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Return of a Masters Swimmer to Competition After a Multi-Year Layoff and Season-Long Performance Recovery

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Abstract

Objective: *Studies of interrupted training in adults rest on planned interruptions of weeks bracketed by laboratory measurement, conditions not met when an athlete leaves competition for years. The present study determined how long a competitive result takes to return after such an interruption, and how far, when the only surviving instrument is the meet record.*

Methods: *Two bodies of evidence were combined. A literature search returned 267 records, 34 of which met the inclusion criteria and 21 were retained; nine, read in full text, supplied the age-expected decrement and the tolerance the analysis rests on. The 2008 to 2026 record of a breaststroke swimmer who returned to Masters competition at 32 after a seven-season interruption was then analysed. An admissibility rule fixed in advance compared only native (unconverted) marks within one pool type. Each 2026 outcome was set against the best native pre-interruption mark in the same event, adjusted for the decrement, and given one of four verdicts against the tolerance, both fixed before any residual was computed.*

Results: *Seven event-and-pool combinations held an official time on both sides. Two 2026 times were faster than their reference by more than the tolerance, the 50 yd breaststroke by 2.70% and the 100 yd individual medley by 2.24%; one was indistinguishable from it, the 50 m breaststroke at −0.37%; and four breaststroke times fell short, 100 yd by 2.80%, 200 yd by 4.00%, 100 m by 3.52% and 200 m by 3.99%. The shortfall increased with distance in both pool types, and the 200 yd breaststroke improved 8.08 s over 82 days.*

Conclusions: *The sprint outcomes returned to or beyond the pre-interruption level within one season, whereas the 100 and 200 breaststroke did not. Published age corrections for the third decade span zero to 4.2% of the reference, wide enough to reverse four of the seven verdicts, so interpretation rests on the admissibility rule and on the return as a rate. Five conditions state when the reading transfers to another record. The findings are observational, from one athlete; no causal inference is drawn.*

Keywords: *Ageing; Breaststroke; Case Report; Competition Record; Detraining; Masters Athlete; Performance Recovery; Return to Sport; Swimming; Training Interruption.*

INTRODUCTION

Athletes leave competitive sport for reasons largely independent of their physical capacity, and the transitions through which they do so have been described at length (Park et al., 2013). What happens when such an athlete returns after several years has attracted less attention, the obstacle being instrumentation rather than interest, since the literature on interrupted training in adults rests almost entirely on interruptions that were planned, short and bracketed by measurement (Barbieri et al., 2024). In a competitive master triathlete, twelve weeks without training reduced relative maximal oxygen uptake by 9.1% in cycling and 10.9% in running (Lepers et al., 2024), while in a second master athlete the same twelve weeks reduced it by 7%, a value that after a further twelve weeks of retraining stood 5% above baseline (Zanou et al., 2024). Neither design is available where the interruption lasted years, no laboratory measurement having been obtained when training stopped, when it resumed, or between.

What does survive is the official meet record, a coarse instrument whose resolution is a single start, which carries no information about mechanism and exists only for those events the athlete contested, but which remained in operation throughout and whose output a third party can check. The present study therefore treats it as the measuring device and addresses the question that device can answer, namely how quickly and how far the competitive mark returns after an interruption of several years.

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It is useful to characterise the case before it is examined. A return episode may be described by what survived as a baseline and by what instrument remains admissible, and these two properties bound what a single case of that class can attest; the classes documented in the literature, and what each permits, are set out in Table 4. Where the interruption is elective and extends over years, as here, neither an instrumented baseline nor laboratory access survives: the only baseline is a historical competition record, in some events obtained in another pool type, and the only admissible instrument is the meet protocol at a resolution of one start. Such a case can attest the time the outcome took to return, provided the baseline is defined explicitly, and cannot attest a mechanism. The absence of laboratory measurement should accordingly be understood as a defining property of the class rather than as an omission here.

