

# The Kashrut of Commercially Sold Milk

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## Introduction

In 1994, the observant community confronted a potential kashrut problem concerning milk extracted from cows that had undergone surgical procedures on their abdomens.<sup>1</sup> Recently, some halachic authorities have raised additional questions that might potentially challenge the kosher status of all commercially sold cow's milk.<sup>2</sup>

The Talmud<sup>3</sup> establishes the permissibility of consuming the

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1. For a discussion of the issues involved, see articles by R. J. David Bleich (*Contemporary Halachic Problems Volume V*, 2005, pp. 192-205), R. Yisroel Belsky and R. Moshe Heinemann (*Mesorah, Adar 5755*, pp. 62-78), R. Menachem Genack (*Tradition*, Winter 1995, pp. 44-48), R. Shlomo Gross (*Hapardes, Tishrei 5755*, pp. 23-24), and R. Eliyahu Ben-Chaim (*Beit Yitzchak 5755*, pp. 79-82).

2. The current kashrut question was featured in a front-page article in the *Five Towns Jewish Times*, November 17, 2006. The halachic aspects involved have been treated by the following authors: R. Gavriel Yehuda Illowitz (*Kovetz Beit Aharon V'Yisrael, Kislev-Tevet 5763*, pp. 66-76; *Nissan-Iyyar 5763*, pp. 124-136), R. Asher Ze'ev Schreiber (*ibid.*, *Sivan-Tamuz 5763*, pp. 156-159), R. Yosef Meir Feldman (*ibid.*, *Av-Elul 5763*, pp. 101-108), R. Zalman Nechemiah Goldberg, and R. Levi Yitzchak Halperin (*Habe'er, Nissan 5763*, pp. 140-156), R. Asher Weiss (*Minchat Asher, Shemot* pp. 305-307); R. Dov Weiss (*ibid.*, *Adar 5764*, pp. 76-85), R. Eliyahu Schlesinger (*Beit Hillel, Av 5763*, pp. 62-70), and R. David Landau (*Binetiv Hechalav, 5763*, pp. 20-25). R. Menashe Klein (*Mishneh Halachot 11:114 and 12:265*) addresses the question tangentially.

3. *Bechorot 6b*.

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milk of a kosher animal and the prohibition of consuming the milk of a non-kosher animal.<sup>4</sup> Not only is the milk of a non-kosher animal prohibited, but so is the milk of a *terefah*, an animal from a kosher species that developed a fatal organic disease or condition,<sup>5</sup> the meat of which the Torah prohibits in the verse, “*Uvasar basadeh terefah lo tocheilu*” – “You shall not consume meat of a *terefah* in the field.”<sup>6</sup> The Talmud<sup>7</sup> records a *halacha l’Moshe MiSinai* (oral dictum given to Moshe at Sinai) that there exist eighteen *terefot* – organic diseases or conditions – and Rambam<sup>8</sup> enumerates seventy specific instances of *terefot*.

Although the meat of a *terefah* is prohibited, the Talmud<sup>9</sup> demonstrates that one need not establish definitively that a given animal is not a *terefah* in order to consume its meat, and by extension its milk. This is a function of the principle of following the majority (*rov*). The Talmud outlines two types of *rov*: *ruba deita kaman* – a majority involving a closed set –

4. According to one opinion in the Talmud, milk forms from blood, and without a Scriptural source to the contrary we would assume that a kosher animal’s milk is forbidden just as its blood is. According to the other opinion, we would assume that the milk of a kosher animal is included in the prohibition of consuming a limb of a live animal (*eiver min hachai*). Once there is a Scriptural source permitting the milk of a kosher animal, one might have thought that milk is a *chiddush* – something that defies the usual rules – and even a non-kosher animal’s milk may be consumed, contrary to the principle that that which is extracted from a forbidden substance is forbidden (*hayotzei min he’assur assur*). The Talmud therefore needs to prove that milk from a non-kosher animal is forbidden.

5. The term *terefah* can refer either to the condition of an animal or to the animal that has such a condition.

6. *Shemot* 22:30. While the Talmud does not explicitly prohibit the milk of a *terefah*, Rif (*Chulin* 19a), Rashba (*Chulin* 9a s.v. *v’chen Rabbeinu Shlomo*), and Rosh (*Chulin* 3:52) derive the prohibition from a Mishnah in *Chulin* (116b). Rambam (*Hil. Ma’achalot Assurot* 3:10) and *Shulchan Aruch* (*Yoreh Deah* 81:1) codify the prohibition.

7. *Chulin* 42a. All subsequent references to the Talmud and its commentaries refer to *Chulin* unless otherwise noted.

8. *Hil. Shechita* 10:9.

9. 11a–12a.

and *ruba deleta kaman* – a majority involving an open set. A classic instance of *ruba deita kaman* is that we decide the verdict of a *bet din* based on the opinion of a majority of its members. Similarly, if one finds a piece of meat in front of a shopping center housing ten meat stores, nine of which sell kosher meat, one may assume that the piece of meat in question is kosher.

While a *ruba deita kaman* governs items in a closed set, a *ruba deleta kaman* describes a natural phenomenon.<sup>10</sup> One application of *ruba deleta kaman* is that the majority of animals from kosher species in the world do not harbor *terefot*. Since such a majority exists, we may assume that any individual animal came from the majority and we have the right to consume that animal's meat and milk without needing to check it for *terefot*.

