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United States District Court  
Southern District of New York

7:21-cv-00120

Andrew Glancey, individually and on behalf  
of all others similarly situated,

Plaintiff,

- against -

Trek Bicycle Corporation,

Defendant

Class Action Complaint

Plaintiff alleges upon information and belief, except for allegations pertaining to plaintiff, which are based on personal knowledge:

1. Trek Bicycle Corporation (“defendant”) manufactures, labels, markets and promotes bicycle helmets under the Bontrager WaveCel brand (“Product”) which purport to reduce the incidence and/or prevent the occurrence of concussions, relative to other similar bicycle helmets, sold to consumers from stores and websites, operated by third-parties and defendant.

2. The Product was touted by defendant as the most significant advancement in cycling in the last 30 years when it was released in early 2019.

#### I. Introduction

3. Over the past two decades, the public has become increasingly aware of the long-term neurologic risks associated with concussions due to the publicity and media attention on professional football.

4. A concussion is an injury to the brain that results in temporary loss of normal brain function.

5. According to the CDC, up to 3.8 million people suffer concussions each year, the majority of which occur during competitive or recreational sports.

6. According to The New York Times, emergency room visits by children and adolescents for brain injuries jumped more than 60% from 2001 to 2009.

7. The CDC attributes this increase in visits to “the growing awareness among parents and coaches, and the public as a whole, about the need for individuals with a suspected traumatic brain injury (TBI) to be seen by a health care professional.”

8. The increased awareness has improved procedures to properly recognize and diagnose concussions through education and training.

9. Young athletes who endure collisions are no longer told to “walk it off” or praised for “having their bell rung,” but evaluated according to various concussion protocols.

10. A downside to this greater attention is the development and marketing of products claiming to provide greater protection from concussions – but at significantly higher cost.

11. Since concussions are brain injuries, many people are willing to pay a price premium beyond a standard product, if the alternative has even the slightest chance of providing *any* additional protection.

12. Defendant’s marketing and advertising claims for the Product were disseminated on the packaging and labeling, through online channels including social media, websites including its own, and/or through in-store placards and signage.

13. The Product is described as “A major advancement in the protection against cycling-related head injuries.”<sup>1</sup>

14. Defendant claimed the Product is “up to 48x more effective than traditional foam helmets in protecting your head from injuries caused by certain cycling accidents.”<sup>2</sup>

15. According to Defendant:

WaveCel is a revolutionary helmet safety tech that’s available exclusively in these Bontrager helmets. Standard foam helmets are designed to protect against direct impacts. But WaveCel accounts for how most cycling accidents actually happen: ungracefully, with twists, turns, and angled impacts. These WaveCel road, mountain, commuter, and e-bike helmets are remarkably effective at preventing concussions caused by common cycling accidents.

16. In much of its marketing surrounding the Products, Defendant noticeably avoids the term “concussion,” and employs a variety of euphemisms:

- It’s designed to be **more effective than traditional foam helmets** in protecting your head from injuries caused by **certain cycling accidents**.
- You only get **one brain – Protect it**
- How it works – WaveCel works like a crumple zone that helps absorb the force of impact before it reaches your head. In order to protect your head and absorb the energy created by an **angled impact**, WaveCel is designed to go through a three-step change in material structure.
- Steeped in science WaveCel is the brainchild of a biomechanical engineer and an orthopedic surgeon who've dedicated their lives to **brain injury prevention**. It's the first-ever helmet tech to receive funding from the US National Institute of Health.

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<sup>1</sup> Press Release, [Trek and Bontrager's new helmet technology disrupts safety standards](#), March 19, 2019; Bontrager [WaveCel Helmets](#).

<sup>2</sup> *Id.*

- Wear it for them [kids] A leading technology in the protection against **cycling-related head injuries**
- Protect **what matters most** Young riders carry precious cargo on every ride: a complex, developing organ that gives them movement, imagination, memory, feeling, and more, and makes them the person and rider they are. Yep, we're talking about their **brain**. They only get one, and it's worth protecting.<sup>3</sup>

17. Reasonable consumers understand the terms defendant uses to promote the Product are intended to refer to concussions, even if Defendant does not explicitly say so.

II. Defendant's Reliance on its Study to Promote the Product as Effective in Concussion Reduction is Misleading

18. As part of their effort to capture the largest share of the helmet market, defendant conducted what would appear to be a scientific test regarding the purported concussion protective benefits of the Product.<sup>4</sup>

19. Defendant marketed the Product as capable of reducing the incidence of concussion when compared to other bicycle helmets available for sale from other manufacturers that cost significantly less.