Two obstacles nevertheless stand between a competition record and a verdict about recovery. The first is that the record mixes pool types: in short-course 100 m breaststroke, turn segments have been reported to account for 44.30 ± 0.58% of total race time against 38.93 ± 0.50% for clean swimming (Olstad et al., 2020), so a yards mark and a metres mark are outcomes of tasks differing in composition. The second is that several years elapsed between the two sides of every comparison, so part of any observed gap may be attributable to age rather than the interruption.

Three procedures were adopted in response. An admissibility rule was stated in advance and every cell it excludes was named. An age correction from published longitudinal studies of swimmers was applied, fixed before any residual was computed, and its value within the age band occupied here is reported alongside it. The season was then read as a rate rather than a pair of endpoints, with the irregularities left visible. No prior study appears to have measured the speed at which a competitive result returns after a multi-year interruption on one athlete's continuous record, with an age correction applied before the verdict. No causal claim is made regarding the training that preceded any outcome, and no generality is claimed beyond the transfer conditions stated in the Conclusion.

MATERIALS & METHODS

The Documentary Base and what it cannot Show

Six documents constituted the record analysed: a career matrix of times by year, event and pool type covering 2008 to 2026; a meet-by-meet sheet for the 2026 short-course season with date, meet, event, time, splits and place; the 2026 long-course results; a competitive résumé of placings for 2008 to 2018 and 2026; and two accounts of the training load. All figures drawn from them are the athlete's own, are attributed as such, and were checked against their source file.

One value was corrected by the author after the record was first assembled: the 2026 long-course 50 m breaststroke time, entered as 28.54 in the source note, was corrected to 29.54. The corrected value is used throughout, and the correction is recorded here because it alters one verdict in Table 3.

Two gaps are named rather than reconstructed: one 2013 short-course-metres entry records a disqualification and no time, and the résumé has no entry for 2014. The 2026 long-course championship spanned 5 to 9 August, and the athlete has supplied the day of each event within it: the 200 breaststroke on 6 August, the 100 freestyle and the 50 breaststroke on 7 August, the 100 breaststroke on 8 August, so intervals ending there are exact. The corpus evidences what was recorded and when, not that any training decision produced any outcome, and no part of the analysis treats it as though it did.

The Admissibility Rule

The rule was fixed before the record was read and governs every comparison below (Table 1). Two marks were compared only where both were native to the same pool type, a native mark being one actually swum in the pool type under which it is filed rather than estimated from a swim over another distance. The career matrix also contains such converted values, marked as such in the source; being estimates rather than measurements, they take no part in any verdict. The consequence is not trivial: three of the four 2026 entries in the long-course rows are conversions and were excluded, although they present as data.

Table 1. The admissibility rule and the cells it excludes.

What is compared	Admissible	Reason the rule decides this way	What remains comparable
Two native marks, same event and pool	Yes	Same task, same conditions	The full comparison
A native mark against a converted value	No	A conversion estimates rather than measures; the race types differ in the share taken by turns (Olstad et al., 2020)	The native side, against other native marks
Two marks in different pool types	No	Different task; no absolute-time comparison is meaningful	Each pool type in its own table and panel
A mark whose meet or date is not recorded	Not for a verdict	A third party cannot check its provenance	Within-season movement, the limitation stated with it; none remains in the record

Reference Frames and the Age Correction

Each outcome was read against three frames: the best native pre-interruption mark in the same event and pool type, which yields the raw residual; the age-expected decrement over the elapsed interval; and the movement of the mark from meet to meet, which yields a rate. By age-expected decrement is meant the time by which such a swimmer would be expected to have slowed through ageing alone over the years elapsed; it is added to the reference before the 2026 mark is judged against it, so the years lived between the two swims are not charged to the interruption.