Ramban<sup>11</sup> contends that one may not automatically rely on a majority involving a closed set (*ruba dileta kaman*) in a situation where there exists a significant minority (*mi'ut hamatzui*)<sup>12</sup> of *terefot*. For this reason, writes Ramban, given that a significant minority of animals harbor *terefot* in their lungs, one must check the lungs of an animal after it is slaughtered prior to

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10. This is how *Shev Shmateta* (6:7 s.v. *u'lefi zeh*) characterizes a majority involving an open set (*ruba deleta kaman*). R. Elchanan Wasserman (*Kovetz Beurim, Shev Shmateta*, 3) notes by way of illustration that even if there were only a single cow left in the world, the majority involving an open set (*ruba deleta kaman*) of kosher animals would allow us to assume that it was kosher, since if there would be more animals in the world the majority of those animals would be kosher.

11. 3b s.v. *bodeik* and *Milchemot Hashem* 3b.

12. *Shu"t Rivash* (191 s.v. *gam*) writes that a "significant minority" is close to fifty percent ("*karov l'mechtzah*"). However, the most widely accepted quantification of a significant minority is that of *Mishkenot Ya'akov* (*Yoreh Deah* 17 s.v. *vetarti*), who places the threshold at ten percent. See R. Hershel Schachter in *The OU Guide to Preparing Fruits and Vegetables* (New York 2004), pp. 78-80. See also *Bedikat Hamazon Kehalacha* (R. Moshe Vaye, Jerusalem 5765, Vol. I p. 116) for the opinions of various contemporary halachic authorities who advocate a lower threshold of a significant minority.

consuming its meat.<sup>13</sup> This requirement is codified in *Shulchan Aruch*,<sup>14</sup> who refers specifically to checking the lungs for adhesions (*sirchot*).<sup>15</sup>

This checking, however, is no more than a rabbinic mandate,<sup>16</sup> and when it is difficult or impossible to perform, as in where the lung was lost before it could be checked, one may consume the meat anyway.<sup>17</sup> Since we cannot examine a lung while an animal is alive, we may drink milk extracted from a live animal under the assumption that the animal came from the majority of animals that do not have *terefot* in their lungs.

### Do a Majority of Dairy Cows Have *Terefot*?

Recently, anecdotal evidence has been cited to the effect that a majority of cows raised for dairy production harbor adhesions (*sirchot*). One rabbi involved in kashrut supervision

13. Ramban cites a passage in *Beitzah* 25b and *Tanchuma Shemini* 8 as evidence for his conclusion. Rashi (12a s.v. *Pesach*) also requires checking of an animal's lungs, but he does not articulate a general principle of not relying on a majority in the face of a prevalent minority. Rashba (9a s.v. *u'mah*) entertains other reasons for the requirement of checking lungs.

14. *Yoreh Deah* 39:1.

15. While Ramban and Rashi refer to checking lungs for *terefot* in general terms, Rashba (ibid. and *Torat Habayit, Bayit 2 Sha'ar 3*), Rosh (3:16, see *Ma'adanei Yom Tov* 8), *Tur Shulchan Aruch*, and *Shulchan Aruch (Yoreh Deah 39:1)* refer specifically to checking for *sirchot*, adhesions on the lungs. The biological definition of a *sircha* is "the adhesion of the folia of the rib membranes to the pulmonary membrane. These folia adhere as a result of pneumonia and of pleuritis" (*Mazon Kasher Min Hachai*, R. Israel Meir Levinger, Jerusalem, 1978, p. 503). *Shach* (39:2) claims that lungs must be checked for other *terefot* as well. *Pri Megadim (Sha'arei Deah 39:2)* quotes from *Tevuot Shor* that while we check lungs for all *terefot*, the requirement to check was instituted only because of adhesions. See *Darchei Teshuvah* (39:15) for a further discussion of this issue.

16. This is the opinion of, among others, Ramban, Rashba, Ramo (39:17), and *Shach* (39:3,8). The questioner in *Shu"t Rivash* 263 refers to *Orchot Chaim* who quotes a biblical source for checking the lungs.

17. According to *Shulchan Aruch* (39:2) the permissibility is unequivocal, whereas according to Ramo one may only consume the meat in a situation of significant financial loss (*hefsed merubah*).

in Johannesburg, South Africa, reported that 95% of dairy cows that are slaughtered contain adhesions. Another rabbi involved in kashrut supervision in the United States observed one dairy farm in which 80% of slaughtered cows had adhesions.<sup>18</sup> While these two accounts do not necessarily reflect a representative sample (and a representative sample would be nearly impossible to procure as dairy cows are generally not slaughtered for kosher meat and thus are not posthumously examined for *terefot*) what would the halacha say if we were able to establish that a majority of dairy cows do contain *terefot*?

At first glance, absent a majority of kosher cows, we would no longer have the right to assume that any given cow is kosher. Following this logic, we would not be allowed to consume any milk until the cow that provided the milk was slaughtered and found to be kosher. However, there are numerous other factors that warrant a lenient conclusion.

*Shu"t Tiferet Zvi*<sup>19</sup> addresses the question of how we can consume milk and butter in places where the number of *terefot* equals the number of kosher cows. He appears to present the following three distinct grounds for leniency:

### 1. How do we define a majority?

The only evidence that a majority of cows contain *terefot* comes from an analysis of cows that are slaughtered. This does not take into consideration living cows. It may well be the case, argues *Tiferet Zvi*, that a majority of all cows – when we consider both living and slaughtered cows together – do not contain *terefot*. In our situation, even were we to establish through a reliable sample that 80% of slaughtered dairy cows

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18. Letter by R. Hershel Schachter to R. Nachum Rabinovitz, dated 13 Tishrei 5767.