20. Defendant's promise is false or deceptive because their Helmets do not provide the promised reduced incidence of concussions.

21. In fact, objective and reliable research shows that claims of concussion reduction related to bicycle helmets are not valid and are instead simply a marketing tool.

22. Defendant's marketing and advertising relies heavily on a study it conducted in

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<sup>3</sup> [WaveCel Kids](#).

<sup>4</sup> Emily Bliven et al. "[Evaluation of a novel bicycle helmet concept in oblique impact testing](#)." Accident Analysis & Prevention 124 (2019): 58-65.

support of its Product's ability to reduce concussions.

23. Defendant's claims and representations with respect to the connection between the Product and concussions are false and misleading for several independent reasons.

A. Concussion is a Clinical Diagnosis Without Uniform Definition or Determination

24. Advertising a helmet as effective at preventing or reducing the risk of concussion is misleading because there is no standardized definition for concussion.

25. A concussion is not a structural injury to the brain but is rather a functional injury.

26. As a result, concussions do not typically show up on MRI or CT scans.

27. The global bodies – WHO and the ACRM – differ in their definition of concussion.<sup>5</sup>

28. Studies examining helmet usage and concussion focus on diverse, dissimilar factors in establishing concussion, such as cranial pathology, neck injury, vestibular dysfunction, or noncranial pathology.

29. There is overlap between the definitions of mild traumatic brain injury (“mTBI”) and concussion, even though they are separate intracranial injuries.

30. Indications of a concussion include headache, lack of concentration, problems with memory and judgment, sensitivity to light, lack of coordination and difficulty with balance.

31. Significant effects of concussion can include Chronic Traumatic Encephalopathy (“CTE”) and Second Impact Syndrome.

32. CTE is a progressive neurodegenerative disease caused by repetitive trauma to the brain, which eventually leads to dementia and other neurological disorders.

33. Second Impact Syndrome is a condition in which the brain swells rapidly after the injured person suffers a second concussion before being able to properly heal from the first,

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<sup>5</sup> World Health Organization; American Congress of Rehabilitation Medicine.

causing substantial injury or death.

34. The brain is encased in a hard skull, stabilized by supporting tissues, and covered on all sides by membranes and a layer of fluid.

35. For this reason, it is often said that the brain “floats” inside the skull.

36. Injuries to the brain occur when the head suddenly stops moving, but the brain, which was traveling at the same speed as the head, continues to move and strikes the inside of the skull, transferring part of the force to the brain.

37. This occurs when a blow is given to the head and when the head is forced to accelerate or decelerate rapidly.

38. Because the brain is soft, when the brain strikes the inside of the skull, it briefly deforms, leading to a concussion.

39. A common analogy of for a concussion is an eggshell and a yolk.

40. The brain is the yolk, nestled in its shell and further protected by the egg white.

41. When the yolk moves quickly and violently, it smashes into the rigid shell – the same as with the brain inside the skull.

42. Accordingly, while the shell can be protected with a device that might prevent it from cracking, this device cannot prevent the yolk inside the shell from being shaken and twisted.

B. Not Only are Helmets not Proven to Effect Incidence of Concussion, They are Not Shown to have an Impact on Brain and Head Injury

43. Credible studies demonstrating an effect of helmets on concussions do not exist for several reasons.

44. First, a randomized double-blind controlled trial is not possible because this would require a very large number of cyclists and subjects would know whether they are wearing a helmet or not.

45. Nevertheless, the literature is replete with studies showing dramatic effects of helmets in reducing incidences of head injury.

46. A seminal 1989 case control study concluded that helmets contributed to an 85 percent reduction in risk of head injury and an 88 percent reduction in risk of brain injury.

47. This study is deficient because it aggregated data on people involved in bicycle crashes after they happened, regardless of how or why they occurred.

48. It involved comparing the number of helmeted and non-helmeted cyclists with a head injury from an accident, with the total number of cyclists with and without a helmet.

49. However, the number of total cyclists that wear helmets is often not known, so the control group consists of a group of hospital patients with cycling injuries other than head injuries.

50. Meta-analyses have concluded other studies purporting to show a causal connection between helmets and head injury are beset by methodological problems that inflate the effect of helmets on head injuries.

51. Time-trend studies which show an increase or decrease in head injuries before, during and after helmet mandates are subject to confounding factors.