The correction was fixed before any residual was computed and taken from longitudinal rather than cross-sectional work, the question concerning the trajectory of one person over time. In a twelve-year follow-up of 640 United States Masters swimmers it was reported that "peak performance times were maintained until ~35 yr of age, followed by a progressive increase until ~70 yr of age" (Donato et al., 2003). The subject competed in the M32 age group in 2026, so that every interval examined here terminates within the band in which that model reports no systematic decrement, and the point estimate is accordingly zero. An upper bound came from a second longitudinal study of champion Masters swimmers aged 25 to 96, in which the decline was "linear, at about 0.6% per year up to age 70–75" (Rubin et al., 2013; see also Ganse et al., 2018). Since that sample begins at 25, the rate was carried only over the portion of each interval at or above that age, seven years in every case, yielding an upper bound of 4.2%. The two sources disagree with respect to the third decade of life; verdicts were therefore issued on the point estimate, with the upper bound reported as a sensitivity.

Ages at the reference swims were obtained as the 2026 age minus the elapsed years, with the imprecision an age-group entry entails.

The Verdict Rule and its Tolerance, Fixed before Calculation

Four verdicts were defined as three bands about zero, separated by the tolerance, together with one class for inadmissible comparisons. A mark was classed as **exceeded** where the 2026 time was faster than the adjusted reference by more than the tolerance; as **restored** where the residual lay within the tolerance in either direction, the time being in that case indistinguishable from the reference; as **not restored** where the residual exceeded the tolerance; and as **unresolved** where either side of the comparison was a converted value or the provenance was incomplete.

The tolerance is the parameter upon which a borderline verdict turns, and was therefore taken from a published value before any residual existed. Competition-to-competition variation in the same stroke and event has been reported at 1.4%, with a 95% likely range of 1.3 to 1.5%, and, in 51 Olympic-level swimmers, at 0.8% (Stewart & Hopkins, 2000; Pyne et al., 2004; both as cited in Alshdokhi et al., 2020). The larger figure was adopted, since a wider tolerance makes "not restored" harder to reach and cannot therefore operate in the subject's favour.

The Literature Layer

The literature was consulted for three purposes: an age-expected decrement, a tolerance, and comparison classes for the return episode. The search was correspondingly narrow, and no exhaustiveness is claimed. Seven queries against a bibliographic index aggregating Crossref, PubMed and related sources returned 267 unique records in August 2026; 242 remained after removal of records without an abstract or outside the eligible types; 43 met the inclusion criteria; 34 were carried forward. Sixteen of the works cited derive from that screen and five from targeted searches for the age of peak breaststroke performance, further cases of interrupted training, and the reporting standards adopted below. Nine of the 21 were read in full text, the remainder at the level of their reported results, with the uncertainty that entails. Existing reviews cover race analysis in competitive swimming (Gonjo & Olstad, 2020) and the energetics, biomechanics and age-related recovery of masters swimmers (Ferreira et al., 2016; Borges et al., 2016; Rubin & Rahe, 2010), but none takes a multi-year interruption as its unit. No systematic-review procedure was followed and none is claimed.

Reporting Framework, Units, and Ethics

Reporting follows an adapted CARE structure (Riley et al., 2017) mapped onto the sections this journal requires. Several CARE fields have no data behind them and were left empty rather than reconstructed, there being no diagnosis, no examination, no diagnostic testing, no therapeutic intervention and no adverse event; what exists is a training schedule and a set of competition protocols. The caliber of the subject is given in the terms published participant-classification schemes employ (McKay et al., 2022): national-championship and collegiate-conference level before the interruption, Masters-championship level since. His training volume is reported in section 3.6 and forms no part of that classification, which places a participant at a point in time and does not encode a return trajectory.

Because pool type alters the composition of the task, every result is reported with the pool in which it was swum; yards and metres appear in separate tables and figure panels and are never compared by absolute time.

The present report describes the author's own practice and competition record. No other participants were involved and no intervention was administered, so institutional ethics approval is not required and none is claimed. A medical assessment before resuming heavy training is a reasonable step after a long interruption; nothing here constitutes a clinical recommendation.

RESULTS & DISCUSSION

The Level before the Interruption, and the Interruption Itself

The record begins in 2008 and contains no official starts from 2019 through 2025, seven seasons, established by the absence of entries in both the results matrix and the résumé rather than by assertion. Competition resumed in 2026 in the Masters category.