19. *Yoreh Deah* 13, referenced in *Pitchei Teshuvah* 81:4 and *Darchoi Teshuvah* 81:18.

contain adhesions, that would not necessarily indicate that a majority of living (i.e., milk-producing) cows contain adhesions. This is because according to Ramo (81:2), absent any contrary evidence, we need not assume that an adhesion existed for more than three days prior to *shechita*.<sup>20</sup>

From a biological standpoint, R. Israel Meir Levinger<sup>21</sup> points out that as *terefot* primarily develop due to diseases, the prevalence of *terefot* increases with the age of an animal. In a study involving over 8,000 cows in Israel,<sup>22</sup> R. Levinger discovered an average *terefah* rate of 6.73% for calves (ages one and two) compared with 14.22% for cows (ages four and above).<sup>23</sup> As slaughtered dairy cows tend to be older, their *terefah* rates should not be considered representative of cows in their milking prime.

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20. R. Yisroel Belsky (*Mesorah, Adar 5765*, p. 63), however, notes that if a cow's lungs are full of adhesions, as is often the case, it would be difficult to assume that all the adhesions developed in the last three days of the cow's life. Similarly, R. Dov Weiss (*Habe'er, Adar 5764*, p. 85) points out that if a high percentage of cows routinely have adhesions, we may not assume that all the cows developed their adhesions in the last three days of their lives. See also footnote 27.

21. *Mazon Kasher Min Hachai*, Jerusalem, 1978, p. 302, 505.

22. *Ibid.*, p. 304.

23. R. Levinger reported a 13%-16% overall *terefah* rate in Yugoslavia, and a rate of 25%-30% for oxen and 40%-50% for calves in other European countries. He notes that *terefah* rates tend to be lower in Israel because there is almost no market for non-kosher meat (*hefsed merubah*) and therefore greater effort is extended to attempt to rule leniently regarding questionable *terefot* (pp. 298-301, 506). R. Yisroel Belsky (*Mesorah, Adar 5765*, p. 63) refers to *terefah* rates of 40%-50%. R. Levinger also compared the *terefah* rates of cows raised for beef and cows raised for dairy in Israel. He discovered no statistically significant difference among older cows. However, the rate of *terefot* in calves raised for dairy was almost double that of calves raised for beef (15% to 5%). R. Levinger attributed the discrepancy to the prevalent practice of dairy farms to wean their calves in a drastic fashion. The change of diet leads to colds and coughing, which cause adhesions to develop (pp. 331-332, 500-501).

## 2. Presumption of Status (*Chazakah*)

Tosafot<sup>24</sup> assume that the presumption of permissibility (*chezkat kashrut*) of an animal is inoperative. Under the normal rules of presumption of status (*chazakah*), a permissible status that previously existed continues to exist until the point at which we can definitively prove otherwise. Thus, if we discovered a *terefah* in an animal, milk that had been extracted up until the point at which we could definitively prove that the animal developed the *terefah* would be presumed kosher. However, since there was never a point at which we had definitive knowledge that a given animal was kosher, as at any point in time the animal may have developed a *terefah*, Tosafot claim that the animal lacks a presumption of permissibility. *Rishonim* refer to the presumption of status (or lack of it) of such an animal as a *chazakah shelo nitbarirah bisha'atah*, a *chazakah* that was not clarified in its time. Tosafot rule that if someone produces cheese from the milk of a few cows and subsequently slaughters one of the cows and finds it to be a *terefah*, all the cheese becomes prohibited. Absent a presumption of permissibility, we must assume that the *terefah* was present in the animal prior to the milking, and thus the cheese contains milk from a non-kosher source.

Rashba<sup>25</sup> quotes R. Shimshon ben R. Shimshon, who argues with Tosafot and assumes that the majority of kosher animals creates a presumption of permissibility even in regard to *terefot*. *Shulchan Aruch*<sup>26</sup> partially adopts this opinion and presents three categories of *terefot*. Some *terefot*, like an extra digit, clearly existed from birth, and milk extracted from such an animal at any time is not kosher. Other *terefot*, like a hole in the membrane of the brain, may have developed at the moment before death, and any milk extracted from such an animal while alive is kosher, as we rely on the animal's

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24. 11a s.v. *atya*.

25. 11a s.v. *u'vishem*, see also Rosh, 1:16.

26. *Yoreh Deah* 81:2; see *Taz*, 81:3.

original presumption of permissibility. A third group of *terefot* takes three days to develop. If a slaughtered animal harbors a *terefah* of the third class, *Shulchan Aruch* holds that its presumption of permissibility is compromised, and any milk extracted, even prior to the last three days of its life, may not be consumed. Ramo, however, rules that while milk obtained during the last three days is prohibited, any milk extracted previously remains permissible. Ramo considers adhesions of the lung as belonging to the third category.<sup>27</sup> *Tiferet Zvi* writes that since every individual animal has a presumption of permissibility, as most of the *terefot* that exist were likely not present at birth, we may rely on that presumption of status (*chazakah*) to drink milk and assume that the *terefot* developed only after the milk was extracted.