52. This is because the presence of helmet requirements influences the types of people who are bicyclists and their behaviors.

53. For example, helmet mandates often deter the safer, less experienced riders and do not account for the decrease in safe riding behaviors due to helmet wearing.

54. Of 11 publications based on injury reports, two studies evaluated bicycle helmet use regarding concussion and TBI rates.<sup>6</sup>

55. A recent study has concluded that bicycle helmets are ineffective at preventing

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<sup>6</sup> Je Yeong Sone et al. "[Helmet efficacy against concussion and traumatic brain injury: a review.](#)" *Journal of neurosurgery* 126.3 (2017): 768-781.

concussions, at the same time raising questions about their tendency to cause more bike accidents and injuries due to factors such as risk compensation.<sup>7</sup>

56. Previous studies focused on concussions and helmets showed only a 14.9% decline in concussions between 6-17 year-olds in the US from 2006-2010 to 2011-2016, despite a 17.6% decline in cycling participation.

57. One study concluded there was no relationship between the rate of helmet use and incidence of traumatic brain injury in California as a result of a mandatory helmet law between 1992 and 2009.

58. Another (retrospective) “cohort study on pediatric bicyclists reported a concussion rate of 19.4% in helmeted patients and a concussion rate of 37.4% in unhelmeted patients, but the difference was not statistically significant between the 2 patient groups ( $p = 0.0509$ ).”

59. Most studies showed that helmet use did not result in a statistically significant reduction in concussion incidence and symptoms.

C. Defendant’s Study Includes Non-Standard Assumptions Contradicted by Real World Standards

60. Defendant’s study is based on the increased academic and medical attention given to rotational acceleration as a cause of concussions.

61. According to this theory, the standard measure of helmet effectiveness – linear acceleration – is ill-equipped for helmets that prevent concussions, as opposed to other head injuries like skull fracture.

62. It is posited that helmets may be less effective against concussion than more severe forms of TBI due to the different biomechanics of these injuries.

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<sup>7</sup> Edward J. Alfrey et al. "[Helmet Usage Reduces Serious Head Injury Without Decreasing Concussion After Bicycle Riders Crash.](#)" *Journal of Surgical Research* 257 (2020): 593-596.



63. However, little research and understanding have been developed on the specific roles of linear and angular head acceleration in concussion.

64. Generally, concussion is “induced by low-energy linear and rotational accelerations that cause more diffuse, distributed impact loading and peak ICP than the brain tissue can tolerate, resulting in damage to the microscopic structures of the brain and temporary onset of neurological impairment.”

65. More severe forms of TBI are typically caused by high-energy focal forces loading onto a localized region of the brain, resulting in injuries such as penetrating TBI and depressed skull fractures.

66. Helmets are designed to prevent extreme forms of brain injury such as skull fracture which often results in death.

67. The Product’s emphasis on being different from “traditional helmets” which supposedly do not protect against angular impacts is misleading.

68. Standard helmets are designed to reduce linear acceleration, which will “also reduce angular acceleration which is a result of oblique impacts.”

69. Novel helmet technologies seek to cast doubt on the ability of current helmets to reduce the risk of concussion.

70. Defendant’s study compared its Product, which uses “a collapsible structure that seeks to reduce the shear stiffness of the helmet to provide a rotational suspension” (“WAVECEL”), to one that uses a slip interface inside the helmet (“MIPS”), to a control, standard helmet.

71. It is theorized that the WaveCel and MIPS helmets provide superior concussion protection because they reduce rotational acceleration by permitting sliding between the helmet

and head during impact.

72. This overlooks that a typical bicycle helmet is loosely coupled to the rider's head, such that a slip-plane or collapsible cellular structure does not add significant sideways movement in an impact.

73. In a real-world impact, a helmet will slide against a rider's head.

74. Wide varieties of helmets were unable to protect against the impacts of simulated directional forces that would induce concussion in human subjects.

D. The Authors of the Study have a Financial Interest in the Product

75. One or more of the study's authors has a direct financial interest in the WaveCel technology, licensed exclusively by Defendant.

76. These financial relationships are a significant potential conflict of interest that was subsequently raised by many commentators regarding the study.

77. In advertisements and marketing copy which trumpet the purported success of the study, Defendant failed to disclose to consumers these significant potential conflicts of interest.