Read one pool type at a time (Figure 1), the pre-interruption record yields a native best for each event. In the 25-yard pool these were 26.32 for the 50 breaststroke (2016), 54.33 for the 100 breaststroke (2016), 1:56.15 for the 200 breaststroke (2018) and 51.81 for the 100 individual medley (2018), the last being the only pre-interruption entry the record holds for that event. In the 50 m pool they were 29.65 for the 50 breaststroke (2015), 1:03.34 for the 100 breaststroke (2015) and 2:15.97 for the 200 breaststroke (2013). Set against the 2026 age of 32, these swims fall at approximately 22, 22, 24, 24, 21, 21 and 19 years, which places the strongest close to the reported age of peak breaststroke performance in elite men (Wolfrum et al., 2013) and within the range at which elite swimmers reach championship finals (König et al., 2014; Born et al., 2020, 2022). The short-course-metres rows terminate in 2013 with no post-return counterpart, so that pool type supports no verdict. Figure 1 also displays what the rule removes: several long-course entries, three filed under 2026, are conversions from yards swims, plotted as crosses and excluded from every verdict.

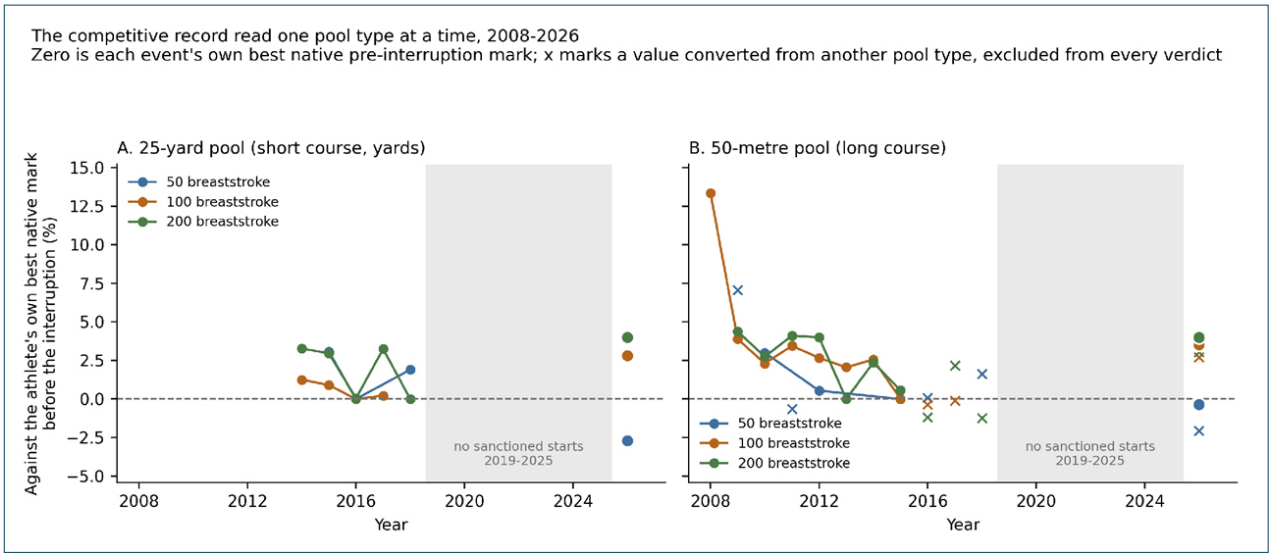


Figure 1. The competitive record read one pool type at a time, 2008 to 2026. Zero on each panel is that event's own best native mark before the interruption. Crosses mark values converted from another pool type, which are excluded from every verdict. The shaded band covers the seven seasons with no official starts.