### 3. Double Doubt (*Sefek Sfeika*)

Tosafot,<sup>28</sup> who rule stringently about the milk extracted from an animal found to be a *terefah*, write that if the *terefah* discovered in the slaughtered animal is an adhesion, the cheese that was produced from its milk may be consumed because of a double doubt (*sefek sfeika*): First, there exists a doubt as to whether the adhesion is a genuine *terefah*, as we are stringent regarding adhesions due to our lack of competence in identifying what adhesions are authentic *terefot*. Secondly, even if it is a bona fide *terefah*, perhaps it developed only after the milk was extracted. *Shulchan Aruch*<sup>29</sup> records this comment of Tosafot. *Tiferet Zvi* notes that even if we were not to accept the previous grounds for leniency, we should permit milk based on this double doubt, as most of the *terefot* found in cows are adhesions.

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27. *Darchei Teshuvah* (81:53) quotes *Pri Tevuah* (39:163), who notes that if an adhesion is so thick that it could not have formed in only three days, any milk extracted in the previous twelve months is prohibited.

28. *Ibid.*

29. *Yoreh Deah* 81:1.



#### 4. The Status of Our *Terefot*

Other *poskim* have suggested additional grounds for leniency. *Sha'agat Aryeh*<sup>30</sup> provides a corollary to *Tiferet Zvi's* last argument. *Or Zarua*<sup>31</sup> rules that one may not slaughter an animal on Yom Tov in a location where the majority of animals are *terefot*.<sup>32</sup> *Sha'agat Aryeh* writes that although in his time (the work was published in 1756) a majority of animals had *terefot*, slaughtering on Yom Tov was still permissible. This was because the vast majority of *terefot* are found on the lung, and the later authorities adopted extra stringencies regarding the lungs, considering many permissible blemishes to be *terefot*. From a technical halachic perspective, many adhesions that we consider to be *terefot* are not really *terefot*.<sup>33,34</sup>

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30. 64, cited in the aforementioned *Pitchei Teshuvah* and *Darchei Teshuvah*.

31. Quoted in *Hagahot Asheri, Beitzah* 4:15.

32. Strictly speaking, slaughtering on Yom Tov is permissible when meat is needed for consumption on that day. *Or Zarua* prohibits slaughtering when there is more than 50% probability that the slaughtered meat will not be kosher.

33. *Pri Chadash* (39:3), *Tevuat Shor* (39:2), and *Kiseh Eliyahu* (81:1), all cited in *Darchei Teshuvah* (81:18), make a similar observation about how we assess *terefot*. While *Tiferet Zvi* and *Sha'agat Aryeh* refer to locales where the number of *terefot* equals the number of kosher animals, *Kiseh Eliyahu* writes that in Alexandria, Egypt, in his day (1750's) more than 90% of animals had *terefot*. He nevertheless assumes that milk may be consumed because the majority of what they considered *terefot* were not authentic *terefot*. *Teshuvot Rashi* 62 (New York 1943, cited partially by R. Dov Weiss) records that half (according to a variant text: a majority) of all animals have adhesions, but not one in a thousand have other *terefot*. See also *Shu"t Chatam Sofer* (*Yoreh Deah* 19).

34. R. Ovadiah Yosef (*Yabia Omer* Vol. 5 Y.D. 3:3) invokes this argument in a different context. *Shulchan Aruch* (39:10-11) forbids *miuch u'mishmush*, removing or eliminating minor adhesions through applying pressure or smoothing them down. This is the basis of the widespread practice of Sephardic Jews (and some Ashkenazic Jews) to eat only "*glatt*" ('smooth') *Beit Yosef*' meat. *Ramo* (39:13) allows the practice of *miuch u'mishmush* because he assumes that any authentic adhesion would not be removed by this process. R. Ovadiah Yosef addresses the question of whether a Sephardic Jew who adheres to *Shulchan Aruch's* position may eat meat at a family "*simcha*" without knowing whether the meat is "*glatt*." He proposes that

### 5. The Status of a *Safek Terefah's* Milk

R. Ovadiah Yosef<sup>35</sup> notes that there is an opinion among *Rishonim* that consuming the milk of a *terefah* is only prohibited *miderabbanan*, rabbinically. *Mordechai*<sup>36</sup> quotes Maharam as holding that the juice (*tzir*) of a *terefah* is only prohibited rabbinically, and *Tosafot*<sup>37</sup> equate *tzir* with milk. R. Yosef observes that the Talmud itself implies that milk of a *terefah* is not biblically prohibited. The Talmud<sup>38</sup> asks how R. Meir, who does not hold of a majority involving an open set (*rubā dileta kaman*), could ever eat meat, given that one could never establish definitively that a slaughtered animal did not have a *terefah*, as perhaps there was a preexisting hole at the point where the *shechita* knife cut the animal. If the milk of a *terefah* were biblically prohibited, reasons R. Yosef, the Talmud should have asked how R. Meir could ever drink milk.<sup>39</sup>

According to this opinion, in a case of a *safek terefah* one should be able to consume the animal's milk based on the principle of *safek dirabbanan l'kula* – we rule leniently in a case of doubt concerning a rabbinic law. R. Yosef points out that the accepted opinion<sup>40</sup> is that the milk of a *terefah* is biblically prohibited. He is willing, however, to invoke the minority opinion in conjunction with other factors in certain cases of doubt.<sup>41</sup>

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one may be able to rely on a double doubt (*sefek sfeika*): perhaps the meat is in fact "*glatt*" and even if there was an adhesion that was removed through *miuch u'mishmush*, perhaps the given adhesion was not an authentic *terefah*.

35. *Yabia Omer* Vol. 8, Y.D. 2:13.

36. *Chulin* 671.

37. *Bechorot* 6b, s.v. *le'esor*.

38. 11b.

39. There is an obvious rejection of this proof. The Talmud specifically asks about meat because, as the Talmud proceeds to observe, there are times when one is religiously obligated to consume meat (the Paschal offering and other *kodshim*). There is never a religious obligation to drink milk.

