
292. Hammond CJ, Gray KM. Pharmacotherapy for Substance Use Disorders in Youths. Vol. 25, Journal of Child and Adolescent Substance Abuse. Routledge; 2016. p. 292–316.
293. Bailey SR, Hagen SA, Jeffery CJ, Harrison CT, Ammerman S, Bryson SW, et al. A randomized clinical trial of the efficacy of extended smoking cessation treatment for adolescent smokers. Nicotine Tob Res. 2013 Oct;15(10):1655–62.
294. Killen JD, Robinson TN, Ammerman S, Hayward C, Rogers J, Stone C, et al. Randomized clinical trial of the efficacy of bupropion combined with nicotine patch in the treatment of adolescent smokers. J Consult Clin Psychol. 2004 Aug;72(4):729–35.
295. Muramoto ML, Leischow SJ, Sherrill D, Matthews E, Strayer LJ. Randomized, double-blind, placebo-controlled trial of 2 dosages of sustained-release bupropion for adolescent smoking cessation. Arch Pediatr Adolesc Med. 2007 Nov;161(11):1068–74.
296. Gray KM, Carpenter MJ, Baker NL, Hartwell KJ, Lewis AL, Hiott DW, et al. Bupropion SR and contingency management for adolescent smoking cessation. J Subst Abuse Treat. 2011 Jan;40(1):77–86.
297. Faessel H, Ravva P, Williams K. Pharmacokinetics, safety, and tolerability of varenicline in healthy adolescent smokers: A multicenter, randomized, double-blind, placebo-controlled, parallel-group study. Clin Ther. 2009 Jan;31(1):177–89.
298. Gray KM, Carpenter MJ, Lewis AL, Klintworth EM, Upadhyaya HP. Varenicline versus Bupropion XL for Smoking Cessation in Older Adolescents: A Randomized, Double-Blind Pilot Trial. Nicotine Tob Res. 2012 Feb 1;14(2):234–9.
299. Gray KM, Baker NL, Mcclure EA, Tomko RL, Squeglia LM, Saladin ME, et al. Efficacy and Safety of Varenicline for Adolescent Smoking Cessation: A Randomized Clinical Trial. JAMA Pediatr. 2019 Dec 1;E1–8.
300. Maisel NC, Blodgett JC, Wilbourne PL, Humphreys K, Finney JW. Meta-analysis of naltrexone and acamprosate for treating alcohol use disorders: When are these medications most helpful? Addiction. 2013 Feb;108(2):275–93.
301. Miranda R, Ray L, Blanchard A, Reynolds EK, Monti PM, Chun T, et al. Effects of naltrexone on adolescent alcohol cue reactivity and sensitivity: an initial randomized trial. Addict Biol. 2014 Sep;19(5):941–54.
302. Tomko RL, Jones JL, Gilmore AK, Brady KT, Back SE, Gray KM. N-acetylcysteine: A potential treatment for substance use disorders. Curr Psychiatr. 2018;17(6):30–6, 41–2, 55.
303. Dawes MA, Johnson BA, Ait-Daoud N, Ma JZ, Cornelius JR. A prospective, open-label trial of ondansetron in adolescents with alcohol dependence. Addict Behav. 2005 Jul;30(6):1077–85.
304. Gray KM, Watson NL, Carpenter MJ, Larowe SD. N-Acetylcysteine (NAC) in young marijuana users: An open-label pilot study. Am J Addict. 2010 Mar;19(2):187–9.
305. Gray KM, Carpenter MJ, Baker NL, DeSantis SM, Kryway E, Hartwell KJ, et al. A double-blind randomized controlled trial of N-acetylcysteine in cannabis-dependent adolescents. Am J Psychiatry. 2012 Aug 1;169(8):805–12.
306. Miranda R, Treloar H, Blanchard A, Justus A, Monti PM, Chun T, et al. Topiramate and motivational enhancement therapy for cannabis use among youth: a randomized placebo-controlled pilot study. Addict Biol. 2017 May 1;22(3):779–90.
307. Gray JC, Treloar Padovano H, Wemm SE, Miranda R. Predictors of Topiramate Tolerability in Heavy Cannabis-Using Adolescents and Young Adults: A Secondary Analysis of a Randomized, Double-Blind, Placebo-Controlled Trial. J Clin Psychopharmacol. 2018 Apr 1;38(2):134–7.
308. Borodovsky JT, Levy S, Fishman M, Marsch LA. Buprenorphine Treatment for Adolescents and Young Adults with Opioid Use Disorders: A Narrative Review. Vol. 12, Journal of Addiction Medicine. Lippincott Williams and Wilkins; 2018. p. 170–83.
309. Marsch LA, Moore SK, Borodovsky JT, Solhkhah R, Badger GJ, Semino S, et al. A randomized controlled trial of buprenorphine taper duration among opioid-dependent adolescents and young adults. Addiction. 2016 Aug 1;111(8):1406–15.
310. Bukstein OG. Medication-Assisted Treatment (MAT) for Adolescents with Opiate Use Disorder. Child Adolesc Psychopharmacol News. 2015 Apr;20(2):1–4,8.

311. Fishman MJ, Winstanley EL, Curran E, Garrett S, Subramaniam G. Treatment of opioid dependence in adolescents and young adults with extended release naltrexone: Preliminary case-series and feasibility. Addiction. 2010 Sep;105(9):1669–76.
312. Vo HT, Burgower R, Rozenberg I, Fishman M. Home-based delivery of XR-NTX in youth with opioid addiction. J Subst Abuse Treat. 2018 Feb 1;85:84–9.
313. Heinzerling KG, Gadzhyan J, Van Oudheusden H, Rodriguez F, McCracken J, Shoptaw S. Pilot randomized trial of bupropion for adolescent methamphetamine abuse/dependence. J Adolesc Heal. 2013 Apr;52(4):502–5.
314. Passetti LL, Godley MD, Kaminer Y. Continuing Care for Adolescents in Treatment for Substance Use Disorders. Vol. 25, Child and Adolescent Psychiatric Clinics of North America. W.B. Saunders; 2016. p. 669–84.
315. Cornelius JR, Maisto SA, Pollock NK, Martin CS, Salloum IM, Lynch KG, et al. Rapid relapse generally follows treatment for substance use disorders among adolescents. Addict Behav. 2003 Mar;28(2):381–6.
316. Gonzales R, Douglas Anglin M, Beattie R, Ong CA, Glik DC. Understanding recovery barriers: Youth perceptions about substance use relapse. Am J Health Behav. 2012 Sep;36(5):602–14.
317. Sussman S, Skara S, Ames SL. Substance abuse among adolescents. Vol. 43, Substance Use and Misuse. 2008.
318. Kaminer Y. Alcohol and Drug Abuse: Adolescent Substance Abuse Treatment: Where Do We Go From Here? Psychiatr Serv. 2001 Feb;52(2):147–9.