What the Age Correction is Worth in this Age Band

The correction proves small, and this is part of the result rather than a caveat upon it. Every interval examined terminates at 32 years, within the band in which peak times have been reported to be maintained (Donato et al., 2003), so the point estimate is zero seconds for all seven pairs. The upper bound derived from the linear masters rate reaches 4.2% of the reference, amounting to 1.11 s on the 50 yd, 2.28 s on the 100 yd, 4.88 s on the 200 yd, 2.18 s on the 100 yd individual medley, 1.25 s on the 50 m, 2.66 s on the 100 m and 5.71 s on the 200 m.

That bound is large relative to the residuals it would offset, which is why it is reported rather than adopted, and the literature disagrees with itself in a manner bearing directly on the interpretation. The linear masters rate is fitted across 25 to 96 years and cannot resolve a plateau; the twelve-year longitudinal model carries quadratic terms, locates the inflection near 35, and does resolve one; and career-trajectory work on elite swimmers, reporting a peak-performance window of approximately 2.6 ± 1.5 years following a peak near 24 (Allen et al., 2014, as cited in Alshdokhi et al., 2020), measures when a full-time athlete's personal best occurs rather than the effect of ageing upon a competitor who continues racing. An age correction for a man in his early thirties is therefore not a settled quantity, and a verdict turning upon which end of that interval is taken should be reported as turning upon it.

Where such an interval lies in the fourth decade or later the published rates converge and the correction performs real work, whereas in the third decade its uncertainty is of the same order as the residual being measured, so that the analysis must rest instead upon which cells may be compared at all and upon the rate at which the mark moved.

The Recovery Ledger

Tables 2 and 3 set each outcome against its native pre-interruption reference, one pool type to a table. Two of the seven pairs are faster than their reference by more than the tolerance: the 50 yd breaststroke by 0.71 s (2.70%) and the 100 yd individual medley by 1.16 s (2.24%). One lies within the tolerance and is indistinguishable from its reference:

the 50 m breaststroke, 0.11 s (0.37%) faster on a tolerance of 0.42 s. Four fall short: the 100 yd breaststroke by 1.52 s (2.80%), the 200 yd by 4.65 s (4.00%), the 100 m by 2.23 s (3.52%) and the 200 m by 5.43 s (3.99%), each exceeding twice the 1.4% tolerance, so that none may be attributed to ordinary meet-to-meet variation.

Table 2. Recovery ledger, 25-yard pool. Each 2026 outcome against the athlete's own best native pre-interruption mark in the same event. The age-expected decrement is zero seconds on the point estimate (Donato et al., 2003), so the adjusted reference equals the native reference throughout and is not repeated as a column. The final column is the sensitivity: the residual that would remain if the reference were instead raised by the 4.2% upper bound (Rubin et al., 2013), computed as the 2026 mark minus 1.042 times the reference (first row: 25.61 − 26.32 × 1.042 = −1.82 s).

Event	Native reference (year, age)	2026 mark	Residual	Verdict	What the row licenses	Residual, upper bound
50 breaststroke	26.32 (2016, ~22)	25.61	−0.71 s (−2.70%)	exceeded	Past the pre-interruption level	−1.82 s
100 breaststroke	54.33 (2016, ~22)	55.85	+1.52 s (+2.80%)	not restored	A shortfall of 1.52 s, twice the tolerance	−0.76 s
200 breaststroke	1:56.15 (2018, ~24)	2:00.80	+4.65 s (+4.00%)	not restored	A shortfall of 4.65 s, the largest in the table	−0.23 s
100 individual medley	51.81 (2018, ~24)	50.65	−1.16 s (−2.24%)	exceeded	Past the only pre-interruption entry for this event	−3.34 s

Table 3. Recovery ledger, 50-metre pool; columns as in Table 2. The ledgers are kept apart because no comparison crosses pool types.