40. *Tosafot* 99b s.v. *shani*, *Rashba* 9a.

41. See also *Nefesh Chaya* (*Yoreh Deah* 4).

*Mishkenot Ya'akov*<sup>42</sup> argues that one might prohibit the meat of a *safek terefah* while permitting its milk. Rashba<sup>43</sup> quotes the opinion of Rashi's teachers who prohibited the meat of an animal whose lungs were lost before being checked. Rashi disputed this practice, arguing that it would be hypocritical to have permitted the milk of such an animal and now to prohibit its meat. Those who argued with Rashi apparently were not bothered by his question and assumed that one could be more lenient regarding the milk of a *safek terefah* than with its meat.

*Mishkenot Ya'akov* suggests that this is because the presumption of permissibility of milk is stronger than that of meat. This is because the milk of an animal is permitted even when it is alive, whereas the meat of a live animal is included in the prohibition of eating the limb of a live animal (*eiver min hachai*). He proceeds to note that while the *Or Zarua* quoted above prohibited slaughtering animals on Yom Tov in a place where the majority of animals were *terefot*, there is no evidence that people in those locales refrained from drinking milk.

### 6. *Terefah Einah Chayah*

There may be another way of demonstrating that many of the adhesions that we disqualify are not authentic *terefot*. The Talmud<sup>44</sup> records a dispute whether an animal with a *terefah* is capable of surviving. We accept the position that *terefah einah chayah*, a *terefah* will not live for more than twelve months. Ramo<sup>45</sup> rules based on his understanding of Rashba<sup>46</sup> that if we observe a *vaday terefah* – a condition that is definitely a *terefah* – and the affected animal lives for more than twelve months, the animal remains prohibited. However, if we observe a *safek*

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42. *Yoreh Deah* 17 s.v. *u'mah*.

43. 9a.

44. 43a, 57b.

45. *Yoreh Deah* 57:18.

46. *Shu"t* 1:98.

*terefah* – a condition the status of which is uncertain – and the affected animal lives for more than twelve months, we may treat the animal as kosher.<sup>47,48</sup>

While Ramo's ruling, strictly speaking, applies to a case in which we observe an external condition and are unsure whether it qualifies as a *terefah*, we may nevertheless suggest the following argument regarding the question of how many dairy cows have adhesions on their lungs: If 80% of

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47. Rashba addresses the question of how to relate to an animal with a *terefah* that lives for more than twelve months. He emphatically denies the possibility that an animal with a *terefah* could ever live for more than twelve months. If an animal with a *terefah* appears to have survived for that long, then it must be that we lost track of time or that we confused the animal with a different animal. The only exception is an animal with an extra digit that has the status of a *terefah* not because it will die within a year, but because of the halachic principle that something extra is the equivalent of something missing (*yeter k'natul damei*). Since an animal that is missing a digit has the status of a *terefah* because it will die within twelve months, an animal with an extra digit is accorded the same status. Rashba does explicitly refer to a distinction between a *safek terefah* and a *vaday terefah* in his commentary on *Chulin* (42a s.v. *chayah*). *Shach* (*Yoreh Deah* 57:48) notes that according to Rashba, if an animal with a *terefah* lives for more than twelve months it must be because of a miracle. He quotes Maharshah (*Chulin* 3:80) who holds that *terefah einah chayah* is not an absolute principle but an indication of an overwhelming majority. Maharshah allows for the possibility that one out of every thousand *terefot* may live for more than twelve months. Meiri (42a s.v. *masoret*) writes that if an animal with a *terefah* survives for more than twelve months it is a fluke. His formulation would seem to allow for a more frequent instance of *terefot* that survive for twelve months than would Maharshah. *Tosafot HaRosh* (*Niddah* 2b s.v. *heicha*) appears to say that *terefah einah chayah* is no more than a simple majority. For a further discussion of Rashba's position, see R. Neriya Gotel, *Hishtanut Hatevaim Behalacha*, Jerusalem 1995, pp. 32-39.

48. *Shach* (57:48) and *Chochmat Adam* (*Binat Adam, Issur V'heter* 26, quoted in *Pitchei Teshuvah* 48:2) contend that the twelve-month test can render an animal kosher not only in the case of a *safek* in *metziut* – a doubt as to whether a given blemish is indeed a blemish – but even in a case of a *safek* in *din* – a doubt as to how we rule regarding the status of a given blemish. *Pitchei Teshuvah* quotes others who dispute this position. See also R. Ovadia Yosef (*Yabia Omer* 8, *Yoreh Deah* 2:3) who quotes over a dozen authorities who are of the former opinion.

slaughtered cows harbor adhesions, one of two explanations must hold true. If the adhesions all developed in the last year of the cows' lives, we may still assume that the majority of living cows in their prime are not *terefot*. If the adhesions developed earlier, the fact that a large number of cows do not drop dead every year<sup>49</sup> must indicate that most of what we treat as *terefot* are not authentic *terefot*.<sup>50</sup>

One may object, however, that as modern medicine perceives many *terefot* as not being fatal, it would be difficult to arrive at any definitive conclusions from the fact that animals harboring adhesions generally live for more than twelve months. This is borne out by a comment of *B'chor Shor*<sup>51</sup> regarding Rambam's position. Rambam<sup>52</sup> writes that even if the medical knowledge of the time indicates that some *terefot* are not fatal, we must still follow *Chazal's* list of *terefot*. Yet, Rambam also rules that if an animal with a doubtful *terefah* lives for more than twelve months, we may assume that the questionable blemish was not an authentic *terefah*. *B'chor Shor* asks how the twelve-month test could prove anything according to Rambam, if the list of *terefot* is binding even contrary to scientific realities. He is forced to answer that the twelve-month test only works for the type of *terefah* that even modern medicine considers fatal. If modern medicine does