E. To the Extent it is Accepted that Bicycle Helmets Can Reduce Concussion, Defendant's Product is Only Marginally Superior to Helmets Significantly Less in Price

78. Even accepting the Product reduces the incidence of concussions, the benefit offered is not equivalent to the price premium charged.

79. For example, among third-parties that seek to evaluate bike helmets for effectiveness against concussions, Defendant's Product with the WaveCel technology is rated equal to or only marginally better than a helmet it sells which incorporates MIPS, though the WaveCel is significantly more expensive.

80. Therefore, Defendant's representation of the Product as a breakthrough in

concussion reduction is misleading, because the benefit is imperceptible in contrast to the large price difference.

F. Defendant's Claim that the Product is "up to" 48 times more Effective in Providing Head Injury Protection than Competitors is False, Deceptive and Misleading

81. Defendant prominently claims on its website and in marketing materials that the Product provides "up to" 48 times more head injury protection than competitor products.

82. This statement is false and misleading.

83. First, the "48x" figure was based on an accident which occurs at a much higher speed than most bicyclists ever reach.

84. This means the "up to" language will have no relevance for consumers and its only relevance is to facilitate the "48x" claim.

85. Second, the study was conducted with non-standard head and neck models.

86. Third, the disclosure accompanying the claim citing to the study is inconspicuous and does not disclose the issues with the study.

87. Fourth, the comparative effectiveness of the Product was based on specific angles and potential impacts that are inconsistent with real world bicycle accidents.

G. Defendant's Study did not Use any of the Helmets it Promotes

88. Defendant's reliance on the study in making its claims is false and misleading because none of its actual helmets were used in the study.

89. Instead, Scott ARX helmets were modified to include the WaveCel component.

III. Conclusion

90. Defendant misrepresented the Product through affirmative statements.

91. Defendant had a duty to disclose the truth about the Product because: (1) the facts at

issue involve an issue of safety; (2) it has superior or exclusive knowledge of material facts not known to plaintiff; (3) it actively concealed material facts from plaintiff; and (4) it made partial representations but also suppressed and failed to disclose other material facts.

92. Defendant sold more units of the Product and at higher prices than it would have in the absence of the misrepresentations, resulting in additional profits at the expense of consumers like plaintiff.

93. The value of the Product that plaintiff purchased and consumed was materially less than its value as represented by defendant.

94. Had plaintiff and class members known the truth, they would not have bought the Product or would have paid less for it.

95. The Product is sold for a price premium compared to other similar products, no less than \$6.49 for pack of three, higher than it would otherwise be sold for absent the misleading representations.

#### Jurisdiction and Venue

96. Jurisdiction is proper pursuant to Class Action Fairness Act of 2005 (“CAFA”). 28 U.S.C. § 1332(d)(2)

97. Under CAFA, district courts have “original federal jurisdiction over class actions involving (1) an aggregate amount in controversy of at least \$5,000,000; and (2) minimal diversity[.]” *Gold v. New York Life Ins. Co.*, 730 F.3d 137, 141 (2d Cir. 2013).

98. Plaintiff Andrew Glancey is a citizen of New York.

99. Defendant Trek Bicycle Corporation is a Wisconsin corporation with a principal place of business in Waterloo, Jefferson County, Wisconsin.

100. Diversity exists because plaintiff Andrew Glancey and defendant are citizens of

different states.

101. Upon information and belief, sales of the Product and statutory and other monetary damages, exceed \$5 million during the applicable statutes of limitations, exclusive of interest and costs.

102. Venue is proper because a substantial part of the events or omissions giving rise to the claim occurred here – plaintiff’s purchase of the Product.

103. Venue is further supported because many class members reside in this District.

Parties

104. Plaintiff Andrew Glancey is a citizen of Staatsburg, Dutchess County, New York.

105. Defendant Trek Bicycle Corporation is a Wisconsin corporation with a principal place of business in Waterloo, Wisconsin, Jefferson County.

106. During the relevant statutes of limitations for each cause of action alleged, plaintiff purchased the Product within his district and/or State in reliance on the representations and omissions of the Product.

107. Plaintiff bought the Product at Wheel and Heel, 2658 East Main Street Wappingers Falls NY 12590, in 2020.

108. Plaintiff bought the Product at or exceeding the above-referenced price because he liked the product for its intended use and relied upon its representations it could reduce the incidence and/or prevent concussive injuries in riding a bicycle.