Event	Native reference (year, age)	2026 mark	Residual	Verdict	What the row licenses	Residual, upper bound
50 breaststroke	29.65 (2015, ~21)	29.54	−0.11 s (−0.37%)	restored	Indistinguishable from the reference; margin a quarter of the tolerance	−1.36 s
100 breaststroke	1:03.34 (2015, ~21)	1:05.57	+2.23 s (+3.52%)	not restored	A shortfall of 2.23 s	−0.43 s
200 breaststroke	2:15.97 (2013, ~19)	2:21.40	+5.43 s (+3.99%)	not restored	A shortfall of 5.43 s against his fastest native long-course mark	−0.28 s

The excluded cells are named individually. Three 2026 entries in the long-course rows, 2:20.09, 29.04 and 1:05.06, are conversions from yards swims, and the 2013 short-course-metres 200 breaststroke records a disqualification and no time; all four are unresolved. The June and July 2026 long-course marks are admissible but slower than the August marks in the same events, so they enter the season trajectory (section 3.5) rather than the ledger.

Read across both tables, the verdicts sort by race distance rather than by pool type: the 50 breaststroke is at or beyond its reference in both pools, the 100 and 200 fall short in both, and the shortfall increases with distance within each pool type independently, from 2.80% to 4.00% in yards and from 3.52% to 3.99% in metres. That two independent series order themselves in the same way is a stronger observation than either alone, and it is consistent with the reported finding that age-related increases in swimming time are greater in long-duration events (Donato et al., 2003), although the ledger cannot separate that explanation from any other. All four shortfalls lie within the 4.2% upper bound, so a reader preferring the linear masters rate would read every one as recovered; both readings are left visible.

The Return Measured as a Rate, and Where the Rate is not Monotone

Three short-course meets, 82 days apart end to end, permit the return to be expressed as a rate rather than a pair of endpoints (Figure 2). Across the season the 200 yd breaststroke moved from 2:08.88 to 2:00.80, a change of 8.08 s or 6.27%, of which 6.44 s fell within the final 33 days; the 100 yd individual medley moved by 3.42 s (6.33%), of which 3.07 s fell within that interval; and the 50 yd breaststroke by 1.07 s (4.01%), of which 0.96 s fell within it. In every event, therefore, the greater part of the movement occurred between the second and third meets.

The 100 yd breaststroke did not move monotonically. The three marks were 57.94, then 59.94, then 55.85, so that the second meet was 2.00 s slower than the first and the net change across the season, 2.09 s, is smaller than the change in the final interval alone. This is reported as it stands. An instrument whose resolution is a single start cannot distinguish a genuine reversal from the ordinary variation of one swim, and 2.00 s on a 100 yd swim is 3.45% of the mark, more than twice the reported meet-to-meet variation. Smoothing that point would convert a property of the instrument into a claim about the athlete.

The concentration of movement within the final 33 days is reported as an observation about when the marks fell rather than as an inference about when fitness arrived.