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49. According to the United States Department of Agriculture National Health Monitoring System Dairy 2002 survey, approximately five percent of dairy cows die on farms annually, as opposed to only one to one-and-a-half percent of beef cows. The same survey indicated that in 2001 approximately 25.5 percent of dairy cows left herds permanently, with 94 percent of those culled (sent for slaughter). About half of the cows culled were removed from dairy production due to disease or injuries and the other half were removed because of suboptimal productivity (Frank Garry, "Current Mortality Rates on U.S. Dairies," *Western Dairy News*, February 2006, pp. W-43-4).

50. R. Dov Weiss (*Habe'er*, Adar 5764, pp. 77-78) raises the possibility that the twelve-month test may prove something about the status of our adhesions.

51. *Chulin* 58a.

52. *Hil. Shechita* 10:13.

not view adhesions as fatal,<sup>53</sup> the twelve-month test should be of no value to us.

### **The Status of Milk Obtained from Large Numbers of Cows**

Even if we consider a majority of dairy cows to be kosher, we must contend with a second potential problem. Until the mid-nineteenth century, milk production in the United States was dominated by family farm operations that owned only a few cows and milked them by hand, providing for customers in their immediate vicinity. As the technologies of refrigeration, transportation, and electric milking advanced through the first decades of the twentieth century, milk preservation techniques improved and production increased. Contemporary milk production is concentrated in large dairy farms<sup>54</sup> where cows are generally milked in assembly-line-like parlors, with milk flowing through pipelines from the milking machines to bulk tanks that typically hold tens of thousands of gallons of milk.<sup>55</sup>

This modern method of milking cows raises the following question: Let us assume, for argument's sake, that 10% of dairy cows (*Mishkenot Ya'akov's* threshold of *mi'ut hamatzui*) harbor authentic *terefot*. As we noted earlier, if we extract milk from any single cow we may drink the milk because of the

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53. Professor Frank Garry of Colorado State University indicated (in personal correspondence dated December 20, 2006) that firm adhesions are scars from old inflammatory diseases that the animal survived, while adhesions of softer consistency represent inflammation of active diseases that could kill the animal. The implication of this description is that diseases, and not adhesions per se, kill animals.

54. The United States Department of Agriculture documented that in 2005, 8.4% of commercially marketed milk came from dairy farms of fewer than 50 cows, while 44.5% of milk came from dairy farms with over 500 cows (*Agricultural Statistics 2006*, VIII-5).

55. *Encyclopedia Americana*, 2005 edition, Vol. 8, pp. 428-429. Information about the size of bulk tanks was obtained from the Orthodox Union Kashrut Division.

majority involving an open set (*ruba d'leta kaman*) of cows that are kosher, and we do not have to be concerned that perhaps this cow is a member of the minority. However, if the milk of tens or hundreds of cows were mixed together in the same bulk tank, it is implausible that none of the milk came from cows that have *terefot*. Is a majority involving an open set (*ruba dileta kaman*) a halachic reality that allows us to view every individual animal as exhibiting a presumption of permissibility (*chezkat kashrut*) and permit all the milk, ignoring the larger statistical picture that would necessitate a contrary conclusion? Or does a majority involving an open set only operate on a small scale but not when it runs counter to a statistical reality? If the latter is the case, we would only be permitted to consume milk from a bulk tank if there are sixty times as many kosher cows whose milk was extracted as cows with *terefot*.<sup>56</sup> In other words, the *terefah* rate would have to be lower than 1.6%. Although biblically if a prohibited substance is mixed with a permissible substance the prohibited substance is nullified in a majority of the permissible substance, there is a rabbinic enactment that the nullification of liquids can only be effected with a 60:1 ratio.<sup>57</sup>

### 1. The Stringent Opinion

R. Gavriel Yehuda Illowitz<sup>58</sup> contends that a majority

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56. Even if there would be sixty times as many kosher cows as cows with *terefot* we would still have to contend with the problem of *ein mivatlin issur l'chatchila* – one may not prospectively nullify a prohibited substance. See *Har Zvi* (*Yoreh Deah* 36) regarding a similar application of *ein mivatlin issur l'chatchila*. *Taz* (*Yoreh Deah* 99:10) claims that the prohibition of benefiting from improper nullification does not apply where the beneficiary is unaware that nullification was effected on his behalf. R. Akiva Eger quotes *Shu"t Rivash* (498) as dissenting, prohibiting benefiting from nullification that was effected on behalf of any member of a large constituency. See R. J. David Bleich (cited in footnote 1) for sources that address nullification effected by a non-Jew.

57. *Shulchan Aruch* 98:1.