109. Plaintiff bought the Product instead of other, less expensive similar helmets.

110. Plaintiff would not have purchased the Product in the absence of Defendant’s misrepresentations and omissions.

111. The Product was worth less than what Plaintiff paid for it and he would not have paid as much absent Defendant's false and misleading statements and omissions.

112. Plaintiff intends to, seeks to, and will purchase the Product again when he can do so with the assurance that Product's labeling is consistent with its composition.

Class Allegations

113. The class will consist of all purchasers of the Product who reside in New York, New Jersey, Pennsylvania and Maryland during the applicable statutes of limitations.

114. Plaintiff seeks class-wide injunctive relief based on Rule 23(b) in addition to a monetary relief class.

115. Common questions of law or fact predominate and include whether defendant's representations were and are misleading and if plaintiff and class members are entitled to damages.

116. Plaintiff's claims and basis for relief are typical to other members because all were subjected to the same unfair and deceptive representations and actions.

117. Plaintiff is an adequate representative because his interests do not conflict with other members.

118. No individual inquiry is necessary since the focus is only on defendant's practices and the class is definable and ascertainable.

119. Individual actions would risk inconsistent results, be repetitive and are impractical to justify, as the claims are modest relative to the scope of the harm.

120. Plaintiff's counsel is competent and experienced in complex class action litigation and intends to protect class members' interests adequately and fairly.

121. Plaintiff seeks class-wide injunctive relief because the practices continue.

New York General Business Law ("GBL") §§ 349 & 350  
(Consumer Protection Statutes)

122. Plaintiff incorporates by reference all preceding paragraphs.

123. Plaintiff and class members desired to purchase a product provided the benefits

touted by Defendant.

124. Defendant's acts and omissions are not unique to the parties and have a broader impact on the public.

125. Defendant misrepresented the Product through its statements, comparisons, omissions, ambiguities and actions.

126. Plaintiff and class members would not have purchased the Product or paid as much if the true facts had been known, suffering damages.

#### Negligent Misrepresentation

127. Plaintiff incorporates by reference all preceding paragraphs.

128. Defendant had a duty to truthfully represent the Product, which it breached.

129. This duty is based on defendant's position, holding itself out as having special knowledge and experience in the sale of the product type.

130. The representations took advantage of consumers' cognitive shortcuts made at the point-of-sale and their trust in defendant, a well-known and respected brand or entity in this sector.

131. Plaintiff and class members reasonably and justifiably relied on these negligent misrepresentations and omissions, which served to induce and did induce, the purchase of the Product.

132. Plaintiff and class members would not have purchased the Product or paid as much if the true facts had been known, suffering damages.

#### Fraud

133. Plaintiff incorporates by reference all preceding paragraphs.

134. Defendant misrepresented the attributes and qualities of the Product.

135. Defendant's fraudulent intent is evinced by its failure to accurately disclose the issues

described herein, when it knew not doing so would mislead consumers.

136. Plaintiff and class members would not have purchased the Product or paid as much if the true facts had been known, suffering damages.

Unjust Enrichment

137. Plaintiff incorporates by reference all preceding paragraphs.

138. Defendant obtained benefits and monies because the Product was not as represented and expected, to the detriment and impoverishment of plaintiff and class members, who seek restitution and disgorgement of inequitably obtained profits.

Jury Demand and Prayer for Relief

Plaintiff demands a jury trial on all issues.

**WHEREFORE**, Plaintiff prays for judgment:

1. Declaring this a proper class action, certifying plaintiff as representative and the undersigned as counsel for the class;
2. Entering preliminary and permanent injunctive relief by directing defendant to correct the challenged practices to comply with the law;
3. Injunctive relief to remove, correct and/or refrain from the challenged practices and representations, and restitution and disgorgement for members of the class pursuant to the applicable laws;
4. Awarding monetary damages, statutory damages pursuant to any statutory claims and interest pursuant to the common law and other statutory claims;
5. Awarding costs and expenses, including reasonable fees for plaintiff's attorneys and experts; and
6. Other and further relief as the Court deems just and proper.

Dated: January 7, 2021



Respectfully submitted,

Sheehan & Associates, P.C.

/s/Spencer Sheehan

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Pursuant to 22 NYCRR 130-1.1, the undersigned, an attorney admitted to practice in the courts of New York State, certifies that, upon information, and belief, formed after an inquiry reasonable under the circumstances, the contentions contained in the annexed documents are not frivolous.

Dated: January 7, 2021

/s/ Spencer Sheehan  
Spencer Sheehan