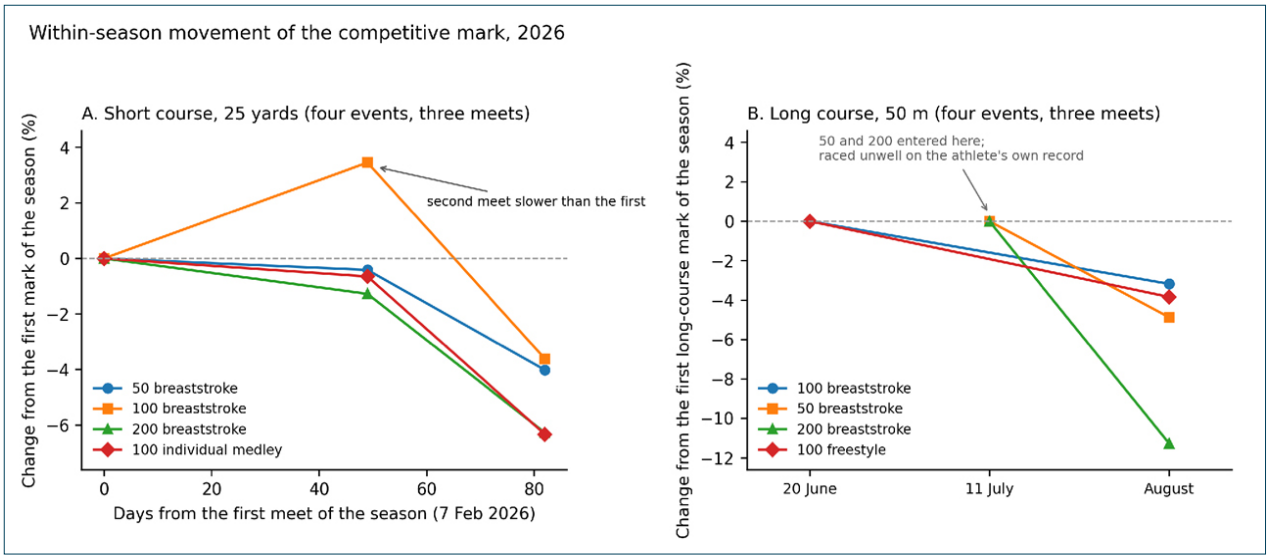


Figure 2. Within-season movement of the competitive mark, 2026. Panel A: the four short-course events across three meets, each expressed against its own first mark of the season. Panel B: the four long-course events across three named meets, on the same convention; the championship occupied 5 to 9 August, the 200 breaststroke swum on 6 August, the 100 freestyle and the 50 breaststroke on 7 August and the 100 breaststroke on 8 August, and a line joining two markers spans any meet at which that event was not contested. Yards and metres are plotted in separate panels and are not compared by absolute time.

The Long Course on its Own Account

The long-course record is kept separately throughout, for the quantitative reason given above: the two race types allocate a competitor's time differently (Olstad et al., 2020), so that a conversion between pool types estimates one race from the other rather than measuring it.

The 2026 championship produced the first native long-course marks recorded since the interruption, namely 29.54, 1:05.57 and 2:21.40. Set against native long-course references, the 50 breaststroke is indistinguishable from its pre-interruption best while the 100 and 200 fall short by 3.52% and 3.99%, reproducing the ordering observed in yards in a pool the athlete had not raced since before the interruption. The 200 m mark coincides, to the hundredth, with his own native long-course time of 2012, a coincidence within the record rather than a finding, named because a reader scanning the career matrix would otherwise encounter it as a claim.

Two long-course meets preceded the championship of 5 to 9 August 2026. At the 2026 Bumpy Jones Classic Long Course Meet on 20 June the 100 breaststroke was swum in 1:07.72 and the 100 freestyle in 56.04; at the 16th Annual June Krauser Summer Splash on 11 July the 50 breaststroke was swum in 31.05 and the 200 breaststroke in 2:39.34. The athlete records that he raced unwell on 11 July, the context in which the 200 breaststroke of that day, 17.94 s slower than in August, should be read. Between June and the championship the 100 breaststroke improved by 2.15 s (3.17%) over 49 days and the 100 freestyle by 2.15 s (3.84%) over 48 days; between July and the championship the 50 breaststroke improved by 1.51 s (4.86%) over 27 days.

The long-course block is now attested to the same standard as the short-course one, every mark carrying a named meet and a date, and remains the thinner only in coverage: no event was contested at all three long-course meets, so each long-course series rests on two points where the short-course series rest on three.

What Stood Behind the Outcome

A reader will reasonably ask what training stood behind these marks, and the answer belongs here at the order of magnitude. The present model comprises four sessions per week, two in the water and two dryland sessions, with a session ceiling the athlete sets at 2,500 m; the pre-interruption model comprised as many as two sessions per day at typical water volumes of 4.5 to 6 km. The point of reference adopted for the return was the athlete's first competition after resuming rather than a synthetic readiness test, which is the origin of the 7 February entry anchoring the season in Figure 2. The contrast establishes the scale a reader should have in mind, in that the marks in Tables 2 and 3 were recorded on approximately one fifth of the weekly water volume behind the pre-interruption references. Whether that difference bears upon the residuals is not a question this design can test, and no such assertion is made. Dosages, monthly progressions and transition criteria are omitted for the same reason: the record shows what the outcomes were and when, and cannot attribute them to any component of the schedule.