58. *Kovetz Beit Aharon V'Yisrael*, Kislev-Tevet 5763, pp. 66-76; Nissan-Iyyar

involving an open set (*ruba dileta kaman*) cannot allow for a permissive ruling contrary to a statistical reality. He reasons that it is logically impossible that we would be allowed to consume a mixture that, based on the laws of probability, almost definitely contains prohibited substances.<sup>59</sup> R. Illowitz thinks that this is the assumption of *Mishkenot Ya'akov*.<sup>60</sup> The Mishnah<sup>61</sup> records that according to Rabbi Yehudah, the *Kohanim* would fill a cup with the blood of the Paschal offerings that spilled on the floor of the Temple Courtyard. They would sprinkle the blood of this mixture so that in case the blood of any individual Paschal offering had inadvertently not been sprinkled, its owners would still fulfill their obligation through this sprinkling. The Talmud<sup>62</sup> links this opinion to Rabbi Yehudah's general position that there can be no nullification of like substances (*min bimito lo batel*). Likewise, blood cannot nullify blood (*ein dam mivatel dam*). The blood of any single Paschal offering that fell on the floor and got mixed up with other blood would retain its identity,

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5763, pp. 124-136.

59. R. Hershel Schachter in the aforementioned letter supports this position. In a letter dated 28 Kislev 5767 he explains that majority (*rov*) generally functions as a clarification of the facts (*birur*), as opposed to a presumption of status (*chazakah*), which instructs us how to act in a given circumstance (*hanhagah*). (See R. Elchanan Wasserman, *Kovetz Beurim, Shev Shmateta*, 4.) A *hanhagah* is only relevant in the absence of a *birur*. This is why a majority (*rov*) overpowers a presumption of status (*chazakah*) when the two suggest opposite conclusions (*ruba v'chazakah ruba adif*). This also explains the opinion of Tosafot (*Avodah Zarah* 41b s.v. *v'ein safek*) that a weak majority (51%) does not overpower a presumption of status, as weak majority cannot function as a clarification. (See R. Schachter in *Ginat Egoz*, New York, 2001, pp. 63-64.) In light of this explanation, asks R. Schachter, how can we rely on the presumption of kashrut of each individual animal when the milk of multiple animals gets mixed together, even if that presumption is based on a majority involving an open set (*ruba dileta kaman*), and ignore the stronger clarification provided by the statistical likelihood that there is a problematic percentage of non-kosher milk?

60. *Yoreh Deah* 16 s.v. *vira'iti*.

61. *Pesachim* 64a.

62. *Ibid.* 65b.



and the sprinkling of any mixture of blood would count for all the offerings whose blood had spilled.

*Mishkenot Yaakov* poses the following question: An animal with a *terefah* is disqualified from sacrificial use.<sup>63</sup> Thus, since Rabbi Yehuda holds that blood cannot nullify blood, the blood of any animal with a *terefah* would disqualify the entire mixture of blood. If a prevalent minority (*mi'ut hamatzui*) of animals harbor *terefot*, how could it be that not a single animal brought as a Paschal offering had a *terefah*?<sup>64</sup> *Mishkenot Yaakov* is forced to conclude that *terefot* in the time of the *Beit Hamikdash* were not as prevalent as they were in later times. R. Illowitz claims that *Mishkenot Yaakov's* question assumes that if there were a significant instance of *terefot*, we would have to view a mixture of the blood of multiple animals as including the blood of *terefot*.

It would seem, however, that a careful reading of *Mishkenot Yaakov* leads to the opposite conclusion. His question is that if there were a prevalent minority (*mi'ut hamatzui*) of *terefot* in the lungs, they would have checked all the lungs of the Paschal offerings and in all likelihood would have found some adhesions. Subsequently, they would not have been able to sprinkle the mixed blood, as the mixture would have contained blood from the animals with adhesions, and R. Yehuda holds that prohibited blood may not be nullified. *Mishkenot Yaakov* then suggests that the instance of adhesions in the time of the *Beit Hamikdash* did not reach the threshold of a prevalent minority (*mi'ut hamatzui*) and they did not need to check the lungs. Since they did not check the lungs, there was no positive knowledge that any *terefot* existed, and they were able to sprinkle the mixed blood.

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63. *Bechorot* 57a and Rambam *Hil. Issurei Mizbe'ach* 2:10.

64. The Talmud (*Pesachim* 64b) records that on one occasion during the Second Temple period, King Aggripas commissioned a census of the number of Paschal offerings offered. That year they estimated that 1.2 million Paschal offerings were brought.

## 2. The Lenient Opinion

Ramo,<sup>65</sup> codifying a position of *Issur V'heter He'aruch*,<sup>66</sup> appears to hold that we may rely on a *rov* even in our situation. *Issur V'heter* addresses a case in which milk from sixty cows is made into cheese and subsequently one of the animals is slaughtered and found to be a *terefah*. He rules that we may assume that none of the live animals have *terefot* and consume the cheese without checking any of the other animals. If the only *terefah* is the animal that was slaughtered, there will be sixty times as much kosher milk as non-kosher milk and the non-kosher milk will be nullified. Even though a prevalent minority (*mi'ut hamatzui*) of animals harbor *terefot* in their lungs, and one would therefore expect (working with a 10% threshold for *mi'ut hamatzui*) that among sixty cows approximately six of them (much more than 1.6%) should be non-kosher, we can nevertheless assume that every individual cow is kosher until proven otherwise.<sup>67</sup> In our case as well, even if the milk of hundreds of cows gets mixed together, we may rely on the independent presumption of permissibility of each individual animal and permit all the milk.<sup>68</sup>

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65. *Yoreh Deah* 81:2.

66. 69:2.

67. If ten percent of cows in the general population have *terefot*, the probability that in a random sample of sixty cows none of them will have *terefot* is approximately 0.18% ( $.9^{60}$ ). The probability that *bitul bishishim* would be operative (namely that one or no cows will have *terefot*) is approximately 1.38% ( $60(.9)^{59}(.1)+.18$ ). (Thanks to Dr. Stanley Ocken of CCNY for providing the relevant mathematical formula.) If we accept that majority (*rov*) must take into account statistical realities, would we prohibit milk if there is merely a 51% probability that there are more than 1.6% of cows with *terefot* in the given sample? Assuming a 10% instance of *terefot* in the general cow population, in a mixture of milk from seven cows, there is only a 48% probability that none of the seven cows will have *terefot* ( $.9^7 \approx 48\%$ ). R. Schachter concedes that a 51% probability forms a weak majority (see footnote 58) and does not prohibit the milk. However, it is difficult to pinpoint the exact threshold at which a majority becomes strong enough to pose a problem (somewhere between 51% and 90%).

68. See *Shach* (81:6) and *Pri Megadim*. R. Levi Yitzchak Halperin (pp. 169-171) and R. Yosef Meir Feldman (*Kovetz Beit Aharon V'Yisrael*, Av-Elul

### 3. The Novel Leniency of *Marcheshet*

Even if we accept the stringent opinion regarding the mechanics of majority (*rov*), there may still be grounds for leniency.<sup>69</sup> R. Chanoch Henach Eiges<sup>70</sup> proposes a fascinating rationale for permitting milk extracted from an animal with an adhesion. Rashi<sup>71</sup> and Tosafot<sup>72</sup> argue about the nature of an adhesion. Rashi believes that an adhesion always contains a hole. (A hole in the lung is one of the *terefot* quoted in the Mishnah.) Tosafot hold that an adhesion need not contain a hole; the reason we treat an adhesion as a *terefah* is that we assume that it eventually will develop a hole.

*Marcheshet* contends that the classic *terefot* are only those that place the animal in a currently fatal condition. Only these *terefot* are subsumed under the *halacha l'Moshe miSinai* and the biblical injunction of "*Uvasar basadeh terefah lo tocheilu*" – "You shall not consume meat field of a *terefah* in the field."<sup>73</sup> According to Tosafot, an adhesion does not fall into this

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5763, pp. 107-108) cite this Ramo in addressing our question. R. Yosef Meir Feldman (*Kovetz Beit Aharon V'Yisrael*, Av-Elul 5763, p. 107) suggests another proof for this position from *Shulchan Aruch* 84:8-10. See also *teshuvah* of R. Yisroel Belsky in the possession of the Orthodox Union Kashrut Division, dated 27 Tishrei 5767. R. Zalman Nechemia Goldberg and R. Asher Weiss (*Habe'er*, Nissan 5763, pp. 140-146) propose additional arguments to support this position.

69. R. Dov Weiss (*Habe'er*, Adar 5674, pp. 78-83) quotes *Acharonim* (*Chiddushei HaGrach al HaRambam*, Hil. *Maachalot Assurot* 3 et. al.) who claim that the forbidden derivative of a prohibited substance (*yotzei min ha'assur*) is not viewed as the source substance but rather as a member of a new prohibited category. Based on this understanding, he suggests that the new prohibition of *yotzei min ha'assur* may only be applied if we know definitively that a given animal is a *terefah*. Absent such knowledge, we could permit the mixed milk, even if statistically there are likely more than a problematic percentage of cows with *terefot*. R. Moshe Heinemann (*Mesorah*, Adar 5755, pp. 76-78) provides another original suggestion that would permit the milk even according to the statistical perspective of majority.

70. *Marcheshet* 1:29.

71. 46b s.v. *let*.

72. 47a s.v. *haynu*.

73. *Shemot* 22:30.

category, as it has not yet necessarily developed a fatal hole. However, since we know that an animal with an adhesion will eventually develop a fatal condition, it is prohibited based on the verse “*V’zot hachayah asher tochelu*” – “And this is the animal that you shall eat,”<sup>74</sup> from which the Talmud<sup>75</sup> derives that an animal that will live may be consumed and an animal that will not live may not be consumed. This latter prohibition is an *issur aseh*, a prohibition derived from a positive statement. *Maggid Mishneh*<sup>76</sup> writes that according to Rambam the principle that that which is extracted from a prohibited substance is prohibited (*hayotzei min ha’assur assur*) does not apply to prohibitions formulated as an *issur aseh*. Thus, according to Tosafot’s understanding of adhesions, the milk extracted from an animal with an adhesion should be permitted. *Marcheshet* is ultimately unwilling to rely on his suggestion because he notes that one could construct a counter double doubt (*sefek sfeika*). Perhaps the halacha is in accordance with Rashi’s opinion that an adhesion is a classic *terefah*, and even if the halacha is in accordance with Tosafot’s opinion, perhaps this particular adhesion had a hole.<sup>77</sup>

### Conclusion

In the contemporary situation, there appears to be no credible evidence that a majority of dairy cows harbor adhesions. It is, however, quite likely that a prevalent minority (*mi’ut hamatzui*) of cows have *terefot*, such that more than 1.6% of milk that gets mixed together comes from such cows. To date, while a few individuals have stopped drinking commercially

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74. *Vayikra* 11:2.

75. 42a.

76. *Hil. Maachalot Assurot* 2:3.

77. R. Schachter, in the second letter, raises the possibility of relying on *Marcheshet*, since we are only dealing with a rabbinic prohibition, as biblically nullification is accomplished with a simple majority. He points out that we would still have to assume that there is less than a 1.6% instance of other *terefot* in cows.

sold milk, major kashrut organizations have endorsed the continued consumption of milk, following the implication in *Shulchan Aruch* that we may assume that every individual cow comes from the majority of cows that are kosher, even if such an assumption contradicts a statistical reality.