What this Outcome does not Show

The ledger measures outcome, which is what it was designed to measure. Training, competitive rhythm, re-adaptation to racing and age act together upon every time in Tables 2 and 3, and an observational record cannot apportion a residual

among them, so the analysis stops where its evidence stops. Physiology was not instrumented and lies outside the scope of the study; the detraining reports cited above instrumented theirs and are not evidence here. One medically relevant line is left unexamined of necessity: breaststroke loads the knee more heavily than the other strokes, and since no clinical assessment of this athlete's knees exists in the record, no finding concerning them is reported, and that silence is not a null result.

Table 4 places the case against the classes of return episode the literature documents; its final column is the point, each class reporting what its surviving instrument permits, and the present class the time an outcome took to return, nothing finer.

Table 4. Classes of return episode and what a single case of each can attest.

Class of episode	What survives as a baseline	Admissible instrument and its resolution	What one case of the class can attest
Planned interruption of weeks	Measurement taken beforehand	Laboratory, resolution of days	Recovery of a measured variable: maximal oxygen uptake down 9.1% and 7% at twelve weeks (Lepers et al., 2024; Zanou et al., 2024)
Interruption following injury	Clinical and field level of the previous season	Clinical criteria, resolution of weeks	Availability to compete and re-injury risk (Nichols et al., 2000; Louis et al., 2020)
Elective interruption of years (this case)	Competition results from a previous career	**Meet protocol, resolution of one start**	Time the outcome took to return, given an explicit baseline; no mechanism
Continuous masters career (a reference, not a return)	An unbroken series of results	Meet protocol, resolution of one season	Background rate of age-related change: peak held to about 35 years (Donato et al., 2003), about 0.6% per year from 25 (Rubin et al., 2013)

Three further limits bound the reading. Firstly, the corpus is small and purposive, and the age correction applies populations of masters swimmers to one man in the band where those populations agree least. Secondly, every meet result analysed was officially recorded and documented by the sanctioning body, but the compilation is the athlete's own transcription of those records, and transcription carries its own risk, illustrated by the correction reported in section 2.1. Thirdly, the events open to a verdict are those the athlete contested, and the 100 individual medley rests upon a single pre-interruption entry.

CONCLUSION

Seven outcomes from the first season following a seven-season interruption were read against the athlete's own native pre-interruption marks in the same pool type, with the age correction and the verdict tolerance both taken from published values and fixed before any residual was computed. Two, the 50 yd breaststroke and the 100 yd individual medley, were faster than their references by more than the tolerance; one, the 50 m breaststroke, was indistinguishable from its reference; and four, the 100 and 200 breaststroke in both pool types, fell short by 2.80% to 4.00%, the shortfall increasing with distance in each pool type independently.

The age correction proved the weakest component of the apparatus rather than its strongest, which is worth reporting in its own right, the published estimates for a man in his early thirties spanning zero to 4.2% of the reference, wide enough to reverse four of the seven verdicts. What carries the analysis instead is the admissibility rule, which removes cells that present as data and are not, together with the decision to measure the return as a rate and leave its irregularities visible.

Five conditions state when this reading may be attempted on another athlete, each checkable against a public results database rather than a private archive. The first is a native anchor: at least three unconverted marks before the interruption, in the same events and pool type to be contested after it, which careers recorded mostly through conversions do not supply. The second is a checkable interruption, visible as a gap in a public database rather than asserted by the athlete, which excludes athletes whose results are not publicly indexed. The third is at least three starts in the return season within a single pool type, sufficient to yield a rate rather than two endpoints and to render an irregularity distinguishable from a trend. The fourth is a named age interval with the decrement subtracted before the verdict and stated with its source and uncertainty, which fails wherever the published estimates disagree by more than the residual being measured, as they do here. The fifth is homogeneity, both sides of every comparison being native and in the same pool type, with converted cells marked and excluded.

The first and third conditions exclude most amateur returns. That is content rather than defect: a recovery ledger is not available for every return, and a paper offering one should state for which.

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